CORPORATE
OWNERSHIP & CONTROL

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EDITORIAL

Dear readers!

The recent issue of the journal Corporate Ownership and Control pays attention to issues of risk and strategic management, Islamic banking, dividend policy, CEO compensation, corporate ownership, credit rating agencies etc. More detailed issues are given below.

Sayed M. Fadel and Jasim Al-Ajmi try to determine the risk management practices of Islamic banks operating in Bahrain. *Stefano Bozzi, Roberto Barontini, Ivan Miroshnychenko* investigate the relationship between investor protection and CEO pay in family-controlled corporations. *Cid Gonçalves Filho, Carlos Alberto Gonçalves, Vera Helena Lopes, Marcos Ferreira Santos* examine the impact of strategic management concepts in micro and small company performance using the StratQual measuring. *Mohammad Ahid Ghabayen, Ahmad Omar Hardan, Zaid Jaradat and Mohannad Alshbiel* examine the relationship between government ownership and bank performance in Jordan. *Imad Jabbouri and Abdelillah El Attar* focuse on the relationship between dividend policy and the cost of debt in Morocco. *Hamed Kharraz and Jihene Ferchichi* examine the determinants which can push the auditors to reveal the weaknesses of the internal control system in companies listed on the Stock Exchange Securities of Tunisia. *Nurulyasmin Binti Ju Ahmad, Afzalur Rashid and Jeff Gow* investigate the impact of CEO duality on Corporate Social Responsibility (CSR) reporting by public listed companies in Malaysia. *Eleonora Isaia and Marina Damilano* examine that reputational concerns should discipline credit rating agencies (CRAs), eliminate any conflicts of interest, and motivate them to provide unbiased ratings.

Halil D. Kaya and Nancy L. Lumpkin-Sowers investigate whether the number of certain types of blockholders, as well as their ownership concentrations, will increase during recessions. *Nazrul Hisyam Ab Razak and Salmi Huwaina Palahuddin* examine the association between directors' remuneration, corporate governance structures and firm performance of 140 Malaysian listed firms which 70 firms are family firm and 70 firms are non-family. *Linda Wimelda and Sylvia Veronica Siregar* research the effect of financial institution ownership (bank institution and non-bank institution) on firm value and also whether there is a difference of the effect between financial institution ownership in form of bank institution and non-bank institution on firm value.

Matthias Baumann and Stephan Stubner examine the role of board control tasks in mitigating self-control problems in controlling owner family businesses. *Christian Kammlott, Jens J. Krüger, Dirk Schiereck* investigate whether and to what extent ownership structure affects cost efficiency in a sample of mainly state-owned but partially privately controlled municipal utilities in Germany.

We hope that you will enjoy reading the journal and in future we will receive new papers, outlining the most important issues and best practices of corporate governance!

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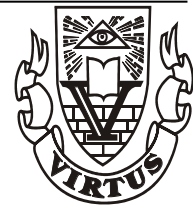
SECTION 1: ACADEMIC INVESTIGATIONS & CONCEPTS

Sayed M. Fadel, Jasim Al-Ajmi

The objectives of this study are to determine 1) the effect of global economic and financial crisis on risk management, 2) the severity of different types of risk facing Islamic banks, 3) the risk levels of Islamic financial modes, 4) risk assessment techniques, and 5) risk management techniques. This paper is the first to study the risk management practices of Islamic banks operating in Bahrain. It also provides evidence about these practices after the global financial crisis that affected all countries, including Bahrain.

Stefano Bozzi, Roberto Barontini, Ivan Miroshnychenko

This paper investigates the relationship between investor protection and CEO pay in family-controlled corporations. The sensitivity of pay to the institutional context is higher for family-CEO than professional-CEO, a result that corroborates the hypothesis that CEO compensation contracts in family firms are influenced by familiar connections. These results are more consistent with the hypothesis of rent extraction than with the perspective of optimal remuneration contracts.

Cid Gonçalves Filho, Carlos Alberto Gonçalves, Vera Helena Lopes, Marcos Ferreira Santos

This paper aims to contribute to the study of the impact of strategic management concepts in micro and small company performance using the StratQual measuring. Micro and small companies are, in the Brazilian economic scenario, responsible for a considerable amount of jobs created, GDP's formation, income generation and the capacity of adapting to the market's necessities with agility and flexibility. Studies that were carried out by SEBRAE - "Serviço Brasileiro de Apoio às Micro e Pequenas Empresas" showing that micro and small companies formulate their strategies according to the perception that the entrepreneurs have of possible markets reactions.

Mohammad Ahid Ghabayen, Ahmad Omar Hardan, Zaid Jaradat, Mohannad Alshbiel

The main objective of this study is to examine the relationship between government ownership and bank performance in Jordan. The banking sector has been widely ignored in the past corporate governance studies due to its strict system. Using a panel data from 2004 to 2013 (147 observations/years), the multiple regression analysis shows that increasing the percentage of shareholdings leads to higher profitability. Additional government-linked banks (GLBs) generally outperform their unlinked counterparts. However, their outperformance is contingent to the significance percentage of the shareholdings. On other words, if the government shareholdings are not significant (less than 10%) the government ownership does not make a significant difference in the performance.

Imad Jabbouri, Abdelillah El Attar

This paper examines the relationship between dividend policy and the cost of debt in Morocco. The results show that high dividend payments reflect a low level of agency costs of equity and low information asymmetries. Consequently, creditors demand lower return for providing their capital to high dividend-paying firms. The findings reveal that creditors are less concerned with agency costs of debt. The study shows that the negative relationship between dividend payout ratios and cost of debt is more pronounced in firms with higher information asymmetries.

Hamed Kharraz, Jihene Ferchichi

The main objective of this research is to examine the determinants which can push the auditors to reveal the weaknesses of the internal control system in companies listed on the Stock Exchange Securities of Tunisia. The conceptual framework referred to this work is the agency theory. The probability of disclosure of internal control weaknesses was not significantly associated with corporate governance and ownership structure. However, some other company characteristics, e.g. the size are strongly related with probability of firms disclosing internal control weaknesses.

Nurulyasmin Binti Ju Ahmad, Afzalur Rashid, Jeff Gow

This study aims to examine the impact of CEO duality on Corporate Social Responsibility (CSR) reporting by public listed companies in Malaysia. Content analysis was used to determine the extent of CSR reporting. A reporting level index consisting of 51 items was developed based on six themes: General, Community, Environment, Human Resource, Marketplace and Other. In order to determine the relationship between CEO duality and CSR reporting, an Ordinary Least Square regression was employed. The finding of the study is that, there is no significant association between CEO duality and CSR reporting. CEOs have little interest to promote CSR as it is not cost free and may lead to loss of individual wealth.

Eleonora Isaia, Marina Damilano

Reputational concerns should discipline credit rating agencies (CRAs), eliminate any conflicts of interest, and motivate them to provide unbiased ratings. However, the recent financial crisis confirms models of CRAs' behavior that predict inflated ratings for complex products and during booms. The stock price reaction to rating revisions is significantly lower after the financial crisis, particularly in the financial sector. In multivariate tests, the stock price reaction is lower, on average, in the post-crisis period by 2.3%.

SECTION 2: CORPORATE GOVERNANCE AND CORPORATE SOCIAL RESPONSIBILITY

Halil D. Kaya, Nancy L. Lumpkin-Sowers

The outside blockholder has become an important agent in the corporate governance literature in the United States. Understanding how his monitoring role changes as economic circumstances deteriorate is rarely considered. In this study, the number and type of blockholder, as well as their ownership concentrations, during recession was examined. By categorizing blockholders by type: affiliated, outside, employee (through Employee Stock Ownership Plans), non-officer director, and officer director, we are able to track how blockholder composition changed within firms when the economy moved from expansion in 1999 to recession in 2001.

This study examines the association between directors' remuneration, corporate governance structures and firm performance of 140 Malaysian listed firms which 70 firms are family firm and 70 firms are non-family. Data has been collected through annual reports in Bursa Malaysia's database from 2005 till 2013. The results show that firm performance is positively and significantly related to directors' remuneration, firm's growth and size measured by ROA, ROE and Tobin's Q. However, firms' performance in this study is not responsive to anticipated future market valuations in Stock returns. The study also finds that family ownership leads to lower performance than non-family owned firms on accounting measurement (ROA and ROE) and market measurement (Tobin's Q) after controlling company specific characteristics.

This research aims to examine the effect of financial institution ownership (bank institution and non-bank institution) on firm value and also whether there is a difference of the effect between financial institution ownership in form of bank institution and non-bank institution on firm value. Total observations are 270 listed firms on Indonesia Stock Exchange in 2012-2014, resulting to 809 observations. The result of this research shows that financial institution ownership in the form of bank institution has no influence on firm value while financial institution ownership in the form of non-bank institution has a positive influence on firm value.

SECTION 3: CORPORATE GOVERNANCE IN GERMANY

This study examines the role of board control tasks in mitigating self-control problems in controlling owner family businesses. It challenges the common perception that controlling owners do not require and use board control because of the concentration of ownership and management in a single individual. Self-control problems, that is agency problems with oneself, have often been overlooked by existing studies on the relevance of control tasks. By using a multiple case study design, we demonstrate that controlling owners frequently use board control as a self-governing mechanism and develop several propositions on favorable board processes and compositions.

The aim of this paper is to investigate whether and to what extent ownership structure affects cost efficiency in a sample of mainly state-owned but partially privately controlled municipal utilities in Germany. Using an empirical approach which permits the joint measurement of efficiency and assessment of the effect of ownership structure we find significantly, sizeable and robustly larger efficiency of utilities when private control is present.

ACADEMIC INVESTIGATIONS & CONCEPTS

SECTION 1

RISK MANAGEMENT OF ISLAMIC BANKS: A SEARCH FOR EMPIRICAL EVIDENCES

Sayed M. Fadel*, Jasim Al-Ajmi*

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Abstract

The objectives of this study are to determine 1) the effect of global economic and financial crisis on risk management, 2) the severity of different types of risk facing Islamic banks, 3) the risk levels of Islamic financial modes, 4) risk assessment techniques, and 5) risk management techniques. The structure of the balance sheet, the nature of Islamic finance instruments and funding sources have a great impact on the level of risk exposure of banks and the instruments. Credit risk is found to be the most serious risk, followed by liquidity risk, market risk and operational risk, in descending order of importance. As for the riskiness of Islamic financing modes, mudarabah is perceived to be the riskiest, followed by musharakah, while murabahah ranked as the least risky mode. Moreover, Islamic banks are found to use traditional risk management techniques more than sophisticated measurements. They also adopt risk mitigation techniques that are used by conventional banks in preference to techniques that are considered to be unique to Islamic banks. This paper is the first to study the risk management practices of Islamic banks operating in Bahrain. It also provides evidence about these practices after the global financial crisis that affected all countries, including Bahrain.

1. INTRODUCTION

Banking regulators play a vital role in enforcing regulations related to risk management on the part of the institutions they regulate. They always stress the importance of appropriate and effective risk management. Regulators are motivated by the fact that banks may overlook risk exposure in their attempt to increase their profits, and devastating consequences can result from the failure to manage risks effectively (Basel Committee on Banking Supervision, 2004). Banks are expected to use reliable risk measures to allocate resources among activities with the best risk/rewards ratios. Risk management is an integral part of managing financial institutions, as a bank's survival depends how it manages its risk exposure. The importance of risk has increased significantly since 2008 as a direct consequence of the global financial crisis. The decision of the Basel Committee on Banking Supervision of the Bank for International Settlements to replace the Basel Capital Accord

introduced in 1988 (known as Basel I), which became effective by the end of 1992 with Basel II in 2004, came as a response to the need to strengthen risk management practices in the banking industry, while Basel III will be fully implemented by 2019. Basel II and III frameworks have three pillars: 1) minimum capital requirements, 2) supervisory review of an institution's internal assessment process and capital adequacy, and 3) effective use of disclosure to strengthen market discipline as a complement to supervisory efforts. Banks operating in Bahrain have been required to comply with Basel II requirements since January 2008. In response to the 2008 economic and financial crisis, the Bank for International Settlements (BIS) issued Basel III. The new accord, which will become fully effective in 2019, requires banks 1) to increase the capital asset ratio from 8%, as it is stipulated in Basel II to 10.5%, which includes conservation and countercyclical capital buffers; 2) introduces a minimum 3% non-risk leverage ratio that covers also off-balance sheet exposures; 3) enhances the supervisory review

process for firm-wide risk management and capital planning; and 4) introduces two minimum liquidity ratios: liquidity coverage ratio (LCR) and net stable funding ration (NSFR). The LCR covers the entire statement of financial position and addresses banks' need to hold high-quality liquid assets cover the total net cash flow, while NSFR aims at addressing the need for banks to have stable sources of funding and to deal with liquidity mismatches (Basel Committee on Banking Supervision, 2012).

Since Basel II does not take into consideration the uniqueness of the investment and liabilities of Islamic banks, the Islamic Financial Services Board (IFSB) issued two standards: IFSB-1 "Guiding Principles of Risk Management for Institutions (other than Insurance Institutions) offering only Islamic Financial Services (IFS) and IFSB-2 "Capital Adequacy Standard for Institutions (other than Insurance Institutions) offering only IFS." The Central Bank of Bahrain (CBB) adopted these standards along with Basel II in its rulebook for the risk management of Islamic banks.

Bahrain has a dual banking system because it allows conventional and Islamic banks to operate. The history of conventional banking can be traced back to 1918 and the establishment of the East Bank while the first Islamic bank, the Islamic Bank of Bahrain, was established in 1979. The sector includes 103 banks of both retail and wholesale banks. At the end of June 2015, there were 28[1] retail banks, 13 of which were locally incorporated and 15 were branches of foreign banks. Furthermore, there were 75 wholesale banks. Of these 103 banks, 23 banks operate on the basis of Islamic sharia'a principles. According to (Thomson Reuters and Dinar Standards 2015) Bahrain maintain its leadership position as the second after Malaysia in the Islamic Finance indicator ranking. As of the end of June 2015, the total assets of the banking sector in Bahrain were US$189.59 billion, of which Islamic banks held US$25.56 billion (13.48% of total banking assets) (CBB, 2015). During this period, the assets of managed all banks contracted, while the assets were managed by Islamic banks increased. Islamic banking profit exceeded $10 billion in 2013 and is expected to reach $37 billion in 2019 (Ernst and Young, 2014).

Theoretically, Islamic banks are based on offering banking products based on the principal of risk and profit sharing with their clients. As such, they are not merely financial intermediaries between borrowers and lenders like conventional banks. Hence, although both types of banks appear similar, theoretically they are not because of the risks that are part of their unique business model. Hence, from a theoretical perspective, risks faced by Islamic banks are not identical to the types of risks that conventional banks face. Therefore, studying risk management in conventional banks may not be generalized to Islamic banks.

Despite the importance of risk management in Islamic banks, there are very few published theoretical and empirical studies on the subject (Khan, 1997, Khan and Ahmed, 2001, Hassan, 2003, Muljawan et al., 2004, Akkizidis and Khandelwal, 2007, Khan and Bhatti, 2008, Hassan, 2009).

Furthermore, studies of the risk management practices of Islamic banks are also very limited (Khan, 1997, Hassan, 2003, Muljawan et al., 2004, Akkizidis and Khandelwal, 2007, Khan and Bhatti, 2008, Ariffin et al., 2009, Hassan, 2009, Abu Hussain and Al-Ajmi, 2012). Furthermore, it has been argued that regulatory economic and regulatory environments, including sharia'a interpretations, play important roles in shaping the risk management practices of Islamic banks (Abu Hussain and Al-Ajmi 2012 and Abdulla et al., 2015). Lack of standardization of products and services is one of the reasons for such findings and this argument. The present study aims to provide new evidence of some aspects of risk management of Islamic banks from Bahrain, a country which has attracted little attention despite its importance in Islamic finance. Specifically, the study aims to identify the types of risk Islamic banks face, the types and level of risk facing the Islamic mode of financing, and the risk identification techniques and risk mitigation techniques that are employed. Khan and Ahmed (2001) and Ariffin et al., (2009) provide conflicting evidence regarding the riskiness of Islamic financing modes and risk management practices. This study aims to provide fresh evidence in this respect. It also provides evidence of risk management practices during financial crises, as the key cause of the current crisis was the fundamental combination of aggressive lending and inadequate risk management, thus leading to a breakdown in confidence between parties (Venardos, 2010). In addition to its contribution to the literature of risk management, the study has important policy implications, because it provides information for regulators, shareholders, management and other stakeholders that they can use when making policy decisions.

The paper is organized as follows. In the next section, we review the relevant literature. In Section 3, we formulate the issues discussed within the study, describe how they are tackled, and describe the sample characteristics. In Section 4, we provide the results. The last section summarizes and concludes the paper.

2. A BRIEF LITERATURE REVIEW

Risk, in the banking context, may be defined as a reduction in a firm's value due to changes in the business environment and inability to meet its obligations. Banks and similar financial institutions face different types of risk. According to Basel II and III frameworks, the most important risk areas are 1) market risk, which is the change in net asset value due to changes in underlying economic factors such as interest rates, exchange rates, and equity and commodity prices; 2) credit risk, which is the change in the net asset value due to changes the perceived ability of the counterparty to meet their contractual obligations; and 3) operational risk, which is defined as the risk of loss resulting from inadequate or failed internal processes or systems or from external events. Risk is inherent in all banking activities and can never be eliminated entirely. However, shareholder value can be preserved and enhanced by managing, mitigating and, in some cases, insuring against risk. These three types of risk encompass all types of risk that are encountered by conventional

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[1] The number of retail banks will go down to 27 after the completion of the takeover of BMI by Alslam bank in the second half of 2015.

banks and parts of the risk faced by Islamic banks. Basel II and III frameworks provide a clear methodology for quantifying credit, market and operational risk.

In a study by the (Basel Committee on Banking Supervision, 2004) of 13 cases of banking failure in 8 countries, credit risk is the most common factor that explains the crisis, followed by operational risk and market risk. Basel II provides mechanisms for quantifying these risks and calculating the minimum capital requirement. Al-Tamimi and Al-Mazrooei (2007) report that the most important type of risk faced by banks in the United Arab of Emirates (UAE) is foreign-exchange risk, followed by credit risk and operational risk. These results are similar to those reported by Hassan (2009) in the study of risk management practices of Islamic banks in Brunei. Al-Tamimi and Al-Mazrooei (2007) also report that banks manage risk effectively, and locally incorporated and foreign banks in the UAE differ in their practices of risk assessment and analysis.

Studies of risk management of Islamic banks (Khan, 1997, Khan and Ahmed, 2001, Hassan, 2003, Muljawan et al., 2004, Khan and Bhatti, 2008, Ariffin et al., 2009, Hassan, 2009; Abu Hussain and Al-Ajmi 2012, among others) argue that Islamic banks face additional risks that are not faced by conventional banks. Archer and Karim, 2007 postulate that Islamic banks' products tend to be more complex than those of conventional banks. The distinctive types of risk faced by Islamic banks are dictated by the way they conduct their business. These risks are related to the nature of the assets that Islamic banks deal with and their liability structure. In Islamic finance, unlike conventional finance, there is no direct lending of cash for the return of a higher amount of cash[2], unless the transaction is asset backed, implying that the transaction has to involve the sale and purchase of an asset. In a typical financing transaction, the Islamic bank will purchase assets that the borrower wants financed at one price and sell them to the borrower at an agreed-upon (higher) price, allowing the bank to make a profit. This purchase and sale of an asset makes the financing Sharia'a-compliant. It can be deduced that Islamic banks need a deeper understanding of a borrower and his or her business to be able to minimize the risk that a client will default on purchasing the asset underlying a financial transaction. Such transactions are interest free and based on profit and loss sharing between clients and depositors.

Second, deposits in Islamic banks are provided mainly by depositors on the basis of profit and loss sharing. Depositors are investment account holders (IAHs). The accounts held are called profit sharing investment accounts (PSIA) and equity investment accounts. The relationship between the depositor (*rab ul mall*) and the bank (*mudarib*) is a partnership in which the *rab ul mall* provides the capital and the *mudarib* provides the management, effort and time. The Islamic bank plays the role of *rab ul mall* when it provides a capital to entrepreneurs. The *rab ul mall* is a sleeping partner in the partnership because he or she cannot take part in the management. The liability of the *rab ul mall* is limited to his or her

investment, unless the *mudarib* is authorized to incur debt on his or her behalf. In theory, IAHs, unlike depositors in conventional banks, are not guaranteed a certain rate of return, because such a promise is considered to be *riba*.[3] The rate of return on deposits depends on the profit banks earned from investing those deposits, as dictated by the profit and risk sharing core principal of Islamic finance. However, in reality, Islamic banks indirectly promise depositors, without legal obligation, to receive a certain profit rate presented to depositors as an expected return. Hence, the return depends on the performance of the investment financed by depositors and the bank's share in the profit. Therefore, one would expect not only fluctuations in the rate of return but also that depositors may lose all their money, provided that losses are not the result of misconduct and/or negligence on the part of the bank. This situation leads to another risk, i.e., rate of return risk, faced by Islamic banks. Rate of return risk is the potential impact of the mismatch between the rate of return on assets and the expected rate of return of the sources of funding. Most of the assets and liabilities of Islamic banks are short term in nature, except for certain long-term liabilities that have been utilized to fund the Islamic bank's strategic investments in its associates. However, in practice, Islamic banks smooth the rate of return on deposits by creating two types of reserves: 1) profit equalization reserves (PER) and 2) investment risk reserve (IRR). PER is the amount appropriated out of gross income from assets, before allocating the bank's (*mudarib's*) share, in order to smooth the returns paid to IAHs and shareholders, but it may not be used to cover losses. IRR is the amount appropriated out of IAHs' income after the deduction of the *mudarib's* share of income in order to cover any future losses on investments financed by PSIA. These two reserves are used by Islamic banks to reduce displaced commercial risk (DCR). The DCR refers to the risk transferred to shareholders in order to cushion the IAHs from carrying some or all of the risk (e.g. credit and market risk) to which they are contractually exposed in a *mudarabah* contract[4]. This risk is a category of the rate of return risk. Furthermore, unlike deposits with conventional banks, balances in the PSIAs do not enjoy protection from insurance deposits.[5] If PER and IRR are sufficient to manage the payout to IAHs, shareholders profits will not be sacrificed in favor of maintaining PSIAs' return.

Third, risk arises from the failure to comply with the sharia'a rules and principles (Lahsasna 2014). This risk may lead to invalidation of contracts, and a loss of income generated from investment in non-sharia'a compliant activities, because, according to sharia'a, any income generated from such investment should be donated to charities. The non-financial impact of this risk may

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3 Riba is an Arabic word that means excess or interest. Islamic sharia'a prohibits Muslims from paying or receiving riba, so Islamic banks do not charge clients interest and do not promise depositors interest on their investment, i.e., deposits.

4 A contract between IAHs as a rab ul mal and the bank as a Mudarib. More information can be found in Usmani . (2002).

5 Since 1993, deposits with conventional banks are insured up to 75 percent of their value or BD20,000, whichever is less.

2 Islamic sharia'a law allows cash to be lent, but generally only as Qard Hassan, where only the same amount of cash must be returned.

include threatening the bank's reparation as Islamic bank and violation of banking regulations.

Fourth, there are counterparty and corporate governance risks. The latter is due to the role of sharia'a supervisory boards (SSBs) in the approval process of products and services and their relationship with management. Given these differences, one would expect that there are some differences between risk management practices of conventional and Islamic banks. The SSBs are entrusted with the task of evaluating any products and services to determine their compliance with Islamic sharia'a before offering them to the banks' clients and also to oversee the implementation and compliance at every stage. This role may raise corporate governance issues, because the success of the banks depends on the approval of the products by the SSBs, while members of the SSBs are paid by the banks. Some authors argue that there is a chance that SSBs might approve products that do not meet the sharia'a requirements. For example, Mufti Muhammad Taqi Usmani, who is a prominent scholar and the president of the Sharia'a Council of the Bahrain-based Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI), said that 85 per cent of the current Sukuk[6] structures were not Islamic, as reported in Reuters (2007). However, global sukuk issues (companies and governments) jumped from around $33.5 billion in 2009 to nearly $110 billion in 2014 and is expected to reach $196 billion in 2020. The outstanding global sukuk is estimated to be round $241 billion at the end of 2014 and is expected to reach $907 billion by the end of 2020 (Thomson Reuters: Zawya, 2014).

Fifth, unlike conventional banks, central banks do not play the role of lender of last resort (LOLR) for Islamic banks, because central banks cannot provide funds on a basis other than interest lending. Since Islamic banks cannot pay interest, they are left without an LOLR, and hence they are left to provide self-insurance. This function is provided by IRR. Lack of an LOLR, limited number of Islamically acceptable short-term financial instruments and the absence of an adequate money market may force Islamic banks to maintain higher liquidity than conventional banks to mitigate liquidity risk.

Finally, Islamic banks face a serious challenge in managing their risk exposure because of lack of sharia'a-compliant derivatives to hedge against those risks. In March 2010, the International Swaps and Derivatives Association (ISDA) and International Islamic Financial Market (IIFM) jointly issued the first sharia'a-compliant master agreement for over-the-counter (OTC) derivatives. The Ta'Hawwut (hedging) Agreement is therefore expected to be used as a reference for market participants where they or their customers need to hedge risks in line with sharia'a principles. However, it remains to be seen whether this opening will be accepted by the industry because 1) many Islamic financing modes are not standardized; 2) for implementation, the agreement must be approved by the bank's SSB; 3) the agreement provides for the election of New York law or the law of England and Wales as the governing

secular law for the Ta'Hawwut Agreement; and 4) according to the agreement, determination of unlawfulness or illegality is made without reference to sharia'a law. This means that termination events under section 5(b)(i) (illegality) or section 5(b)(iii)(2) (tax event - change of tax law) will be determined without regard to sharia'a principles.

Khan and Ahmed (2001), Ariffin et al., (2009), and Abu Hussain and Al-Ajmi (2012) are the only published studies that attempt to shed light on risk management practices of Islamic banks operating in Bahrain. The first two investigated, among other things, the importance of different types of risk facing Islamic banks in a number of countries, including Bahrain. In both studies, risk managers of Islamic banks from different countries, including Bahrain, were surveyed regarding their perception of the types of risk facing Islamic banks, the types of risk of Islamic financing modes, risk measurement, and risk management techniques. The two studies report different levels of importance for the types of risk facing Islamic banks, and they differ in their findings in relation to the risk levels of the financing modes. Abu Hussain and Al-Ajmi (2012) report that risk management practices of conventional and Islamic banks operating in Bahrain are not significantly different. They also found that Islamic banks are found to be significantly different from their conventional counterparts in understanding risk and risk management and the level of risk. Furthermore, Abdulla et al. (2015), who investigate corporate risk disclosure in the Gulf Cooperation Council countries, report that the level of disclosure of conventional banks is significantly lower than that of Islamic banks. These results contradict the theoretical expectations that suggest that Islamic banks face higher agency problems (Athari et al., 2016) because of the nature of the contractual relationships with the depositors, and hence are likely to disclose more information compared with conventional banks. Depositors (IAH) of Islamic banks, unlike those of conventional banks, entrust banks to manage their deposits on the same basis of managing shareholders' funds, hence they expose their investment to the same level of risk of shareholders, as such depositors are considered to be quasi-equity holders. However, IAHs of Islamic banks do not have the same rights shareholders enjoy, such as attending general meetings and voting. Agency theory predicts that increasing disclosure will reduce information asymmetry and hence will mitigate agency problems.

3. RESEARCH DESIGN AND THE SAMPLE CHARACTERISTICS

This is a cross-sectional study of the risk management practices in the banking industry. The target population of this study is staff members of Islamic banking institutions operating in Bahrain. A questionnaire was used to collect information for the study. Based on the literature review, the following questions are addressed:

1. How do Islamic bankers perceive the effect of the current economic and financial crisis on banks' risk management?
2. How do Islamic bankers perceive the relative seriousness of the different types of risk they face?

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6 Islamic bonds, or sukuk, are underpinned by physical assets whose returns are used to pay bond-holders, to account for Islam's prohibition of interest.)

3. How do Islamic bankers perceive the types of risk pertaining to the mode of finance offered by Islamic banks?
4. What types of risk measures are used by Islamic banks in Bahrain?
5. What risk mitigation techniques are used by Islamic banks?

To address the above questions, a questionnaire was developed after reviewing the relevant literature. A modified version of the questionnaire of Khan and Ahmed (2001) and Ariffin et al., (2009) is used. Before sending it to the target population (banks staff), 20 academics and practitioners were asked to comment on it. Their comments were incorporated in the final version of the questionnaire. This version is divided into two parts: Part I solicits information about the respondents and the banks, and Part II includes six questions. The first question seeks the respondents' opinion with regard to the effect of the recent economic and financial crisis on the level of risk facing Islamic banks. The second question solicits the respondents' opinion of the level of seriousness of eight different types of risk facing Islamic banks, using a 5-point Likert scale ranging from 5 (very serious) to 1 (not serious at all). The third question asks respondents to identify the seriousness of different types of risk facing eight Islamic financing modes. The fourth question asks respondents to rate the level of seriousness of five issues of risk faced by Islamic banks. The fifth question identifies

the risk management techniques used by Islamic banks, and the sixth question determines the risk management techniques adopted by Islamic banks. The survey was administered during February and April 2015.

Of the 600 questionnaires distributed, 421 useful questionnaires were returned, representing a response rate of 70.19 per cent. To test for non-response bias, we compared the results of the first 30 and the last 30 questionnaires received. The t-statistic is used to compare the mean responses to all statements, risk types, and risk identification methods/approaches. The results (not reported to conserve space) show no significant differences between the mean responses of the two sets of questionnaires. We tested the reliability of the instrument using Cronbach's α, which was 81.4 per cent and indicates a high level of internal consistency.

The characteristics of the respondents and the banks they work for are shown in Table 1. The majority (60.8 percent) of the respondents are men, and 53 percent of the respondents have banking experience of more than 5 years. More than 60 percent of the respondents occupy middle management and managerial positions. The respondents work in a variety of departments; the largest group works in operations, followed by credit, finance, audit and risk. The majority of respondents hold graduate and/or professional qualifications in accounting, finance and risk management. Eighty-two percent of the respondents work for retail Islamic banks. The majority of the respondents work for locally incorporated banks.

Table 1. Characteristics of the Sample

Attributes	Frequency	Percent
Gender		
Female	165	39.2
Male	256	60.8
Length of Experience		
Less than 5 years	198	47.0
Five years or more but less than 10 years	143	34.0
Ten years or longer	80	19.0
Position		
Executive/Managerial	112	26.6
Middle Management	141	33.5
Other	168	39.9
Type of Job		
Audit	55	13.1
Credit	74	17.6
Finance	73	17.3
Investment	28	6.7
IT	22	5.2
Operations	92	21.9
Risk	53	12.6
Treasury	24	5.7
Highest Qualification		
BSc	236	56.1
Professional (Accounting, Finance)	59	14.0
Graduate degree	56	13.3
Risk management professional qualification	22	5.2
Other	48	11.4
Type of License		
Retail Islamic	166	31.7
Wholesale conventional	100	19.1
My banks		
Local	346	82.2
Foreign	75	17.8

4. RESULTS AND DISCUSSIONS

The bankers were asked to state their opinion of the effect of the latest global economic and financial crisis on risk management practices. All respondents indicated that the crisis has some influence on the way risk is dealt with by Islamic banks. These results are in line with the observation that the crisis played a role in attracting more attention to risk management and practices. This is because bank collapse is the result of risk management failure. However, these results do not indicate whether banks give the same level of attention to risk management, or they revert back to the attention level that they gave to risk management before the crisis.

Table 2 reports the descriptive statistics of the seriousness of the types of risk Islamic banks are exposed to. The mean ranges between 4.20 and 3.02. The relative importance of the types of risk found are higher than those reported by (Khan and Ahmed, 2001) but lower than the results reported by Ariffin et al. (2009). As expected, credit risk is perceived to be the most important risk. This confirms the results of Ariffin et al. (2009) and Abu Hussain and Al-Ajmi (2012). However, Khan and Ahmed, 2001 report that credit risk is only the fourth most important risk facing Islamic banks. Commercial displacement risk[7], which is a unique risk to Islamic banks, came second in terms of importance, with a mean of 4.08. Liquidity risk is perceived as the third most important risk. This result contradicts that of Ariffin et al. (2009) but is similar to that of Abu Hussain and Al-Ajmi (2012). Operational risk was found to be the fourth most serious risk faced by banks. In their survey of banks in Bahrain, Ariffin et al. (2009) report that this risk is the least important type of risk among the seven types or risk included in their survey, but banks of other countries attach more importance to this risk. These results are not in line with the emphasis placed on such risk in Basel II, which banks in Bahrain had to comply with after January 2008. Rate of return risk and sharia'a non-compliance risk are ranked fifth and sixth in importance by the bankers, respectively. These findings are somewhat different from those reported by Ariffin et al. (2009) who found that banks in Bahrain perceived these two types of risk as the fourth most important type, after credit risk, foreign exchange risk, and liquidity risk. Furthermore, the mean rating of these two types of risk are lower than that reported by Ariffin et al., (2009). Our results and those of Khan and Ahmed (2001) and Ariffin et al. (2009) may differ because of the time when the studies were conducted, as the perceptions of bankers are influenced by the practices during the time in which the data was collected. The sample used by Khan and Ahmed (2001) and 6 by Ariffin et al. (2009) were very small (7 and 6 respectively), while our results are based on 421 respondents.

Table 3 presents a summary (mean values and standard deviation) of the risk perceptions for different modes of financing offered by Islamic banks. The results show that Islamic bankers perceive mudarabah, musharakah[8], istisna'a[9] and salam[10] as the most risky modes of financing with mean values of 3.96, 3.93, 3.82 and 3.70, respectively.

Table 2. Descriptive statistics for each type of risk

Types of Risk	Mean	Standard deviation	Skewness	Chi-square Significance level
Credit risk	4.20	0.796	- 0.634	0.000
Commercial displacement risk	4.08	0.815	-0.724	0.000
Liquidity risk	3.90	1.037	- 0.687	0.000
Market risk	3.63	1.053	- 0.099	0.000
Operation risk	3.62	1.034	- 0.084	0.000
Rate of return risk	3.61	0.942	+ 0.019	0.000
Sharia'a non-compliance risk	3.52	1.066	+ 0.077	0.000
Concentration risk	3.33	1.249	- 0.226	0.000
Reputation risk	3.19	1.168	- 0.333	0.000
Legal risk	3.02	1.268	- 0.087	0.000

They also believe that murabahah[11] is the least risky mode of finance, with a mean rank of 3.51. These findings provide an explanation of why investment in murabahah by Islamic banks represents their largest component of assets. The mean risk of all modes of finance are found to be higher than those reported by Khan and Ahmed (2001). However, they are lower than those reported by Ariffin et al. (2009), with the exception of mudarabah. Furthermore, average credit risk is higher than the other three types of risk, followed by market risk, while operational risk is perceived by the bankers as the least serious risk, with a mean of 3.41. These results provide further evidence of the bankers' opinions about the operational risk facing Islamic banks. However, its relative seriousness is lower than that reported by Ariffin et al. (2009) but higher than that reported by Khan and Ahmed (2001). Market risk is the second most serious risk in the view of the surveyed bankers. The credit risk of mudarabah is considered to be highest, followed by musharakah, while Salam came in the third place,

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7 Commercial displacement risk arises from Islamic banks practices to match rate of return on deposits paid by competitors, which may force Islamic banks to absorb losses that should be borne by depositors (investment account holders).

8 Musharakah is a partnership between an Islamic bank and its clients, whereby both parties contribute to the capital and participate in the management of the partnership. Islamic banks, however, may prefer to be a sleeping partner. Diminishing musharakah is a partnership transaction through which an Islamic Bank and its customer contribute their equity at an agreed-upon ratio for the purchase of equipment/machinery and other tangible assets, and over the life of the contract, the bank sells its equity to its client on agreed-upon terms, (Usmani, 2002).

9 Istisna'a is a contract for manufacturing a product in which the manufacturer agrees to produce a specified product to be delivered at a specified time for a specified price, (Usmani, 2002).

10 Salam is a forward contract that requires payment of the price of the goods made at the time of signing the contract and goods are delivered on the maturity of the contract. The basic purpose of this sale is to meet the needs of the small farmers who need money to grow their crops and to feed their family up to the time of their harvest. The permissibility of Salam is an exception to the general rule that prohibits forward sales, (Usmani, 2002).

11 Murabahah is a particular kind of sale whereby the seller acquires a commodity and then sells it to another person at an express profit or mark-up. Islamic banks generally sell the commodity or assets on credit, (Usmani, 2002).

with mean ratings of 4.41, 4.30 and 4.10, respectively. The average credit risk of the financing mode is 4.04, which makes it the most serious risk. These findings are similar to those reported in Table 3, which shows that credit risk is the most serious risk facing Islamic banks. These results are somewhat different from those reported by Ariffin et al. (2009), who found that the most serious credit risk is for Salam, followed by istisna'a and mudarabah, and are also somewhat different from those reported by Khan and Ahmed (2001), who conclude that the credit risk of musharakah, diminishing musharakah, and salam are the highest. Our results show that murabahah has the least credit risk, with a mean value of 3.76. Both Khan and Ahmed (2001) and Ariffin et al. (2009) report similar

results, with mean values of 2.56 and 4.10, respectively. It appears from the results that the profit-loss sharing modes of financing employed by Islamic banks are perceived to have higher credit risk. These observations may explain the composition of the assets of Islamic banks, which shows a preference for murabahah compared with the profit-sharing modes of financing. Mudarabah and musharakah are exposed to the highest rate of return risk, while murabahah is perceived by the bankers to carry the least rate of return risk. Moreover, bankers believe that Salam is exposed to the highest risk of sharia'a non-compliance, followed by murabahah.

Table 3. Perceptions of the risk inherent in different modes of financing

	Stats	Credit Risk	Market Risk	Liquidity Risk	Operational Risk	Rate of return Risk	Sharia'a Risk	Average
Mudarabah (assets side)	Mean	4.41	4.03	3.63	3.65	4.27	3.79	3.96
	SD*	0.75	0.75	1.06	0.69	0.81	1.09	0.30
Musharakah	Mean	4.30	4.02	3.83	3.64	4.20	3.76	3.95
	SD	0.77	0.98	0.85	1.09	0.87	0.98	0.24
Salam	Mean	4.10	3.84	3.19	3.48	3.43	4.17	3.70
	SD	0.83	1.10	1.25	0.97	1.08	0.62	0.36
Ijarah Muntahia Biltamleek (financial lease)	Mean	4.08	3.88	3.29	3.02	3.57	3.82	3.61
	SD	0.75	0.87	1.20	1.21	3.26	1.22	0.36
Istisna'	Mean	4.00	3.80	3.78	3.47	4.01	3.87	3.82
	SD	0.85	0.77	0.83	0.66	0.99	0.90	0.18
Ijarah (operating lease)	Mean	3.98	3.91	3.53	3.52	3.46	3.69	3.68
	SD	1.03	0.74	1.02	1.07	1.17	1.05	0.20
Diminishing Musharakah	Mean	3.84	3.52	3.69	3.44	3.65	3.81	3.68
	SD	0.99	0.72	1.09	1.00	1.02	0.92	0.14
Murabahah	Mean	3.76	3.09	3.76	3.04	3.31	4.08	3.51
	SD	1.19	1.21	1.10	1.19	1.02	0.87	0.39
Average		4.06	3.76	3.59	3.41	3.74	3.87	3.74

Note: *Standard deviation

Banks use several risk measurement techniques. Respondents were asked to state whether or not their banks adopt the techniques included in the questionnaire. Panel A of Table 4 summarizes the responses. Maturity matching is used by 85.3 per cent of the banks, followed by gap analysis (80 percent) and credit rating (79.8 percent). Ariffin et al., (2009) report a similar ranking. However, Ariffin et al., (2009) report that these approaches are less widely used. The differences are probably due to the samples used in our study and the other studies. Although the figures indicate that these techniques are popular among Islamic banks, the percentage of the bankers that state that their banks do not use such techniques should raise

questions about their risk management. This is most true for maturity matching, which is the most widely used form for measuring liquidity risk. Around 14.7 per cent state that their banks do not use this risk measurement approach. In general, these banks may not match the funding structure with the maturities of their assets; liabilities have shorter maturities than assets. This is done so that banks can benefit from the return on assets and the cost of funding. The results reported by Khan and Ahmed (2001) show that 41.2 per cent of the banks surveyed do not use maturity matching analysis. Therefore, our results indicate that banks do not measure the liquidity risk more than they did a decade ago.

Table 4. Risk measurement approaches and risk management techniques used by Islamic banks

Panel A		Panel B	
Risk Measurement	Yes (%)	Risk Management Techniques	Yes (%)
Maturity matching	85.3	Collateral arrangement	94.5
Gap analysis	80.0	Loan loss reserves	93.8
Credit Ratings	79.8	Investment risk reserve	87.1
Internal-based rating system	77.4	Profit equalization reserve	85.4
Estimates of worst case/stress tests	70.8	Guarantees	82.2
Risk-adjusted return on capital	47.1	Hamish jediah	74.3
Simulation techniques	39.9	On balance sheet netting	69.1
Duration analysis	36.3	Third-party enhancements	66.0
Earnings at risk	30.6	Urboun (over-the-counter Islamic derivatives)	62.0
Value at risk	25.4	Parallel istisna'a contracts	32.5
		Parallel salam contracts	00.0

The results indicate that Islamic banks in Bahrain do not use sophisticated risk management approaches, with the exception of "estimates of worst case/stress tests," which are used by 70.8 per cent of the banks. These results are somewhat similar to those of Ariffin et al., (2009). However, the comparison of our results and those of Ariffin et al., (2009) shows that banks are using more sophisticated risk measurement techniques than they were a decade ago. These results indicate that Islamic banks are more willing to benefit from the new development of financial risk management than before and that the development of Islamic banks and their products, as they become more sophisticated, requires them to improve their risk measurement to match the development of the institutions. However, the challenges facing Islamic banks remain great.

Risk assessment and analysis of debtors is based on historical data and forecasts. Such mechanisms allow banks to assess credit and market risks. However, such an analysis cannot assure banks that debtors will honor their commitments or that mudaribs will deliver on their promises. This is because history might not repeat itself, and some risk factors may not be accounted for by the banks. The ability of debtors to pay may deteriorate after granting credit, and Islamic banks acting as a *rab ul mall* might lose their investment as a result of misconduct or negligence of the *mudarib*. As a result, banks generally adopt a variety of techniques to mitigate the risks that they face. To identify the techniques adopted by Islamic banks, respondents were asked to state whether or not their banks employ a list of risk mitigation techniques. Table 4 Panel B presents the frequencies of the risk mitigation techniques used by Islamic banks.

Unlike conventional banks, Islamic banks have a limited number of risk mitigation techniques because there are few sharia'a-compliant derivatives. Among the techniques that are widely used by Islamic banks, collateral arrangements are used by 92.9 percent, followed by loan loss reserve, which is used by 82.2 percent. The likely reason for the collateral to be widely used is the high credit risk to which banks are exposed which result from the credit they extend to clients through murabahah and ijarah. These facilities represent 67 percent of the funds provided by IAH and 35.89 percent of the total assets of Islamic banks in Bahrain at the end of June 2015 (CBB 2015). Guarantees came in the third place. Collateral arrangements and guarantees are arrangements undertaken before extending credit, while loan loss reserve is determined after extending credit as a cushion against the possibility of future debtor default. On balance sheet netting is a common practice that is adopted by 69.1 per cent of the banks. None of the respondents mentioned that their banks are using parallel Salam contracts; this is probably because banks in Bahrain are not engaged in Salam arrangements, as indicated in the consolidated balance sheets of the Islamic banks published by the CBB. Nearly three quarters of the respondents indicated that their banks use hamish jediah to mitigate against the possible losses in cases in which the order fails to honor his/her commitment. These results are somewhat similar to those reported by Ariffin et al. (2009) who found that collateral arrangements were the most widely

used risk mitigation technique, followed by guarantees and loan loss. However, on balance sheet netting is used by only 22 per cent of the sample.

Bankers were asked to express their opinion of additional issues related to their risk exposure. Table 5 summarizes the responses to the five additional issues relevant to risk management of Islamic banks. Even though Islamic banks have existed for more than three decades, the Islamic bankers still hold the view that there is a lack of understanding of the risks involved in Islamic models of financing, as the mean response is 4.13. This is least applicable to Murabahah, which is the most widely used mode of financing, and is more applicable to Sukuk (Islamic bonds). These opinions are probably due to the lack of standardized Islamic products and contracts. The bankers surveyed believe that a lack of standardization of a number of Islamic financing modes, such as Sukuk, contributed to the risk management challenges facing Islamic banks. Although depositors in Islamic banks expect a rate of return based on profit sharing, Islamic banks are under pressure to emulate the rate of return paid by other Islamic banks and conventional banks. This imposes additional risk related to the liabilities on the balance sheet. Respondents ranked this concern at 4.00. Failure to match the rate of return on deposits paid by competitors will result in depositors shifting their investment to other banks, which results in a withdrawal risk. Islamic bankers rate this risk at 4.11. The bankers also regard seriously the fiduciary risk in which the depositors blame the bank for a lower rate of return, with a score of 3.84. These results confirm those reported by Khan and Ahmed (2001), although the ratings of the issues in Table 5 are higher than those of Ariffin et al. (2009), This is partly due to the accumulation of experience by Islamic banks and improvement in regulation resulting from compliance with Basel II requirements.

Table 5. Mean responses of the respondents regarding risk issues faced by Islamic banks

Issues	Mean	SD*
Lack of understanding of risks involved in Islamic models of financing	4.13	0.66
The rate of return on deposits has to be similar to that offered by others banks	4.00	0.65
Withdrawal risk: A low rate of return on deposits will lead to withdrawal of funds	4.11	0.58
Fiduciary risk: Depositors will hold the bank responsible for a lower rate of return on deposits	3.84	0.73
Lack of standardized Islamic products and contracts	4.14	0.62

*Note: *Standard deviation*

5. SUMMARY AND CONCLUSIONS

The unique structure of Islamic financing modes offered by Islamic banks and their sources of funding have important implications for the type of risks facing Islamic banks. The results of the survey indicate that the credit risk is the most serious risk facing Islamic banks, followed by liquidity risk, and market risk. The type of assets held by Islamic banks might explain such findings. Operational risk is ranked fifth in terms of importance. With regard to the level of risk of the financing modes, mudarabah is perceived as the riskiest, followed by musharakah,

while the most widely used mode, murabahah, is ranked by the respondents as the least risky financing mode. Furthermore, the seriousness of the type of risk associated with financial instruments differs. Such findings indicate that, to manage risk effectively, Islamic banks should evaluate the riskiness of each instrument separately.

Islamic banks are found to adopt traditional risk measurement techniques rather than sophisticated techniques such as value at risk, simulation, and earnings at risk. The relative novelty of Islamic banking instruments and the use of systems developed for conventional banks are probably the reasons why Islamic banks rely more on traditional risk measurement techniques. As for the risk mitigation techniques, Islamic banks are found to use the methods adopted by conventional banks more extensively than those that are more relevant to Islamic instruments.

The findings of the study suggest that the players in the Islamic banking industry, i.e. banks, regulators, supervisory authorities and AAIOFI, should consolidate their efforts to develop guidelines for the identification, assessment, and management of the risks facing Islamic banks, taking into consideration the structure of the balance sheets of those banks. The efforts of the IIFM are a step in the right direction.

The results reported should be read with caution because of the limitations of the study. Those limitations include that respondents might have expressed their beliefs about what banks should be doing rather than reporting actual practices in their banks and that the results might have been affected by the environment following the global economic and financial crisis.

The differences between the results reported in this study and those of Khan and Ahmed (2001) and Ariffin et al., (2009) suggest that there is a need to extend such studies to other jurisdictions. The result of such an extension would provide the necessary background to develop more robust risk measurement and management techniques that the Islamic banking industry requires. A natural extension would be to study the risk management aspects from the perspective of the providers of funds, i.e. investment account holders and shareholders.

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INVESTOR PROTECTION AND CEO COMPENSATION IN FAMILY FIRMS

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Abstract

This paper investigates the relationship between investor protection and CEO pay in family-controlled corporations. Using a panel of 986 firm-year observations from 11 EU countries, we show that the lower the investor protection, the higher the compensation of the CEO. The sensitivity of pay to the institutional context is higher for a family CEO than a professional CEO, a result that corroborates the hypothesis that CEO compensation contracts in family firms are influenced by familiar connections. Overall, these results are more consistent with the hypothesis of rent extraction than with the perspective of optimal remuneration contracts.

1. INTRODUCTION

Family firms are the most widespread form of business organizations (La Porta et al., 1999), running a significant part of the economy in non-Anglo-Saxon countries such as Continental Europe (Faccio and Lang, 2002, Barca and Becht, 2001) and Asia (Claessens et al., 2000), but also in the U.S. (Neubauer and Lank, 1998, Anderson and Reeb, 2003, Gomez-Mejia et al., 2003). From an international perspective, the behavior of family firms may be exposed to the influence of the institutional context. In fact, the ultimate aim that inspires family firm decisions is the result of contrasting forces and values (Corbetta and Salvato, 2004), where the stewardship orientation of family members (Davis et al., 1997), the emotional value attached to the firm (Gomez-Mejia et al., 2007), and the desire to preserve the firm as an asset to pass on to the heirs (Casson, 1999, James, 1999a) are opposed to the opportunity for the family to extract private benefits through the expropriation of minority shareholders (Morck and Yeung, 2003). The level of investor protection of a country might affect this equilibrium, insofar as it could mitigate expropriation of minority investors' wealth by the controlling family (Pindado et al., 2014), so that the ultimate aims of the family may be contingent upon the institutional environment.

Financial studies offer empirical evidence showing that family ownership might be associated with a premium or a discount on firm value and performance, depending on the level of investor protection of the country where the firm operates (Maury, 2006). However, although recent studies urge to consider the effects of the context in which firms are embedded on executive incentives and firm governance (Aguilera et al., 2008, Filatotchev and Allcock, 2010), little evidence exists on the relationship between the institutional context and family firm compensation practices.

In this paper we contribute to fill this gap by performing a cross-country analysis of the relationship between the level of investor protection and CEO pay policies, with a special focus on family firms. We also pay attention to heterogeneity - an inspirational theme that has a prominent role within family business research (Salvato and Aldrich, 2012, Voordeckers et al., 2014, Sharma, 2002) – through the analysis of the different exposure of family CEOs and professional CEOs pay packages to the institutional context.

Results show that the lower the level of investor protection, the higher the total, cash-based, and equity-based CEO compensation. This relationship is confirmed also for family-owned firms, although the sensitivity to investor protection is higher for the family CEO than for the professional CEO. We argue that these results are more consistent with the hypothesis of rent extraction than with optimal remuneration contracts.

To the best of our knowledge, this is the first study that analyzes the relationship between the institutional context and CEO pay in family firms. Although previous research has explored CEO compensation across different countries (see Boyd et al. (2012) for a comprehensive review on the topic), specific evidence for family firms has yet to be found. Through the lens of optimal contracting and opportunistic theories, our study allows for a more nuanced understanding of family firm CEO remuneration policies and also provides new empirical evidence on CEO pay of family-controlled corporations in Continental Europe.

This research also contributes to the literature on CEO compensation practices by exploring CEO pay on a sample of countries characterized by the same cultural milieu (Gomez-Mejia et al., 2010) and by a significant variation in the level of investor protection. This approach allows the removal of differences in pay practices due to cultural norms

that might characterize different economic areas, i.e. Anglo-Saxon countries vs. Continental Europe (Fernandes et al., 2013), thus highlighting the effect of the level of investor protection.

The remainder of the paper is structured as follows. Section 2 discusses the literature and formulates the hypotheses. Section 3 describes the sample and methodology. Section 4 presents the results of the empirical tests. Section 5 discusses the results and conclusions.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1. Investor protection and CEO pay

Law and finance literature postulates that protection of shareholders and creditors by the institutional environment is essential to explaining cross-country patterns of economic development. Higher investor protection is associated with higher income per capita and higher numbers of listed securities (La Porta et al., 2013), more valuable stock markets and more developed financial intermediaries (La Porta et al., 1997, Levine et al., 2000), as well as more efficient resource allocation (Morck et al., 2000b).

Moreover, shareholder protection has a number of implications for the ownership structure of a firm. First, weak investor protection is usually associated with concentrated equity ownership of corporations (La Porta et al., 2000). Second, marginal cost of equity financing is higher in countries with weak investor protection (Himmelberg et al., 2000).

The level of investor protection and the degree of its enforcement can also affect firm performance and growth by decreasing information asymmetries, and by making it easier to raise external capital (Demirgüç Kunt and Maksimovic, 1998). For instance, Dittmar et al. (2003) show that corporations heavily rely on cash in countries with weak investor protection; similarly, Giannetti (2003) shows that institutions that favor creditor rights and ensure stricter enforcement are characterized by higher leverage and higher availability of long-term debt.

More recently, scholars have started to expand the analysis of the legal environment in which firms operate to the design of compensation contracts (Boyd et al., 2012). Under this view, an important source of heterogeneity among legal environments, namely the level of shareholder protection and the degree of their enforcement, can significantly affect corporate contracting decisions and the shape of CEO compensation contracts as well.

With regard to the amount of total compensation granted to the CEO, some scholars argue that a positive relationship arises with the level of investor protection. Under an *optimal contracting perspective*, Albuquerque and Miao (2013) present a model in which, on the premise that better external governance is associated with better internal governance (Klapper and Love, 2004), the level of CEO pay is positively related to the level of investor protection, inasmuch as a better institutional context makes it more profitable for shareholders to grant higher formal pay to the CEO as a substitute for CEO's extraction of private benefits. Contrarily, Brenner and Schwalbach (2009), under an *opportunism perspective*, assume that when

setting compensation packages, directors are exposed to the CEO's power (Bebchuk and Fried, 2003, Eriksson, 2005) as well as to a variety of other incentives to please the CEO (Shivdasani and Yermack, 1999). As a result, the less likely it is that directors can be held legally liable, due to lower investor protection, the more likely it becomes for the management to achieve "too generous" pay schemes. On a sample of firms from 27 countries, they find empirical confirmation to this hypothesis.

The relative amount of incentive-based pay is another aspect of CEO compensation contracts that is exposed to the influence of the institutional context. Zheng et al. (2016) propose a model where, similarly to Albuquerque and Miao (2013), in order to compensate the CEO for shrinking in the consumption of managerial private benefits, additional pay should be granted under the form of incentive compensation, and a positive correlation between the level of investor protection and pay-performance sensitivity in CEO pay arises. Bryan et al. (2010) and Bryan et al. (2011) assume that companies use more equity-based executive pay in countries with high level of investor protection and strict law enforcement, due to the fact that countries with strong legal environments have informationally efficient stock prices (Morck et al., 2000b), which in turn increase effectiveness of equity-based compensation. In a study of four Continental European and four Anglo-American countries, Jouber and Fakhfakh (2012) find a positive association between the strength of investor protection and the relative use of incentive compensations. Similarly, Fahlenbrach (2008) analyzes a sample of large U.S. public companies and detects that firms operating in countries with weak investor protection have lower CEO pay-for-performance sensitivity, and extract excess total compensation from the company. The afore-mentioned research suggests that the use of equity-based compensation schemes is positively related to the strength of investor protection.

On the contrary, Hüttenbrink et al. (2014) advocate a negative relationship between investor protection and stock-based incentives, on the premise that in countries with weak legal environments, pay-for-performance contracts are a substitute for the low level of investor protection.

The analysis of the extant literature on the topic then reveals that both theoretical predictions and empirical evidence reach contradictory results. As suggested by Boyd et al. (2012) in a review of international executive compensation studies over the last two decades, more cross-country research on the impact of institutional environments on executive compensation practices is necessary. On this premise, we study the relationship between the level of investor protection and CEO pay on a sample of 11 Continental European countries over 1998-2010, with a particular focus on family firms, the prevalent form of corporate ownership in Continental Europe.

2.2. Agency relationship in family firms

Within the classical agency-theory approach, CEO incentive compensation is conceived as a remedy to the conflict of interests between shareholders and managers, often referred to as *Agency Problem I*

(Villalonga and Amit, 2006). This agency problem arises from the separation of ownership and control that is typical of widely held firms, where the ownership of a small fraction of cash flows discourages each individual shareholder from monitoring management actions (the free riding problem), leaving managers free to pursue their own interests, eventually to the detriment of the firm's value and shareholder interests (Berle and Means, 1932). In an optimal contracting perspective, executive pay might help to reduce the agency costs arising from the relationship between the CEO and shareholders, through a compensation contract that links CEO pay to the market value of the firm (Jensen and Meckling, 1976).

In family firms, the concentration of ownership in the hands of the family mitigates the *Agency Problem I*, due to either the lack of separation of ownership and control in firms managed by family members (Ang et al., 2000, Fama and Jensen, 1983, Jensen and Meckling, 1976), or the greater incentives for the family to monitor the CEO when the family firm is run by a "professional" CEO (Burkart et al., 1997, Anderson and Reeb, 2003, Shleifer and Vishny, 1986). Nonetheless, other agency costs may arise in family firms (Chrisman et al., 2004), such as altruism and self-control problems due to the combination of ownership and owner-management (Lubatkin et al., 2005, Schulze et al., 2003), which appear in the form of perquisites and privileges granted to family members that they would not otherwise receive (Gersick et al., 1997, Ward, 1987). Moreover, when the family retains a number of shares that assures the control of the firm, and the residual ownership is dispersed amongst several small shareholders, the family has the opportunity to use its controlling position to extract private benefits at the expense of the small shareholders (*Agency Problem II*), especially when the family exercises control without owning a large fraction of the cash flow rights through the use of control-enhancing devices (Claessens et al., 2000, La Porta et al., 1999, Morck et al., 2005, Morck and Yeung, 2003)[12]. Examples of private benefit diversion include the payment of special dividends, excessive compensations scheme, and related-party transactions (DeAngelo and DeAngelo, 2000, Anderson and Reeb, 2004).

However, alongside the agency costs, the family nature of ownership is also associated with several characteristics that potentially benefit the value of the firm. First, as noted above, families are in an extraordinary position to influence and monitor management. This effect is reinforced if monitoring requires knowledge of the firm's technology, provided that "families potentially provide superior oversight because their lengthy tenure permits them to move further along the firm's learning curve" (Anderson and Reeb, 2003). Second, family owners largely relate their own reputation to the economic success of their firms (Corbetta and Salvato, 2004, Davis et al., 1997, Dyer and Whetten, 2006) and

conceive the firm as an asset to pass on to their heirs (Casson, 1999, James, 1999a), thus supporting the view of families as long-term investors committed to the success of the firm they invest in. Third, political connections centered on the family members' relationships might be beneficial to the value of the firm, especially in countries with a high level of corruption (Faccio, 2006).

Contrasting forces then compete within family firms, and the overall efficiency of family ownership depends on how these forces combine, i.e. whether the family pursues the maximization of its own wealth through maximization of the value of the firm or, conversely, the family indulges in parental altruism and expropriation of minority shareholders, so that "family ownership is no longer value-maximizing but rather utility-maximizing for founding families" (Bertrand and Schoar, 2006, pg. 74).

2.3. CEO compensation in family firms

The degree to which the family's needs and desiderata might be effectively satisfied depends on the actions actually implemented by the CEO, who retains the formal power to make decisions within the firm. As a consequence, being one of the more powerful instruments in the hands of the family for addressing CEO actions, the compensation policy cannot be conceived independently from the ultimate aims of the family.

In an ideal setting, where no contrasting objectives among the different groups of shareholders exist, both the family and minority shareholders agree to grant efficient CEO pay, and compensation is set at a level that does not exceed the minimum amount the CEO is willing to accept. In terms of incentives to be provided to the CEO of family firms, despite attenuated owner-manager conflicts, a certain amount of incentives is still granted to the CEO, in order to contrast agency costs related to altruism and self-control problems typical of family ownership (Michiels et al., 2013, Schulze et al., 2001).

On the other hand, when the family pursues the maximization of its own utility and indulges in the extraction of private benefits, the CEO's compensation contract might be shaped accordingly. In cases where the CEO is a member of the family, higher CEO compensation might be a direct form of extraction of private benefits (Dyck and Zingales, 2004, Johnson et al., 2000, Morck and Yeung, 2003). If the CEO is not a member of the family, he/she would find it profitable to collude with the family in the extraction of private benefits (Barontini and Bozzi, 2011, Burkart et al., 2003, DeAngelo and DeAngelo, 2000, Miller et al., 2010), and a more generous pay package would be the reward for acting in the interest of the family. As a result, the CEO's compensation contract departs from the standards of the optimal contracting perspective, and is shaped in order to better accommodate the CEO's preferences, i.e. higher total compensation and lower performance-related pay.

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[12] The expropriation of wealth from other shareholders can take several forms, such as resources diverted from the firm to other firms where the ownership of the family is more concentrated, company properties confiscated by controlling families for their personal use, personal political careers for family members supported by company's resources, as well as higher compensation for family members hired by the company (Morck et al. 2000a).

2.4. Investor protection and CEO compensation in family firms

Within the scheme described above, the exposure of CEO compensation to the influence of the institutional context is affected by the ultimate aim of the family.

In fact, if the extraction of private benefits from the firm is not the primary aim, the family is in the best possible position to negotiate the most efficient compensation contract with the CEO, in light of either its large-block ownership or owner-management (Lubatkin et al., 2007). Differently from widely held firms, in which the increasing monitoring exerted by active investors might mitigate the free rider problem engendered by atomized shareholders and improve the efficiency of contracts (Almazan et al., 2005, Hartzell and Starks, 2003), in efficiency-maximizing family firms the toughest disciplinary power of minority shareholders' scrutiny that comes with a better institutional context doesn't add much to the incentives of the family to negotiate an efficient contract with the CEO, and no significant relationship between the level of investor protection and the CEO pay package design is expected.

We summarize this argument in the following hypothesis:

Hypothesis 1a: Under an optimal contracting perspective, CEO compensation in family firms is insensitive to the level of investor protection.

On the contrary, if the family that controls the firm puts its overall utility as the primary objective, the family needs the cooperation of the CEO for the extraction of private benefits, and the compensation package is set to better accommodate the CEO's preferences, in favor of higher compensation than in the case of arm's length contracting.

The level of investor protection thus affects CEO compensation in two ways.

First, because in a context with better investor protection, the family would be less inclined to expropriate minority shareholders (La Porta et al., 2002), and the need to be "generous" with the CEO would be lowered.

Second, because in contexts with better investor protection, the potential costs to the family for granting excessive compensation to the CEO would be higher. Similar to the outrage reaction of shareholders towards the powerful CEO that grants himself an overly generous compensation package (Bebchuk and Fried, 2003) - both minority shareholders and the market as a whole might react to excessive CEO compensation by imposing indirect costs to the family. Examples of these costs are: the legal fees the family must pay when sued by minority shareholders; the lower stock price at which the stock would trade if higher CEO pay is perceived by the market as a signal of the self-interest of the controlling family (Cohen and Lauterbach, 2008); and the loss in the market value of the family's stock following an eventual "against" issued by a proxy advisor due to the sub-optimal CEO compensation package (Ertimur et al., 2013).

The probability that the family would incur these costs, and the total amount of these costs, is strictly related to the quality of shareholders' protection and financial market transparency (La Porta et al., 2000, La Porta et al., 2002). It follows

that, *ceteris paribus*, in the presence of a better institutional context, the family would be less inclined to accommodate the CEO's requests for higher pay than in contexts characterized by lower investor protection. We summarize these arguments in the following hypothesis:

Hypothesis 1b: Under an opportunism perspective, CEO compensation in family firms is negatively related to the level of investor protection.

2.5. Family CEO, Professional CEO and investor protection

While exploring CEO compensation in family-controlled firms, a common distinction is made with regard to the CEO family status, namely whether the CEO is a member of the family (family CEO) or not (professional CEO). In fact, family and professional CEOs have very different characteristics that significantly affect total compensation, as well as the amount of incentive-based pay to be provided to the CEO.

A manager with family ties enjoys higher employment security than a professional CEO, both because of the fulfillment of family obligations (Gomez-Mejia et al., 2001) and because the family would likely be more complaisant in evaluating his/her performance (Schulze et al., 2001). Higher job security is therefore counterbalanced by a lower level of pay. Moreover, family CEOs have, on average, inferior ability than professional management (Morck et al., 2000a) and, due to family ties, are unlikely to leave the firm for greater pay elsewhere (Gomez-Mejia et al., 2003). These conditions make it unnecessary to pay family CEOs market rates for their services, which is not the case with professional CEOs.

A lower level of compensation is then expected for the family CEO than for the professional CEO (Gomez-Mejia et al., 2003). Empirical analyses support this hypothesis (Gomez-Mejia et al., 2003, McConaughy, 2000, Croci et al., 2012), although some studies have found contradicting evidence (Cohen and Lauterbach, 2008).

In terms of the CEO compensation structure, a characteristic of the family manager is the long-term perspective, a natural outgrowth of family membership (Bertrand and Schoar, 2006). As a consequence, granting long-term incentives is expected to have limited benefits when the recipient is a family CEO (Gomez-Mejia et al., 2003), while increasing the potentially negative effects related to the increased executive power and entrenchment of the family manager (Schulze et al., 2001, Pereira and Esperança, 2008). It follows that, all other things equal, the optimal amount of long-term and stock-based incentives for a family CEO is lower than for a CEO with no familiar connections. Moreover, the large amount of the firm's stock in the portfolio of the controlling family implies that the family CEO directly bears the effects of his/her actions in terms of family wealth (Chrisman et al., 2004). These circumstances make the optimal level of equity-based compensation for a family CEO significantly lower than for a professional CEO.

Following the arguments summarized above and previous empirical evidence, we expect that the compensation package for a family CEO is

characterized by lower total and equity-based compensation than for a professional CEO.

In light of the substantial differences between family and professional CEOs, the analysis of the relationship between the institutional context and CEO pay in family firms must also be refined.

As highlighted in the previous section, in an optimal contracting perspective the CEO's compensation package would be unaffected by the institutional context, and the differences between family and professional CEO pay packages would also be insensible to the level of investor protection. However, when the family aims at extracting private benefits, the emotional relationship amongst family members plays a crucial role with regards to the exposure of the CEO pay contract to the influence of investor protection. In fact, the collectivist culture amongst family members is at the base of bonding social relationships among family members, especially as they meet the economic and social needs of one another, and promote an organizational climate in which personal goals are subordinate to the goals of the collective (Corbetta and Salvato, 2004, James, 1999b). A family CEO responds more than a professional CEO to familial norms of trust, loyalty and altruism, thus showing a greater willingness to adapt his/her own compensation package to the family's needs. As a result, in the presence of better investor protection, a family CEO is more inclined than a professional CEO to curb his/her own compensation, either in terms of total or equity-based pay, in order to attenuate the indirect costs for the family of minority investors' outrage reaction in the presence of "too generous" CEO pay. Likewise, the reciprocity in altruism among family members ensures that when investor protection is low and there are more opportunities to reward the CEO with an extra-rent for allowing family's extraction of private benefits a family CEO's pay increases more than in the case of a professional CEO, due to the greater benevolence of the family towards its-own members.

As a result, we expect that the institutional context plays a moderating role on the relationship between family and professional CEO pay. We summarize the arguments above in the following hypotheses:

Hypothesis 2a: Under an optimal contracting perspective, family and professional CEO pay-packages are insensitive to the level of investor protection.

Hypothesis 2b: Under an opportunism perspective, family CEO pay packages are more sensible to the level of investor protection than professional CEO pay packages.

3. VARIABLES, METHODOLOGY AND SAMPLE

3.1. Variables

The sample consists of Continental European non-financial (SIC 6000-6999) and non-regulated (SIC 4900-4999) corporations, with 986 firm-year observations from 1998 to 2010. We selected relatively large companies, with assets worth more than €300 million13, from 11 countries (Belgium, Denmark, Finland, France, Germany, Italy, the Netherlands, Norway, Spain, Sweden and Switzerland). Family firms made up 40% of our final sample.

Variables used in the empirical analysis are described as follows (details provided in Table 1):

CEO compensation. Different definitions are taken into consideration, such as total, cash-based and equity-based compensation. Data on CEO pay was collected from BoardEx and, when unavailable, we gathered data from the financial statements on the website of the firms included in the sample.

Family Ownership. In order to evaluate how family control affects CEO pay, we estimated family ownership, tracing the identity of the ultimate largest shareholder according to the standard methodology developed by La Porta et al. (1999) and Claessens et al. (2000). As in Faccio and Lang (2002), we started by using 10% as the cut off point for the existence of a control chain (a listed company with no shareholder owning more than 10% is considered widely held). However, we imposed two additional requirements to assess the influence of "strong" family control: a) either the family controls more than 51% of direct voting rights, or it controls more than twice the voting rights of the second largest shareholder; b) according to Astrachan and Shanker (2003), at least one member of the firm has to sit on the Board of Directors[14]. Hence, *Family Firms* is a dummy variable that takes the value 1 if the characteristics described above are satisfied, and 0 otherwise.

For family firms, we assess whether the CEO is a family member (*Family CEO*) or not (*Professional CEO*).

Investor protection. Cross-country differences related to the level of investor protection are detected using the Anti-director Rights Index (*ADR Index*) as a proxy for the legal environment and governance characteristics[15].

This index, originally proposed by La Porta et al. (1998), is a composition of three proxies for shareholder voting and three for minority protection. With the aim of improving its accuracy, Spamann (2010) refined the process for collecting and organizing the data, obtaining a more objective and reliable version of the index[16]. This refined

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13 Companies included in the sample are selected at the beginning of the period (1998) according to the size of the assets. The same list of companies is left unaltered over the entire period (1998–2010), except for delisted firms, which have been removed from the sample at the year of delisting.

14 In fact, since the sample is restricted to listed companies, the presence on the Board is the better approximation for the "family participation in the business" suggested by Astrachan and Shanker (2003).

15 Over a hundred published papers have used this index in corporate governance empirical studies, in very different fields of research (Roe, 2006, Pinkowitz et al., 2006, Nenova, 2003, Durnev and Kim, 2005).

16 As quoted from Spamann (2010), the method at the base of the revised version of the ADR Index differs from that of La Porta et al. (1998) in three specific, interrelated respects, all of which aim to produce the most reliable measurement possible. First, the raw legal data derive directly from primary materials analyzed with the help of local lawyers. By contrast, La Porta et al. (1998) did not involve lawyers in the data collection process and obtained the data mostly from secondary sources such as Price Waterhouse's Doing Business reports for various. Second, Spamann (2010) documents these data with references compliant with standards of legal scholarship. In contrast,

version of the ADR Index was thus employed in our regressions as a proxy for the level of investor protection.

Control Variables. In our analysis, we considered a set of variables that previous studies had found to be determinants of CEO pay, such as: ownership concentration (Firth et al., 2007); firm size (Djankov et al., 2008, Rosen, 1982); stock market and ROA (Gabaix and Landier, 2008, Abowd and Kaplan, 1999, Core et al., 1999); firm risk (Cyert et al., 2002, Smith and Watts, 1992); CEO duality (Core et al., 1999); the number of years the CEO has been appointed and the one-tier or two-tier structure of the Board.

Accounting returns, as well as other accounting information, were obtained from Worldscope, while market returns were collected from Datastream.

Table 1 summarizes the list of variables used in the empirical analysis.

Table 1. Definition of Variables

Description	Variable	Type of Variable
CEO Base compensation	BaseComp	Log of Salary+Bonus+Other annual benefits
CEO Equity compensation	EquityComp	Log of the value of Stock and Options Grants at the grant date
CEO Total compensation	TotalComp	Log of the sum of Base and Equity CEO Compensation
Index of investor protection	ADRI	Ranges from 1 to 6 as investor protection increases
A family is the ultimate owner of the firm (see the definition in the text)	Family firms	Dummy (1; 0)
The firm is widely held or is controlled by a widely held firm	Nonfamily firms	Dummy (1; 0)
The CEO belongs to the family	FamilyCEO	Dummy (1; 0)
The CEO of a family firm doesn't belong to the family	ProfessionalCEO	Dummy (1; 0)
Ownership concentration	Ownership	Stake of cash flow rights held by the ultimate shareholder
Firm Size	FirmSize	Log of Total Assets
Stock Performance	Return	Annual stock market returns
Accounting Performance	ROA	Returns on Assets
Firm Risk	StandardDev	Standard deviation of stock returns
CEO duality	Duality	Dummy (1; 0)
Two-tier Board structure	Two-tier	Dummy (1; 0)
CEO Tenure	Tenure	Number of years since the CEO was appointed
Year Dummies	Year t	Set of Dummies (1; 0)
Industry Dummies	Industry	Set of Dummies (1; 0)
Country Dummies	Country	Set of Dummies (1; 0)

La Porta et al. (1998) provide no public documentation of the law underlying the coding of the original ADRI. Finally, Spamann (2010) employed a detailed fifteen-page coding protocol, to ensure consistent coding of the raw data into numerical index values, while La Porta et al. (1998) provided only the index component definitions, which contain a fair number of ambiguities.

3.2. Methodology

To test the hypotheses described in Section 2, we regressed annual CEO compensation on family ownership variables and the level of investor protection, while controlling for industry and company characteristics. We estimated the following panel regression with mixed random and fixed effects:

$$\text{Comp} = \alpha + \beta \text{ CG Variables} + \gamma \text{ ControlVariables} + \delta \text{FixedEffects} + \varepsilon \text{RandomEffects} \quad (1)$$

where, *Comp* is total, cash and equity compensation respectively for firm *i* in year *t*;

CG Variables are corporate governance variables related to the firm *i* in year *t-1* (i.e. different family firm dummies and ADR Index);

ControlVariables are the groups of variables for firm *i* in year *t-1* described above. *Fixed Effects* included year and industry dummy variables. For industry effects, we used 12 dummy variables based on the Campbell (1996) classification;

Random Effects captured the correlation between error terms within each country.

Specific tests on CEO compensation in family firms were based on the interaction between family ownership characteristics (*Family firms*, *Family* or *Professional CEO*) and the level of investor protection (*ADR Index*).

3.3. Sample characteristics

Table 2 summarizes the main characteristics of the firms included in the sample.

In terms of CEO pay, the mean (median) total CEO compensation for the sample as a whole was €2.8 (1.4) million, with a cash-based component equal to €1.8 (1.0) million and a lower equity-based component (€1.0 million on average). The sub-sample of family firms shows a slightly higher, although not significant, total compensation than nonfamily firms, with a higher cash-based component and a lower average amount of equity-based pay. As the analysis will later clarify, this is mainly due to nonfamily CEOs (in family firms), whose total compensation is, on average, higher than that of CEOs in nonfamily firms.

On average, family firms are smaller than nonfamily firms, with a slightly lower risk, as measured by standard deviation of stock returns computed over the previous 256 days. However, no significant differences were detected in terms of accounting and market performance (ROA and stock returns, respectively). The correlation matrix is reported in the Appendix.

Table 2. Sample characteristics

	Total Sample (N=986)		Family Firms (N=390)		Nonfamily Firms (N=596)		Test Family vs NonFamily	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
CEO Pay								
BaseComp (€ ,000)	1'796	1'088	2'007	1'088	1'659	1'090	*	
EquityComp (€ ,000)	1'040	-	952		1'097	-		*
TotalComp (€ ,000)	2'835	1'366	2'973	1'448	2'745	1'328		
Firms' Characteristics								
FirmSize (€ million)	19'094	7'039	14'565	4'641	22'058	8'832	***	***
ROA	0.066	0.601	0.063	0.592	0.068	0.606		
Return	0.146	0.137	0.139	0.135	0.150	0.137		
StandardDev	0.328	0.318	0.319	0.301	0.333	0.324	*	*

*Note: Statistical significance: * = p < .10; ** = p < .05; *** = p < .01*

4. RESULTS

Tables 3 and 4 summarize the results for multivariate analysis along different model specifications. In each table, dependent variables are CEO total compensation (*TotalComp*), cash compensation (*BaseComp*) and equity-based compensation (*EquityComp*), respectively. The determinants of these variables were analyzed firstly through a "basic" regression (columns from (1) to (3)), and then with the inclusion into the regression of interaction terms for the level of investor protection (columns from (4) to (6)).

In all regressions we use a set of control variables that previous studies have found to be significant determinants of CEO pay. As expected, ownership concentration has a negative and statistically significant relationship with executive pay in all specifications. The size of the firm (*FirmSize*) is positively related to the amount paid to the CEO, as well as the firm's accounting performance, *ROA*. Other significant determinants are the number of years the CEO has been appointed (*Tenure*) and, to a lesser extent, the two-tier structure of the Board (*Two-tier*).

4.1. CEO pay and Investor protection in Family vs. Nonfamily firms

Table 3 assesses the impact of investor protection on CEO pay by distinguishing between family and nonfamily firms.

Table 3. Ownership, Investor Protection, and CEO compensation

Dependent variable	TotalComp (1)		BaseComp (2)		EquityComp (3)		TotalComp (4)		BaseComp (5)		EquityComp (6)	
Intercept (non family)	0.7874	***	1.7952	***	-6.6605	***	0.7535	**	1.7679	***	-6.8098	***
	(2.67)		(10.46)		(-3.05)		(2.39)		(8.75)		(-3.25)	
Family firms	0.1146		0.1143		0.0029		0.0526		0.0647		-0.2644	
	(0.99)		(1.43)		(0.01)		(0.37)		(0.53)		(-0.77)	
ADRI	-0.7410	***	-0.6162	**	-0.9212	**						
	(-3.01)		(-2.54)		(-2.25)							
ADRI*Nonfamily Firms							-0.6959	**	-0.5801	**	-0.7378	
							(-2.51)		(-2.08)		(-1.16)	
ADRI*Family Firms							-0.8311	***	-0.6886	***	-1.3095	***
							(-2.92)		(-2.91)		(-3.08)	
Ownership	-0.0063	***	-0.0030	*	-0.0227	***	-0.0063	***	-0.0030	*	-0.0226	***
	(-3.22)		(-1.84)		(-2.77)		(-3.09)		(-1.74)		(-2.75)	
FirmSize	0.3851	***	0.3116	***	0.5167	***	0.3870	***	0.3131	***	0.5248	***
	(12.84)		(18.08)		(3.40)		(12.92)		(18.66)		(3.57)	
ROA	1.8825	***	1.0103	**	7.2476	***	1.8718	***	1.0009	**	7.2175	***
	(5.99)		(2.38)		(3.24)		(5.99)		(2.33)		(3.25)	
Return	0.0517		-0.0331		-0.2078		0.0508		-0.0340		-0.2090	
	(0.84)		(-0.52)		(-0.71)		(0.82)		(-0.53)		(-0.70)	
StandardDev	-0.0681		0.1331		-0.8931		-0.0537		0.1451		-0.8367	
	(-0.12)		(0.29)		(-0.56)		(-0.09)		(0.31)		(-0.51)	
Duality	-0.0073		0.0839		-0.5799		-0.0058		0.0849		-0.5685	
	(-0.04)		(0.45)		(-1.01)		(-0.03)		(0.45)		(-0.99)	
Two-tier	-0.0347		-0.0588		0.4218	***	-0.0341		-0.0591		0.4389	***
	(-0.67)		(-1.17)		(5.85)		(-0.62)		(-1.12)		(6.07)	
Tenure	0.0265	***	0.0226	***	0.0431		0.0262	***	0.0223	***	0.0417	
	(2.93)		(2.80)		(1.02)		(2.93)		(2.76)		(1.04)	
Difference in slope ADRI*Family Firms vs ADRI*WH Firms							-0.1352		-0.1086		-0.5717	
							(-0.58)		(-0.60)		(-0.67)	
Pseudo R²	41.40%		37.98%		25.48%		41.34%		37.85%		25.63%	
n	986		986		986		986		986		986	

*Note: * = p < .10; ** = p < .05; *** = p < .01*

The intercept of regression is the coefficient for nonfamily firms. Within the first specification (columns from (1) to (3)), the non-significant coefficients on *Family firms* suggest that CEO compensation in family firms is not different from that of nonfamily firms. These results differ from those obtained by Croci et al. (2012), who find a significant lower total CEO compensation for family firms, due to a lower level of both cash-based and equity-based compensation. The difference is probably due to the different period covered (1998-2010 vs. 2001-2008), the number of countries

included (11 vs. 14 countries) and the different sample selection[17].

Moving on to evaluating the influence of institutional context on CEO compensation, the coefficient on *ADR Index* is always negative and highly significant (columns from (1) to (3) in Table 3) suggesting that higher investor protection is associated with lower cash-based, equity-based and total CEO pay. These results are in contrast with the optimal contracting hypothesis of a positive association between investor protection and both total CEO pay (Albuquerque and Miao, 2013) and performance-based pay (Zheng et al., 2016, Bryan et al., 2010, Bryan et al., 2011, Jouber and Fakhfakh, 2012); instead, they support the view that in the presence of high level of investor protection, the corporate board strives to design the best possible CEO compensation contracts, due to the threat of being held liable for not acting dutifully on behalf of their shareholders (Brenner and Schwalbach, 2009). Therefore, the evidence that "generous pay" CEO contracts are observed in countries with weak institutional environments corroborates the opportunism perspective.

In order to assess whether the effect of the legal environment on CEO pay differs between family and nonfamily firms, we interact the dummies for the firm's ownership with ADR index. The coefficients on *ADRI*Nonfamily Firms* (columns from (4) to (6) in Table 3) are all negative, although only significant for total and cash-based compensation, as evidence of the fact that in contexts characterized by lower investor protection the increase in total pay is mainly driven by cash-based compensation. This result suggests that the opportunism hypothesis is supported in nonfamily firms, as within a more favorable context the CEO extracts higher pay.

With regard to family firms, the opportunism hypothesis predicts that investor protection would be negatively related to CEO pay. In table 3 (columns from (4) to (6)), the coefficients on *ADRI*Family Firms* are all negative and significant. This result thus corroborates *Hypothesis 1b*, insofar as family firms grant higher pay to their CEOs in contexts with lower investor protection. Results also suggest that in order to get higher total compensation, a CEO may be willing to accept an even higher amount of equity-based compensation – despite the increase in sensitivity to the firm's performance carried by the grant of stock and stock options - as a necessary stratagem to overcome possible outrage reaction from shareholders. As suggested by Bebchuk and Fried (2003, pg. 13), over a certain amount, additional cash-based compensation easily generates an outrage reaction from shareholders, while the grant of equity-based pay provides more defensible reasons in light of the possible benefits from improved incentives, other than being more easily camouflaged. Results in Table 3 are consistent with this interpretation: in countries with low investor protection, CEOs enjoy consistently higher cash-based pay than in countries with higher investor protection, and the concurring higher equity-based pay might be conceived as an additional form of rent

extraction, instead of a means aimed at increasing pay-performance sensitivity.

4.2. CEO pay and Investor protection within Family firms: family CEO vs. professional CEO

We further analyze the impact of investor protection on CEO pay in family firms by distinguishing between a family CEO and a professional CEO.

First, we assess whether significant differences between family and professional CEO pay exist. In Table 4, the intercept of regression is the coefficient for nonfamily firms. Within the first specification, coefficients on *Professional CEO* (columns from (1) to (3) of Table 4) indicate that professional CEOs of family firms receive higher total and cash-based compensation than CEOs of nonfamily firms, with non-different equity-based compensation. To our best knowledge, this is the first empirical confirmation to the theoretical prediction developed by Chrisman et al. (2013) that professional CEOs in family firms request higher total compensation than CEOs of nonfamily firms, as a premium for the specific risks and costs associated with family firms that they must face, such as bounded rationality problems associated with family-centered noneconomic goals and the family handcuff due to the difficulty to transfer to other contexts the idiosyncratic knowledge obtained working in family firms.

Coefficients on *Family CEO* in columns from (1) to (3) indicate that non-significant differences in pay packages are detected between family CEOs and CEOs of nonfamily firms, except for a slightly lower level of equity-based pay granted to family CEOs. Family CEOs have instead a significantly lower total, cash and equity-based compensation than professional CEOs (as highlighted by the negative and highly significant difference between coefficients on *Family CEO* and *Professional CEO* at the bottom of Table 4), thus confirming the structural differences in compensation packages between the CEO types in family firms (i.e. Gomez-Mejia et al., 2003, McConaughy, 2000).

In light of these differences, we investigate the moderating effect of investor protection on CEO pay for the different types of CEOs. In Table 4 - specifications from (4) to (6) - the three interaction terms measure the sensitivity of CEO pay to the ADR Index, with regard to the CEO of nonfamily firms, to the professional CEO, and to the family CEO in family firms, respectively. The coefficients are all negative and significant (except for the equity-based pay coefficient on nonfamily firms), thus revealing that lower CEO pay is associated with higher levels of investor protection, whatever the nature of the CEO. However, some relevant differences arise with regard to the magnitude of coefficients: the sensitivity of family CEO total and cash-based pay to the institutional context is about twice that of a professional CEO, and about three times the ones measured on equity-based pay. As reported at the bottom of Table 4, these differences are all statistically significant. The differences are even higher when the sensitivity of family CEO pay to investor protection is compared to the CEO of nonfamily firms.

Table 4. Family nature of the CEO, Investor Protection, and CEO compensation

Dependent variable	TotalComp (1)		BaseComp (2)		EquityComp (3)		TotalComp (4)		BaseComp (5)		EquityComp (6)	
Intercept (non family)	0.9524	***	1.9160	***	-6.1866	***	0.9625	***	1.9252	***	-6.1727	***
	(3.23)		(9.50)		(-2.85)		(3.13)		(9.25)		(-3.01)	
Professional CEO	0.2344	**	0.2023	***	0.3452		0.1992	**	0.1767	**	0.2024	
	(2.39)		(3.43)		(1.35)		(2.25)		(2.09)		(0.91)	
Family CEO	-0.0737		-0.0238		-0.5447	*	-0.5479	**	-0.4070	***	-2.1492	**
	(-0.58)		(-0.25)		(-1.75)		(-2.40)		(-2.83)		(-1.97)	
ADRI	-0.7426	***	-0.6177	**	-0.9306	**						
	(-2.95)		(-2.50)		(-2.29)							
ADRI*Nonfamily firm							-0.6413	**	-0.5380	*	-0.5917	
							(-2.14)		(-1.76)		(-0.92)	
ADRI*Professional CEO							-0.7799	***	-0.6440	**	-1.0877	**
							(-2.63)		(-2.50)		(-2.54)	
ADRI*Family CEO							-1.4074	***	-1.1563	***	-3.1842	**
							(-3.09)		(-3.87)		(-2.24)	
Ownership	-0.0059	***	-0.0027	*	-0.0215	***	-0.0055	**	-0.0024		-0.0204	***
	(-2.77)		(-1.73)		(-3.02)		(-2.48)		(-1.43)		(-2.69)	
FirmSize	0.3762	***	0.3050	***	0.4908	***	0.3767	***	0.3053	***	0.4940	***
	(13.41)		(18.11)		(3.34)		(13.32)		(18.62)		(3.44)	
ROA	1.8572	***	0.9914	**	7.1837	***	1.7443	***	0.8987	*	6.8295	***
	(5.94)		(2.20)		(3.33)		(5.21)		(1.89)		(3.17)	
Return	0.0555		-0.0304		-0.1949		0.0582		-0.0286		-0.1785	
	(0.95)		(-0.47)		(-0.66)		(0.99)		(-0.44)		(-0.60)	
StandardDev	-0.0393		0.1546		-0.8137		-0.0660		0.1329		-0.9140	
	(-0.07)		(0.35)		(-0.54)		(-0.12)		(0.31)		(-0.61)	
Duality	0.0152		0.1003		-0.5115		-0.0067		0.0818		-0.5740	
	(-0.07)		(0.35)		(-0.54)		(-0.12)		(0.31)		(-0.61)	
Two-tier	-0.0895		-0.0996	*	0.2776	***	-0.1219	**	-0.1274	**	0.2018	
	(0.95)		(-1.69)		(3.25)		(-2.21)		(-2.44)		(1.63)	
Tenure	0.0264	***	0.0225	***	0.0430		0.0261	***	0.0223	**	0.0421	
	(2.67)		(2.58)		(1.01)		(2.58)		(2.46)		(1.05)	
Difference Family CEO vs. Prof. CEO	-0.3081	***	-0.2261	***	-0.8899	***	-0.7470	***	-0.5837	***	-2.3516	***
	(-4.09)		(-3.13)		(-3.92)		(-3.30)		(-3.93)		(-2.22)	
Difference in slope ADRI*Professional CEO vs ADRI*WH Firms							-0.1387		-0.1060		-0.4960	
							(-0.80)		(-0.68)		(-0.79)	
Difference in slope ADRI*Family CEO vs ADRI*WH Firms							-0.7661	**	-0.6184	***	-2.5925	
							(-2.36)		(-3.23)		(-1.57)	
Difference in slope ADRI*Family CEO vs ADRI*Professional CEO							-0.6274	**	-0.5123	**	-2.0965	*
							(-2.00)		(-2.44)		(-1.66)	
Pseudo R2	41.82%		38.23%		25.93%		42.05%		38.35%		26.61%	
n	986		986		986		986		986		986	

*Note: Statistical significance: * = p < .10; ** = p < .05; *** = p < .01*

These results then corroborate the opportunism perspective presented in *Hypothesis 2b*. The higher sensitivity to the level of investor protection of the family CEO suggests that when the constraints related to the institutional context are lessened, the family has a more generous attitude towards the CEO if he/she is a family member rather than an externally-hired CEO. This interpretation finds further support from the circumstance that the highest difference in sensitivity to the level of investor protection is detected for the equity-based pay, a component of the compensation package whose incentive power has a lower effectiveness on the owner-manager rather than on the professional CEO.

Overall, the results reported above suggests that the process of setting a family CEO's pay is affected more by the emotional relationship amongst family members than by the aim of minimizing agency costs.

5. CONCLUSIONS

This study investigates the relationship between the level of investor protection and CEO compensation, with a particular focus on family firms.

Using a sample of companies across 11 Continental European countries, our empirical analysis documents that a higher level of investor protection is associated with lower total, cash-based and equity-based pay in family firms. Similar results are found with regard to nonfamily firms, except for the non-significant sensitivity of equity-based pay to the institutional context.

This finding stands in contrast with an optimal contracting perspective, which suggest that higher pay and higher incentives should be granted in better institutional contexts. However, different explanations of this relationship arise with regard to family and nonfamily firms, in light of the different agency relationships characterizing these two types of ownership.

In nonfamily firms, the main agency problem is the divergence of interests between shareholders and managers, and the negative relationship between CEO pay and the level of investor protection we detect is consistent with the managerial power perspective, insofar as in countries with weak institutional environments, the lower exposure to shareholders' scrutiny makes it easier for the rent-seeking CEO to exercise his power towards the board and to get a higher level of total compensation, mainly in the form of cash-based pay.

When the company is family-owned, conflicts between the CEO and the family are virtually absent, due to either the tight control exerted by the family on the externally-hired CEO, or the CEO also being the owner of the firm. Instead, the main agency

problem is related to the conflict of interests with minority shareholders that arises when the family aims at maximizing its own utility through the consumption of the private benefits of control. Within this framework, when investor protection is weak, the family has higher incentives to extract private benefits and faces lower outrage costs associated with the more generous pay to the CEO for his cooperation. Hence, the negative relationship between CEO pay and the level of investor protection we detect in family firms is consistent with the willingness of the family to recognize higher CEO pay in contexts that favor the extraction of private benefits for itself, namely when investor protection is low. The higher sensitivity to the level of investor protection that family CEO pay shows in comparison to professional CEO pay suggests that emotional relationships amongst family members contribute to the shaping of CEO pay contracts.

Overall, our analysis offers theoretical and empirical insights on the relationship between CEO pay and the level of investor protection in family firms, a topic substantially neglected in the current literature.

This study also has practical implications for regulators. By showing that the level of investor protection is related to the level of CEO pay, we provide relevant information about the effectiveness of the institutional context in mitigating CEO pay, a theme that over the last decade has captured notable attention from the public opinion, calling for a regulatory intervention that may curb the apparently unstoppable rise in CEO remuneration.

In response to this request, national regulators have intervened through a more stringent regulation in terms of disclosure on executive pay, even going as far as indicating the composition of fixed and variable pay in CEO pay packages, and by providing shareholders with the right to vote on the compensation policy proposed by the company in the general meeting ("Say-on-Pay"). However, the efficacy of these measures in curbing the level of CEO pay is controversial, as well as the side effects they have produced in terms of the distortion of incentives for CEOs (see for example: Ferrarini et al., 2010). Our results highlight that building a more "investor friendly" environment, where minority shareholders have the opportunity to better monitor management and protect their own interests from expropriation, is also an effective way to mitigate "overly generous" CEO compensation.

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Appendix A

Table 5. Correlation matrix

	Base Comp		Equity Comp		Total Comp		Family		Family CEO		Non-family CEO		ADRI		Owner-ship		Firm Size		ROA		Return		Standard Dev		Duality		Two-tier
Equity Comp	0.212	***																										
Total Comp	0.870	***	0.567	***																								
Family	-0.028		-0.051		-0.033																							
Family CEO	-0.154	***	-0.071	**	-0.148	***	0.579	***																				
Non-family CEO	0.112	***	0.001		0.098	***	0.637	***	-0.246	***																		
ADRI	-0.308	***	-0.148	***	-0.321	***	-0.175	***	-0.163	***	-0.058	*																
Ownership	-0.164	***	-0.124	***	-0.185	***	0.411	***	0.361	***	0.138	***	-0.154	***														
Firm Size	0.430	***	0.154	***	0.433	***	-0.175	***	-0.265	***	0.043		0.153	***	-0.273	***												
ROA	0.136	***	0.156	***	0.179	***	-0.038		-0.070	**	0.021		0.065	**	-0.003		0.116	***									
Return	-0.043		-0.018		-0.028		-0.003		0.017		-0.021		0.071	**	0.024		-0.006		0.109	***						
Standard Dev	-0.060	*	-0.091	***	-0.094	***	-0.082		-0.037		-0.062	*	-0.044		-0.060	*	-0.171	***	-0.214	***	-0.031					
Duality	-0.120	***	0.088	***	-0.078	**	-0.133	***	-0.005		-0.173	***	0.273	***	-0.120	***	0.079	**	0.067	**	0.116	***	-0.024			
Two-tier	0.066	**	0.028		0.033		-0.137	***	-0.102	***	-0.075	**	-0.268	***	0.007		-0.187	***	-0.114	***	-0.006		0.093	***	-0.090	***
Tenure	0.118	***	0.111	***	0.136	***	0.212	***	0.169	***	0.084	***	-0.088	***	0.008		-0.100	***	0.035		0.005		-0.078	**	0.077	**	0.015

*Note: * = 10%; ** = 5%; *** = 1%*

STRATQUAL: MEASURING THE DENSITY OF THE STRATEGIC MANAGEMENT DELIBERATE PROCESS IN MICRO AND SMALL COMPANIES PERFORMANCE

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Abstract

This paper aims to contribute to the study of the impact of strategic management concepts in micro and small company performance using the StratQual measuring. Micro and small companies are, in the Brazilian economic scenario, responsible for a considerable amount of jobs created, GDP's formation, income generation and the capacity of adapting to the market's necessities with agility and flexibility. Studies that were carried out by SEBRAE - "Serviço Brasileiro de Apoio às Micro e Pequenas Empresas" showing that micro and small companies formulate their strategies according to the perception that the entrepreneurs have of possible markets reactions. The StratQual index is presented as a measuring instrument that aims to allow a company to verify the intensity of its strategic management's process, its evolution, permiting comparisons between different economic sectors, and enabling benchmarking about strategic management processes. One the main results indicates that micro and small companies that perform the activities of each one (Analysis, Planning, Implementation, Control, Feedback) in the Strategic Management process' stages with higher intensity have a superior performance.

1. INTRODUCTION

In the Brazilian economic scenario, micro and small companies account for much of what is produced. Micro and small companies stand out, especially due to jobs creation and their impact in GDP's development, as well as the generation of income. Despite being more apt to attend the changes in the Market and to adjust themselves in uncertain environments these companies present types of behaviour that distinguish them from bigger organizations, under other aspects. Types of behavior such as risk aversion and low capacity to raise funds that would enable them to reach specific objectives, according "Serviço Brasileiro de Apoio às Micro e Pequenas Empresas" - SEBRAE (2009). The SEBRAE is a public - private organization in Brazil that aims to develop, give training and support to small and medium enterprises to make them sustainable and promote their growth.

A study that was elaborated by the National Bank of Economic Development (BNDES, 2004) shows that part of the increase small enterprises is a result of globalization, due to the necessity of outsourcing of secondary activities by larger companies in their movement to concentrate on their core business. The small companies assume, in this manner, the peripheral parts of the big companies.

The growth of the size of these organizations normally implies in the increase of their structural complexity. These elements associated to the accelerated rate of environmental changes, as the result of several factors, such as technological development, integration of markets, international competition, demographic profile and consumption behaviour (Meirelles, 1995) drive companies permanently review their strategies to reach their objectives.

Independent of the size or type of business, the relevance of strategy has been ever more object of recognition among companies. Thereby, business strategy emerges as a group of concepts and models with the objective of giving the company tools to answer the business environment demands. The perception of the importance of strategy and of the environment for the business' success increases as management starts to been seen under a systemic and organic point of view, countering technical, closed and predictable models, that do not fit in an environment of global competition (Mintzberg, 2003).

Rumelt, Schendel and Teece (1991) state that "Strategic management as a field of inquiry is firmly grounded in practice and exists because of the importance of its subject. The strategic direction of business organizations is at the heart of wealth creation in modern industrial society"(p.6). As

Hoskisson et al. (1999) teach that the development of the field of strategic management has been dramatic in the last 20 years of the 20th century. Early strategy researchers focused their research on identifying practices that contributed to firm success, mainly in big companies. In the 1960s, the seminal work of Chandler Jr. (1962) in his book Strategy and Structure focused on how the economic growth off four big companies changed their organizational structures. Later, in the end of the 1970s the field shifted to the industrial organization (IO) perspective, influenced by the work of Porter (1979, 1986, 1998). As Barney (2002) argues, Michael Porter was the most important scholar of the strategic management field in the last 39 years. In the 1980s the Transactions Cost Analysis and Agency Theory emerged, both inspired in the work of Ronald Coase. Also in the 1980s the Resource Based View of the Firm (Wernerfelt, 1984) emerged but only really gained traction in the field in the 1990s. Most of the work predating the late 1980s focus or is exclusively focused on big companies and multinationals.

According to Wright, Kroll and Parnell (2000), strategic management is a continuous process that takes into consideration the variations that happen when strategy is being formulated, throughout its implementation and, as the environmental or organizational conditions change.

Since the beginning of the 90s, concerns with the strategy formulation and implementation process are indicated as competitive differentials, decurrent of the adapting conditions that the organizations will have to be able to carry out, but, in most cases, cannot do it with the necessary speed, rhythm and cadence. The term Strategic Management is historically considered as a great competitive obstructer of the micro and small companies, given the issue that they have in giving continuity to their pre-established plans and planning. For Schendel (1992), the link between strategy and performance is the problem's critical point. In Mintzberg's (2003) definition, strategy is switched because something fundamental has been changed in the environment. The fact of switching a strategy creates its own discontinuity, not only in the organization but also in the business environment.

The strategic management process involves environmental analyses, establishing organizational guidelines, strategy formulation, implementing strategy and strategy control. Furthermore, it is fundamental the integration to the main business' functions within the company – production, finances and marketing – to the development process. Thus, the strategic decisions are those that allow the company to develop itself and pursue its objectives within its environment in the best possible manner (Certo and Peter, 2005).

Studies that were carried out by SEBRAE (2009) show that micro and small companies formulate their strategy according to the entrepreneur's perception of a market's evolution. However, Porter (1986) states that the smaller the company, the more important strategy is, because the smaller companies, unlike the bigger ones, are more sensitive to market's variations and, therefore, need to have knowledge of the competitive environment in a faster way to respond, guaranteeing survival in businesses.

If on one side the entrepreneurs have difficulties in implementing the strategic management process in their companies, on the other side this process, when well-managed, can produce a better performance and survival chance in the market that these organizations work. It is possible to observe, in this context, a gap in the studies about strategy in micro and small companies, which relate to the strategic management process's constructs related to the performance of these firms. In this sense, it is important to ask the following question: which are the impacts of the strategic management process's stages as antecedents of the micro and small companies' performance?

Thereby, the objective of this article is to verify the impact of the strategic management process' stages as antecedents of the micro and small companies' performance. Starting from validating the scales that measure the intensity of the strategic management process' stages; the test of a theoretical structural model that can identify the relations and impacts of these stages as antecedents of performance of the micro and small companies' performance, as well as possible bilateral relations.

This study is justified for the possibility to observe that an adequate management of this process can imply in a superior performance of these companies. Furthermore, when a strategy is implemented, it may need organizational modifications as the environment or internal conditions also suffer modifications (Wright, Kroll and Parnell, 2000). As consequence of these modifications, the strategic elements also suffer alterations. These changes are always difficult or even impossible to predict. Consequently, a deliberated strategy can be carried out in its original form, in a modified form or even in a completely different form but all of them will affect the company's performance. In addition, in the researches presented in Brazilian conferences and in journals, none of correlated studies was found.

In the literature, it is possible to say that strategic management has been presented as a sequence of stages, whose denomination varies among the authors but that follow the same line in conceptual terms. It is observed that they converge to a sequence of stages, many times having similar denominations or dismemberments, which involve essentially five steps: analysis, planning, implementation, strategic control and feedback. These are considered the stages of the strategic management process and are correlated with the organizational performance in this study.

2. THEORETICAL PATHS

Strategy has several definitions that vary according to the organizations' interests. One just has to look at the number of authors that conceptualize the term. However, a consensus among all the strategic definitions is the inseparability between the organization and the external environment that, if on one hand represents a condition for its activity, on the other hand, offers business opportunities. The relation between organization and the environment is the focus of the strategy concept.

According to Hitt, Ireland and Hoskinsson (2008), a strategy is an integrated and coordinated set of actions defined to explore essential

competencies and obtain competitive advantage. When they define a strategy, companies choose competitive alternatives. In this sense, the strategy indicates what the company pretends to do and what it does not. Being important to the company's success, strategy consists in choosing between two or more alternatives.

A big part of what has been written about strategy presupposes its conceptualization as a set of guidelines that were consciously deliberated and define organizational decisions. This concept, called intentioned strategy by Mintzberg (2003) is representative of the prescriptive schools of strategic thinking. Thus, for a leader of the so called planning school, strategy is seen as a controlled, conscious and formal process of interaction between a company and its environment, accompanied by alterations of the internal dynamic aspects of the company (Ansoff and McDonell, 1997).

However, a company's strategic position may or may not result in the total fulfilment of the plans established beforehand. To explore this relation, Mintzberg and Waters (1985) propose a rating of performed strategies into deliberate and emergent. Deliberate Strategies are the ones that are carried out as they were explicitly planned, through a controlled process; Emergent Strategies are consistent strategies' standards that were performed in spite of (or in the absence of) intentions. Whilst the first definition focuses on the company's management and control, the second is linked to the notion of apprenticeship – starting from a triggered action, it is possible to obtain feedback effects that are considered as sequent actions, and the process will continue in a form that the performed convergences' actions will configure a strategy.

Yet, the reality is more complex. Pure deliberate strategies and purely emergent are extreme situations, among which are the strategies currently carried out. Porter (2000) explores these concepts when ensuring that the intentions performed can be deliberate strategies. The ones not carried out are considered unfulfilled strategies.

Thereby, few (or none) strategies can be purely deliberate, as also few are totally emergent. In any strategy, there is space for preparing and other moments in which apprenticeship is the consequence of a strategy. In other words, strategies should have good information of how they should be. Thus, there is no definition for good or bad strategies; good strategists mix them up in a manner that they reflect the existing conditions, specially, the capacity of foresee and the necessity of reacting over unpredictable events (Mintzberg and Waters, 1985).

According to Mintzberg (2003), an emergent strategy is the one that emerges from the organization as answer to an opportunity in the environment. It arises from the difficulty in predicting, more accurately, the behaviour and interrelationships of the environment's agents and the consequent response to this change.

The emergent strategy has a fundamental role for organizations, since it corrects the company's route starting from the difficulty of predicting changes in the environment, recognizing its limitation and not getting attached to an outdated plan that could be detrimental to the company. The importance of the environment, therefore, is foremost considering it as the evolution of the

organizations as the result of the relation with the environment and the constant challenges that it imposes. Strategy is, under this approach, the use of imagination and logic to respond to the environment in such a manner that it will generate, as a result, a competitive advantage to the company (Henderson, 1989).

According to Borges and Luce (2000) an emergent strategy becomes deliberate if the standard is recognized and if this standard is legitimized by the organisation's top management. When elaborating a strategy, managers usually to not spend time reading the several types of reports, they usually try to learn about their organizations and industrial sectors, for they are also sensitive to experience and mental models.

2.1. Strategic Management: concepts and processes

The Strategic Management (SM) began as a hybrid discipline, under the influence of sociology and economy, being essentially an evolution of the organizational theories (Vasconcelos, 2001). Certo and Peter (2005) consider that the SM had its origin in the course of business policies in the 50s, sponsored by the Ford Foundation and by the Carnegie Corporation, which encouraged schools to introduce in their curriculums a more ample disciple, called Business Policies. At the same time that this was happening, there are many classifications and visions about the SM's origin, influences, formation and evolution defended by several authors. For Mintzberg, Ahsltrand and Lampel (2000), the evolution of the SM starting from the schools appeared in different stages – some of which have already reached their highest point and have already declined, and others that are still in management. Despite its late formation, the SM presented a rapid development, theoretical as well as practical models, especially when considering the great quantity of market analyses models that appeared from the 60s onwards, as also several concepts such as the economic analyses of structure, conduct and performance, distinctive competency, essential competencies and the so called strategic planning management (Vasconcelos, 2001).

Cabral (1998) sees the SM's evolution starting from the prevailing strategic styles during the last 20 years: planning style (70s), in which the analyses of the probable fundamental the future's predictability; vision style (80s), in which the future's unpredictability was based on the possible imagination; apprentice style (90s), in which understanding the present moment enabled mapping and facing the future.

The term strategic management process refers to the dynamism that today's organizations have. Because it is a cycle, it is orientated to give a notion of continuity. Wright, Kroll and Parnell (2000) sustain that once implemented, the planned strategy will frequently require adjustments as environmental and organisational conditions modify. As consequence, the strategic elements will also suffer modifications. These modifications are always difficult or even impossible to predict. Consequently, an intended strategy can be carried in its original form or in any other, as it's possible management implementing a strategy that was not planned due to the environmental elements constant mutation.

In Certo and Peter's (2005) understanding, the current strategic management process is a continuous and interactive activity that aims maintaining the organization as a group appropriately integrated with its environment. For the authors, the correct application of a strategic management implies in encouraging the organization's members compromise to take part in the definition of strategies in order to reach their goals.

According to Hitt, Ireland and Hoskinsson (2008), the strategic management process is a group of commitments, decisions and necessary actions so that the company may obtain competitive advantage and above average returns. The first step of a company in the process is to analyse it external and internal environments to determine its resources, capacities, and essential competences – its strategic information source ("inputs"). With this information the company will develop its vision and mission as also formulates its strategy. To implement this strategy, the company takes actions in order to obtain competitive advantage and above average returns.

The strategic management, in general, has been presented in the literature, as a sequence of stages, whose denomination varies among the authors, but have a certain uniformity in conceptual terms. The strategic management process is a series of basic stages (Certo and Peter, 2005), or can be described as composed of steps that when put together form a model (Wright, Kroll and Parnell, 2000), or as a set of commitments (Hitt, Ireland and Hoskinsson (2008), as a progression of activities (Harrison, 2005), or as a set of processes (Saloner, Shepard and Podolny, 2001).

According to Certo and Peter (2005), the strategic management process is continuous, starting outside the organization and unfolding within it. Since it is a continuous process, it means that it progresses through stages, then to return to the first stage. This sequence qualifies the process' cyclical character. After the conclusion of these stages, the process may receive a feedback, returning to the first step (environment's analysis), if necessary.

After reviewing the literature it is concluded that the Strategic Management Process proposals converge to a sequence of stages, many times with similar denominations or dismemberments, that essentially involve five steps: Environment Analysis, Planning, Implementation, Strategic Control and Feedback (Certo and Peter, 2005; Harrison, 2005; Hitt, Ireland and Hoskinsson, 2008; Porter, 2000; Saloner, Shepard and Podolny, 2001; Wright, Kroll and Parnell, 2000).

The environment's analysis stage refers to acquiring knowledge about the external environment, as well as to the company's internal adaptations, due to the external demands. The planning stage is associated to strategic formulations. It is in this phase that managers use information from the external and internal environments in order to define their scope of goals and actions to achieve their objectives. Furthermore, it is necessary to establish the organization's business guideline. The implementation is a fundamental element for the practical success of the companies' strategies. Wright, Kroll and Parnell (2000), point out that during the implementation of

strategies, the strategic control process will start. The strategic control consists in determining the extent that the objectives of the organization are been reached. At last, the authors of this field defend that among the strategic management processes there should be a feedback; in other words, information about the results and the implementation of deliberate strategies should be returned to the decision makers for analysis and planning or correction of the actions' course.

2.2. Micro and small companies in Brazil and the strategic management process

Micro and small companies contribute in a significant manner in the generation of wealth in the Brazilian economy. They are relevant in absorbing employees, playing a complementary role to the bigger enterprises, a strategic role in foreign trade, which makes possible to diversify the exports and turns the economy less susceptible to the variations that occur in the world trade while directly impacting the local economy (SEBRAE, 2009).

Cher (1990) observes that, regardless of the degree of industrialization or of development of a nation, small companies have a fundamental role in the society, contributing not only to economy, but also politically. Small companies have a better performance in activities that demand abilities or specialized services, developing more personalized and specific works, notably in the service sector. Another relevant aspect is its capacity to react quickly to conditions that the environment offers, due to a smaller operational complexity and also because of a more effective flow of communication.

The official criterion that defines the size of the companies in Brazil is Complimentary Law 123 of December 14, 2006. By this law, the microenterprises are those that receive, in each calendar year, the gross revenue equal or under R$ 360,000 (three hundred and sixty thousand reais). Companies of small size are those that gained, in each calendar year, a gross revenue superior to R$ 360,000 (three hundred and sixty thousand reais) and equal or inferior to R$ 3,600,000 (three million, six hundred thousand reais). It is noteworthy, however, that it is common to use number of employees to determine a company's size, a criterion used by SEBRAE that used in another countries. As noted, companies that have up to 19 employees are classified as micro and those that have between 20 and 99 employees as small (SEBRAE, 2009).

It is possible to observe that the elementary management tools are many times unknown or underused in the management of micro and small companies. The elaborations of the cash flow, the organization chart with main responsibilities, market's segmentation, among others are concepts that do not permeate the management, or if they do, normally it is in an empirical or rudimental manner. The strategic management, in small size organizations, follows an almost natural rhythm, but with deficiencies in several questions that are fundamental to improve competitiveness (SEBRAE, 2009).

The classical approaches in strategies of small companies have had basically their origin in economistic approaches of strategy and aggregate

the scholars that examine small companies using adapted models based on the studies of big companies (Morris, Schindehutte and Allen, 2005; Olson and Bokor, 1995; Robinson, Pearce, Vozikis and Mescon, 1984). It is possible to consider also authors that try to explain the growth of companies as an evolution that follow a coherent structure, more or less predictable of organizational development. Alternatively, Child (1972) argues that studies related to big and small companies' strategic management have in general adopted one of two paradigms predominant in the area. The first one are the contingency approaches to management, which explain the relation between organizational structure and strategy or between environment and strategy, defining the so-called paradigm of strategic choice. The second relates to the focus on environmental determinism, minimizing the consideration of the role of strategic manager denominated the organizational ecology paradigm.

Other constructs, present in the literature about strategy in small companies, suffer the influence of two big approaches: one of economical nature and the other of entrepreneurial nature. The economic approach, used up to the middle of the 80s and the more recent approach, the entrepreneurial, that suggests the influence of the individual's behaviour over the formation and implementation of the strategic process. This new approach studies the association between the personal characteristics of the leader and small companies' strategic management process (Bamberger, 1983; Miller and Toulouse, 1986; Rice Jr. and Lindecamp, 1989).

Moore (1959) was the pioneer in the desire to create models for organizational growth. For this author, as the companies grow, they become to detach themselves more and more from the entrepreneur's influence. According to this author, the company starts highly dependent on the entrepreneur and his personal intentions. While growing, the company's strategy rationalizes when specialists are hired and management becomes more professionalized, less centralized and less personalized. In the third and last phase, the company is organized, with more bureaucracy and starts to present specializations in fundamental areas such as marketing, production and finances, configuring in a more traditional and bureaucratic management.

Research efforts in the small companies' strategic management field have proved to be somewhat less conclusive in many aspects. Among a few noteworthy studies of strategic management issues in small companies are the studies of Kellermanns et al. (2016) that investigated how the established Resource Based View of the Firm can be applied to entrepreneurship theory. The sample of their study consisted of individuals formerly enrolled in an entrepreneurship-teaching program, which ran small companies. Kraus, Rigtering, Hughes and Hosman (2011) studied entrepreneurial orientation as an antecedent of growth, competitive advantage and performance on 164 Dutch SMEs. Pérez-Luño, Saparito and Gopalakrishnan (2016) studied the process to create tacit knowledge and its importance to competitive advantage of SMEs in a survey that involved 374 companies. One of the few points in which there seems to be a convergence

with the studies is in respect with the nature of the strategic planning process in small companies, that has been described as incomplete, not structured, irregular, sporadic, reactive, informal and not very sophisticated (Shuman, 1975; Sexton and Van Auken, 1982).

For Harrison (2005) strategies are not "planned" in the literal sense in small companies. According to the author, managers take advantage of market's opportunities, however with some orientation based on the organization's mission. Thus, strategies reflect the business owner's ideas and, as time goes by, they are transformed into a model, followed by successive decisions. Davig (1986) studied the strategies that were adopted by small companies in mature industries, using the taxonomy proposed by Miles and Snow (1978). The data obtained, with a sample of 60 companies, indicated that firms with prospective and defensive strategies reached a better performance in terms of profit growth, while the reactive ones presented a worse performance result. The performance of the analytic companies was between the results of the reactive and the other two types. Differences in the sales' growth were not statistically significant, albeit being in the same direction. Opposite to Smith, Guthrie and Chen's (1986) conclusions, the size of the companies do not seem to be associated with performance, but the bigger companies tended to be analytical or prospective.

3. METHODS ADOPTED

This research was planned in two phases. The first phase, of a qualitative and exploratory character, aimed studying the phenomenon in order to identify the variables. It was accomplished by a literature review and semi structured interviews with specialists, being these eight PhD Professors in the Strategy Field.

The second phase, of a quantitative nature, had as its objective to validate the instruments and test the structural model (Figure 01), by means of a research of the survey type. The structured questionnaire was applied by the employees of the Brazilian Service of Support for Small and Medium Businesses (SEBRAE), Minas Gerais stated division, on 57 microregions spread all across the State of Minas Gerais. The sample had 378 respondents, partners or managers, mostly of micro and small companies, defined according to SEBRAE's classification by the number of employees. The businesspersons that were in training, or taking part in working groups, or were seeking for support and advice at SEBRAE, were asked to fill in the questionnaires.

With respect to the business sector, it is possible to verify that the biggest part is concentrated in the commercial sector (40.7%) and in the service sector (34.1%). The other 8.7% stated that they worked in the industrial sector and the rest in mixed sectors. As to the corporate governance, it was possible to identify that family members manage nearly 50% of them. Companies that are managed by professionals, correspond to 20.1% and of mixed management (professional + family members) correspond to 20.9%.

Figure 1. Hypothetical Model

Contribution Factors   **Results**
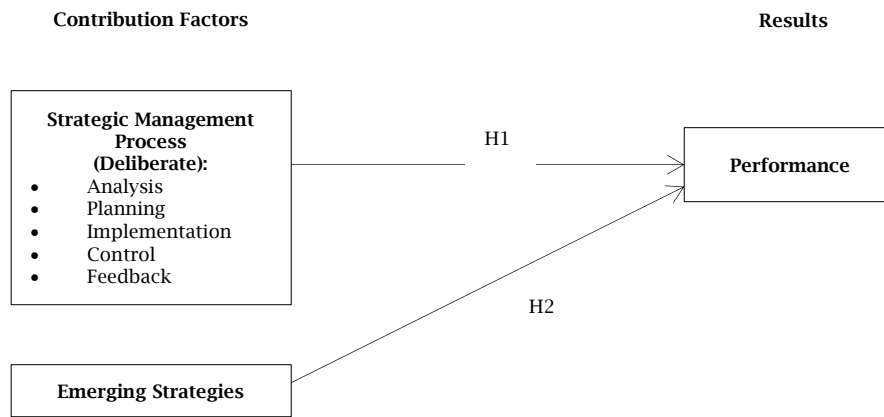
The proposed hypothetical model is centered in the theoretical framework about Strategic Management Process suggested by Certo and Peter (2005), Geus (1997), Harrison (2005), Hitt, Ireland and Hoskinsson (2008), Kaplan and Norton (1997), McGee and Prusak (1994), Saloner, Shepard and Podolny (2001) and Wright, Kroll and Parnell (2000). A theoretical construct is elaborated and a hypothesis proposed that an increased intensity of the Strategic Management Process produces a positive impact on the performance of micro and small companies. On the other hand, it also sought to, as suggested by Mintzberg (2003), to verify the impact of emergent strategies on the performance, in a hypothetical manner, which led to the proposition of a second hypothesis. The following hypothetic research model can be viewed in figure 01.

The measuring scales of the execution's intensity for each of the stages of the Strategic Management Process (Analysis, Planning, Implementation, Control and Feedback) were developed through a literature revision observing the activities that, according to the authors, should be applied in each one of the stages. For example, in the analysis phase, it is consensus in the literature that the organizations should promote internal and external information analysis. Thereby, a set of questions were elaborated to verify if the company carries out this activity and with what intensity. The preliminary scale was submitted to eight PhD lecturers of the Strategy Field, in order to verify gaps and correct any possible issues, in a test of face validity of the questionnaire.

Hypothesis 1: There is a positive impact of the Strategic Management process's stages on the micro and small companies' performance.

Hypothesis 2: There is a positive impact of the emergent strategies on the micro and small companies' performance.

In the descriptive analysis of the variables that were created beforehand to measure the model's constructs, which are eight altogether, it was possible to verify that the average found for the variables were situated towards the middle of the scale and the standard deviations were high, above 2.00.

The analysis of missing values comprised the individuals that formed the sample. Individuals with missing data superior to 5% were to be excluded from the sample, for this would affect the validation of the answers. For this reason, 32 of the 378 questionnaires received were excluded. After the exclusion, the missing data accounted for 139, which represent 0.62% of the total of answers. None of the variables presented more than 2% of missing data, a value considered low.

To verify the existence of univariate normality observations, it was adopted the standardization of results in a manner that the variable's average is 0 and the standard deviation 1. For the bigger samples, the suggestion is that for observations with standardized scores superior to 3 or 4, should be considered atypical observations (Hair et al., 2005). In the present analysis, it was used a score criteria inferior/superior to |3.24| as atypical observations. Based on these criteria, no outlier univariates were found.

The Kosmogorov-Smirnov test that calculates the significant level for the differences of the normal distribution was also used. Significances inferior to 5%, for the Kosmogorov-Smirnov test, for Asymmetry and Kurtosis attest that the data does not follow a normal distribution.

The linearity, also, consists of a presupposition for multivariate techniques and is based on correlated measures of linear association between variables. One of the means of verifying the data's linearity is by checking the correlation of the variables pair by pair. If the correlation presents a significant coefficient, this indicated that the data are linear (Hair et al., 2005). The most commonly coefficient that is used to verify the linear relations between variables is Pearson's (Malhotra, 2006) and it was used in this form in the present research. It is noteworthy to say that at a level of 5%, 245 not significant relations were identified starting from the correlation matrix's analysis, which represents 11.8% of the possible correlations. When the scatterplot was analysed, these deviations did not alter the data's linearity.

The data's analysis continued, as it was considered that the nonlinear effects that were found, represents only a small part of this type of association among the indicators, not implying,

therefore, in a lack of linearity (Hair et al., 2005) or the loss of substantial information contained in the data's matrix.

In order to verify the scales in this study's dimensionality, factorial analyses were carried out and, as an extraction method, the principal axis was used. This method is the most indicated when the main objective is to verify the existence of latent dimensions (Malhotra, 2006). For the rotation method, this study used the Oblimim, for this method starts from the presupposition that there is a relationship between the factors (Hair et al., 2005). The criteria that were adopted to find the best factorial solution and their parameters was: 1) Kaiser-Meyer-Olkin (KMO) - > 0.500 (for 2 variables) and >0.600 (for 3 variables or more; 2) Batlett's Sphericity Test (BST) – Significant value inferior to 1%; 3) Explained Variance (EV) - > 60%; 4) Communality (h^2) - > 0.400; 5) Factorial Load (FL) - > 0.400. Five of the models constructs presented explained variance inferior to 60%. Thus, the variables with the smallest communalities were removed.

Among the model's 08 existing constructs (Analysis (C1), Planning (C2), Implementation (C3), Control (C4), Feedback (C5), non-planned Strategies (C6.1), Emergent Strategies (C6.2), Quality in the Decision Process (C7) and Performance (C8), it was observed that 03 of them met the necessary presuppositions to be considered the valid factor solution, without needing to remove none of the original variables. However, the constructs' variables C1, C3, C5, C6.2 and C7 were removed, with the objective of improving the factorial solution according to the established parameters. Also, it was verified that the C6 construct (emergent strategies) was dismembered in two dimensions.

To verify if the scale is free of random errors, a reliability analysis of the scale was made (Malhotra, 2006). The measurement usually used to verify the scale's reliability is the Cronbach's Alpha. The data shows that all of the constructs present Cronbach's Alpha superior to the limit suggested by the literature of 0.700, defined for scales that have already been validated (Malhotra, 2006). It was not necessary to remove none of the variables of the constructs in order to increase their reliability. An evaluation of the measurements' convergent validity was also conducted, seeking to identify if the indicators of a construct are really adequate to measure the latent dimensions of interest and the discriminant validity that evaluates if the constructs do effectively measure the different aspects of the phenomenon of interest (Hair et al., 2005). These tests were carried out using Confirmatory Factorial Analysis (CFA). When running the analysis, it was verified that the variables Q31 (Has reports and systems to control...) and Q32 (Compares the results that were obtained with the goals...) do not present a convergent validity. For this reason, these variables were removed from the model.

To evaluate the constructs' discriminant validity, Fornell and Larcker (1981) method was adopted. Discriminant validity is assessed by comparing the shared variance (squared correlation) between each pair of constructs against the average of the AVEs between the pairs of constructs. The

results show that it is possible to certify the discriminant validity in almost all the constructs pairs.

The Method of Structural Equations Modelling (SEM) was chosen to test the proposed model. According to Mackenzie (2001), this method has usually been the approach to evaluate causality relations, because it takes into consideration the measuring mistake, it increases the control of the effect of experimental manipulation, it is capable of testing complex theoretical structures, it can conjugate macro and micro approaches and it offers robust evidences of validity and trustworthiness. Although the term Structural Equation Method refers to several algorithms for the solution of simultaneous equations' systems, it can also be understood as a technique which aims to understand the relation between the variables that are being observed, denominated as indicators, their respective latent variables and measuring mistakes; and the several latent variables, namely the relation between several theoretical constructs. In short, it is assumed that the measured indicators are a reflex of the interest latent construct added to a measuring mistake.

As the research's data did not meet the normality presupposition, the method of estimating parameters was the generalized least squares' method. According to Mingoti (2005), estimators of this function do not have as an assumption the multivariate normality of data. The software that was used was AMOS 4.0 and, in figure 02, one can see the measuring model that was tested.

4. TEST AND ANALYSIS OF THE HYPOTHETICAL MODEL: DELIBERATE STRATEGIES AS A CONSTRUCT OF SECOND ORDER

When a model is tested, it is not only to evaluate the reliability of the measurements that were checked, but, mainly, to know if the measurements, defined beforehand as adequate, effectively support the relation between hypotheses and the measured variables. It is essential therefore to evaluate if the associations supposedly causal suggested by a theory are, indeed, supported by the data that was collected. Ultimately, it is expected to test a series of casual relationships using a homological chain (Hunt, 2002).

So to run the model the factors that compose the Deliberate Strategies macro construct were transformed into variables through a simple average based on the variables that were left after a convergent validity (Hair et al., 2005).

The quality of the adjustment of a model measures the correlation of the data's matrix of real entrances or observed (covariance or correlation) with that one predicted by the proposed model (Hair et al., 2005). These authors emphasize the need to take precautions against the model's "super adjustment" to the data. In other words, a certain proportion must be maintained between the estimated coefficients number and the number of respondents to be able to obtain parsimony, being that the achievement of a better or bigger adjustment for each estimated coefficient.

Figure 2. Tested Theoretical Model

Strategic Management Process
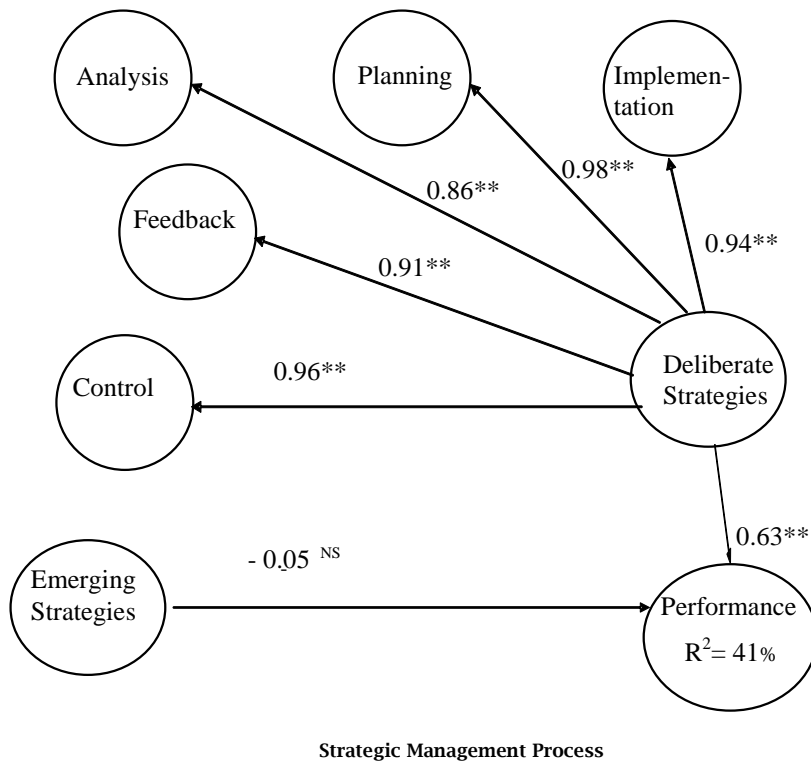
*Note: **Weight is significant at a level of 0.1% (p < 0.001); NS - Weight is not significant at a level of 5% (p > 0.05); Adjusting Measures: Chi-square=1599.988, df =852, Chi-square/df=1.878, GFI =0.784, AGFI =0.760, RMSEA=0.050*

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Table 1. Measuring estimates of the proposed model

Independent	Dependent	Reg.[a]	Error[b]	Value T[c]	Standard[d]	Conf.[e]
Emerging strategies	Performance	-0.02	0.03	-0.65	-0.03	-
Deliberate strategies	Performance	0.52	0.06	9.28	0.64	0.41
Performance	Q62	1.00	-	-	0.77	0.76
Performance	Q63	1.30	0.08	16.68	0.87	0.82
Performance	Q64	1.38	0.10	13.40	0.88	0.79
Performance	Q65	1.43	0.11	13.65	0.89	0.83
Performance	Q66	1.61	0.11	14.66	0.90	0.65
Performance	Q67	1.53	0.10	15.77	0.93	0.55
Performance	Q68	1.48	0.10	14.67	0.90	0.76
Performance	Q69	1.47	0.11	14.06	0.84	0.70
Emerging strategies	Q47	1.00	-	-	0.80	0.63
Emerging strategies	Q48	1.05	0.07	15.68	0.84	0.71
Emerging strategies	Q49	1.07	0.07	16.15	0.87	0.80
Emerging strategies	Q51	0.88	0.06	14.09	0.74	0.86
Deliberate strategies	Analysis	1.00	-	-	0.81	0.82
Deliberate strategies	Planning	1.37	0.07	18.84	0.91	0.79
Deliberate strategies	Implementation	1.05	0.06	19.16	0.89	0.77
Deliberate strategies	Control	1.36	0.08	16.54	0.91	0.75
Deliberate strategies	Feedback	1.31	0.08	16.67	0.87	0.60

Note: a) the regression weight: corresponds to the value of the non standardized statistics. b) standard error: error of the non standardized estimate. c) value t: is the ratio between the non standardized weight by its standard error and, if superior to 2,236, it indicates the convergent validity at the level of 1%. d) standardized weight: indicates the correlation between the indicator and the latent construct. e) the indicator' reliability: values above 0.4 indicate a percentage of variance explained in the limit of 40%, this being considered ideal (Bollen, 1989).

These authors emphasize the need to take precautions against the model's "super adjustment" to the data. In other words, a certain proportion must be maintained between the estimated coefficients number and the number of respondents to be able to obtain parsimony, being that the achievement of a better or bigger adjustment for each estimated coefficient.

The Table 1 presents the regression loads and their significance, besides the standardized load and of the multiple correlations of the model's variables.

To verify the fit of the structural model, measures of absolute fit and parsimonious were used. The measures of absolute fit evaluate only the model's general adjustment, not taking into account the "super adjustment". Now the parsimonious adjustment evaluates the proposed model's parsimony by the adjustment analysis versus the number of estimated coefficients that are necessary to reach the adjustment level. In the table 02, the values that we found and the desired values for the adjustment measures are presented.

Table 2. Adjustment indexes of the proposed model

Adjustment	Index	Found Value	Desired Value
Absolute	Chi-square	350.006	N.A
	RMSEA	0.076	Inferior than 0.080
	GFI	0.881	Superior than 0.900
Parsimonious	AGFI	0.884	Superior than 0.900
	χ^2/df	2.992	Between 1.000 and 3.000

Finally, the adequacy of the obtained structural solution was evaluated. It is important to point out that offensive estimates did not occur, such as non-significant variance errors, which indicates a relative stability of the solution (Hair et al., 2005).

To evaluate the model's absolute adjustment, the RMSEA and the GFI were used. According with the established parameters in the literature (Hair et al., 2005), it is possible to verify in the table 02, that the GFI was a just below the established limit and that the RMSEA was within the limit. Thus, even that the model does not present an adjustment that is strictly within the limits that were suggested by the literature, considering the significance of the chi-square statistic; its adjustment is moderate, which allows that inferences about the estimated casual relationships to be weaved.

In the analysis of the hypothetical model that was tested, it can be observed that 41% of the performance variation are explained, based on the elements in the figure 01. The impact load of the Deliberate Strategies construct is of 0.62, which is significant at the level of 1% and of the Emergent Strategies is of −0.05, which is not significant at the level of 5%. This reveals that these performance variables are of responsibility mainly of the Deliberate Strategies independent variable.

All of the strategic stages presented significant weights as elements that explain the performance of micro and small companies. It is possible to verify, however, that Planning and Control are the stages that have the highest weights in performance between the Deliberate Strategies' processes. The Analysis' Stage is the construct with the smallest weight; however, its weight is also high - Standardized Beta of 0.86.

5. THE STRATQUAL'S INDEX: PROPOSAL AND METHODOLOGY

In the first stage of the paper, it was presented through two models, two significant impacts of the Strategic Management Process on micro and small companies' performance. In this sense, the processes explained 41% in the hypothetical model and 43% in the alternative model, suggesting its relevance.

However, there still is a challenge: how to diagnose and compare the intensity and quality of these processes in a company, indicating if a company is applying processes and practices competitively when comparing itself and others of its sector? What levels of the processes' indicators produce a superior performance?

In this sense considering the proposed hypothetical model, the StratQual Index is proposed: an index calculated in a 0 to 100 scale, weighing the importance of the process (structural weight) with in intensity exercised by the company.

5.1. Calculus and Method

To calculate the Stratqual index, it was necessary to calculate the weights for each one of the dimensions of this construct, namely: C1 – Analysis, C2 – Planning, C3 – Implementation, C4 – Control and C5 – Feedback. To reach the calculus of these indexes, Kline's (1998) suggestions were followed, using values weighed by the non-weighed structural weights in order to calculate the average of the weighed factors (MF_i) for each one of the constructs. With this objective, the following formula [1] was applied:

$$MF_i = \frac{\sum_{i=1}^{k} W_K X_{KI}}{\sum_{i=1}^{k} W_K} \tag{1}$$

where, W_K is the non-standardized regression weight of k indicator that was obtained in the structural model;

X_{KI} is the observed value of k indicator for the i respondent.

Thus, items that share more variance with their constructs receive a larger weight when the averages are calculated, reflecting their greater importance to measure the proposed construct. An alternative way of expressing the index's calculus is to transform the standardized weights (absolute values) in relative values, only needing to apply [2]:

$$WR_i = \frac{W_k}{\sum_{i=1}^{k} W_k} \tag{2}$$

where, W_k is the non-standardized regression weight of k-ésimo indicator that was obtained in the structural model.

Therefore, WR becomes a relative weight in which each indicator is expressed as a percentage in the index's composition. In such a form, that the sum of the weight $\left(\sum_{i=0}^{k} W_k\right)$ of a construct becomes equal to 1. In other words, this standardized weight represents the relative importance of the indicator i for the index's composition (sum) of the considered index. As in [1] the divisor is now equal to unit (1), so the correct formula to be applied is reduced to [3]:

$$MF_i = \sum_{i=1}^{k} WR_k X_{ki} \qquad (3)$$

The formulations [1] and [3] lead to the same results, but the application of [3] has the advantage of identifying the relative weight (or relative importance) for the factor, being more conveniently applied. As the questionnaires scales are constructed with 11 points (1 to 10), the final index was multiplied by 10 so that its amplitude is of 0 to 100. The following Table 3 expresses the absolute weights (non-standardized regression weights) and relative weights (relative importance) of each indicator in the structural model.

Table 3. Absolute and relative weights of each questions for the constructs

QUESTION	DIMENSION	WEIGHT	IMPORTANCE
Q5	C1	1.00	15.6%
Q8	C1	1.13	17.6%
Q9	C1	1.14	17.8%
Q10	C1	1.14	17.8%
Q12	C1	1.06	16.5%
Q13	C1	0.94	14.7%
Q15	C2	1.00	13.3%
Q16	C2	1.00	13.3%
Q17	C2	0.99	13.1%
Q18	C2	1.15	15.3%
Q19	C2	1.19	15.8%
Q20	C2	1.10	14.7%
Q21	C2	1.10	14.6%
Q22	C3	1.00	18.5%
Q23	C3	0.98	18.2%
Q24	C3	0.76	14.1%
Q26	C3	0.79	14.6%
Q28	C3	0.95	17.6%
Q29	C3	0.92	17.0%
Q33	C4	1.00	14.5%
Q34	C4	0.98	14.2%
Q35	C4	0.99	14.4%
Q36	C4	0.94	13.6%
Q37	C4	1.05	15.3%
Q38	C4	1.01	14.7%
Q39	C4	0.92	13.3%
Q41	C5	1.00	19.2%
Q42	C5	1.05	20.2%
Q43	C5	1.02	19.5%
Q44	C5	1.02	19.6%
Q45	C5	1.12	21.5%
Q47	C6.1	1.00	24.7%
Q48	C6.1	1.15	28.4%
Q49	C6.1	1.10	27.2%
Q51	C6.1	0.80	19.7%
Q62	C8	1.00	9.2%
Q63	C8	1.18	10.8%
Q64	C8	1.32	12.1%
Q65	C8	1.41	13.0%
Q66	C8	1.48	13.6%
Q67	C8	1.57	14.4%
Q68	C8	1.39	12.8%
Q69	C8	1.53	14.1%

To proceed to the Straqual calculus, first it is necessary to apply the formulation [1] or [3] and find the factors C1 and C5 averages. Then, the same procedures are applied considering the averages of the five factors and the weights that were reported in Table 4.

Table 4. Absolute and Relative weights for each dimension for the Stratqual

Dimension	Weight	Importance
C1 – Analysis	1.48	15.2%
C2 – Planning	2.18	22.3%
C3 – Implementation	1.80	18.4%
C4 - Control	2.27	23.2%
C5 - Feedback	2.03	20.8%

Considering the averages that were used in the study, the following descriptive values were found for the Stratqual scale and its dimensions, according to Table 5.

Table 5. Descriptive Values

	N	MIN	MAX	AVERAGEMEDIA	DEVIATION
C1 – Analysis	346	.32	10.00	6.3018	2.20441
C2 – Planning	346	.00	10.00	5.3683	2.64763
C3 – Implementation	346	.35	10.00	6.4129	2.16561
C4 – Control	346	.00	10.00	5.0613	2.62150
C5 – Feedback	346	.00	10.00	5.2927	2.68431
Stratqual	346	.58	9.97	5.6156	2.25292
C6.1 – Non planned	346	.00	10.00	4.8578	2.48227
C8 – Performance	346	.53	10.00	65573	2.09223

Furthermore, the percentage of the sample were calculated, and they can serve as a comparison parameter of relative performance of other studies that use the scale mentioned above, according can be used to compare as a performance comparison parameter, as it is possible to verify in Table 6.

Table 6. The Samples Percentiles

PERC.	C1	C2	C3	C4	C5	StratQual	Non Plan.Strat.	Performance
10	3.16	1.41	3.10	1.34	1.21	22.2	1.34	3.63
20	4.31	2.80	4.64	2.59	2.79	34.4	2.49	4.68
30	5.21	4.00	5.46	3.37	3.59	44.2	3.42	5.42
40	6.04	4.64	6.12	4.29	4.59	50.6	4.13	6.34
50	6.63	5.48	6.75	5.25	5.58	58.1	4.91	676
60	7.04	6.29	7.25	5.86	6.37	63.4	5.67	7.29
70	7.68	7.15	7.82	6.75	7.01	70.3	6.51	7.89
80	8.29	7.90	8.35	7.59	7.81	77.2	7.17	8.52
90	9.14	8.99	9.01	8.57	9.00	85.7	8.00	9.16

According to Table 6, it is possible to verify significant differences between the several percentages, suggesting that the specific profiles of this segment (of high and low intensity of the strategic management processes and performance), as also as classification and categorization criteria, that allows to know in which group (of percentile) a company belongs.

In this sense, the differences between groups of companies were explored, considering variables such as size, type of management, among others. The results are presented as follows.

5.2. StratQual Index: Comparison among Groups

With the objective of verifying the differences between groups and verify the capacity of the proposed index to presented cohesion and meaning empirically, an analysis of the companies groups is carried out with the demographic variables present in the research's instrument. Initially, a verification was carried out of the differences between companies of different sizes and values of the StratQual index, according to Table 7.

Table 7. StratQual Values by Size of the Company

Company's size	Analysis	Planning	Implemen-tation	Control	Feedback	Perfor-mange	Stratqual
Micro	5.9608	5.1279	6.2201	4.8855	5.1536	6.1884	54,047
Small	6.2844	5.0783	6.3318	4.5638	4.8082	6.6991	53,168
Medium	7.2670	6.7178	7.3094	6.2963	6.6312	7.3509	67,943

*Source: data from the research. * Differences of the significant averages at level of p<0.01 (1%) – Anova test*

According to Table 9, it is possible to observe that bigger the organization, more intense is the strategic management processes and the performance. To be able to analyse the relation between the StratQual's index and the company's Governance, the Table 8 was elaborated.

Table 8. StratQual values for Governance

Governance	Analysis	Planning	Implementation	Control	Feedback	Performance	Stratqual
Family	6.0162	4.7872	6.0202	4.6302	4.8950	6.1416	51,872
Mixed	6.6234	5.9590	6.7682	5.4920	5.7657	7.0522	60,603
Professional	6.8270	6.1895	7.0811	5.6063	5.8075	7.0551	62,356

*Source: data from the research * differences of significant averages at the level of p<0.01 (1%) – Anova test*

With reference to the companies' governance, all the indexes were significant. In a general manner, the family companies present smaller values in all the Stratqual dimensions. To explore the relation between education and the strategic management process, Table 9 is presented.

Table 9. StratQual Values for Entrepreneur's Level of Education

Entrepreneur's level of Education	Analysis	Planning	Implementation	Control	Feedback	Performance	Stratqual
Elementary School	5.7426	4.2353	5.6486	3.6175	4.1040	5.0234	45,539
High school	5.5752	4.6955	6.0195	4.5341	4.6586	6.3402	50,279
Incomplete Undergraduate	6.2129	5.3082	6.2074	4.9617	5.1759	6.2690	55,033
Complete Undergraduate	6.8536	5.9321	6.8001	5.3865	5.8441	7.1948	60,870
Graduate	6.8524	5.8094	6.9107	5.5688	5.6352	6.8592	60,786
Others	6.7592	6.2451	7.4194	6.3138	6.6880	7.4661	66,478

*Note: * differences of significant averages at the level of $p<0.05$ (5%) – Anova test*

Table 9 shows significant effects of the education among all the Stratqual's indicators. It is possible to notice a certain tendency in which companies with entrepreneurs with higher education present the highest averages in the strategic management processes (higher intensity) and a value higher that the StratQual's index.

6. FINAL CONSIDERATIONS

The result of this study, on one side, indicates that micro and small companies that perform the activities of each of the Strategic Management process' stages with higher intensity have a superior performance. This empirical observation indicates that companies' may need to review their management processes if they want to improve their performance. As all the stages present a significant impact and of significant value (all with weight above of 0.86), and there are evidences that if all the stages are executed it will lead them to a superior performance. On the contrary, if they neglect any of these stages, the organizational performance could be affected.

On the other hand, the results from the studied sample indicate that the emergent strategies did not present a significant impact on micro and small companies' performance. This observation corroborates with the arguments that firms should elaborate strategies in a more integrated and systemic manner, involving execution capabilities in all the stages of the process: analysis; planning; implementation; control and feedback.

Another important component is the fact that in the literature about the theme, the constructs about formulating and implementing strategies were pointed out as the ones of primordial interrelation in the strategies management' process. The formulation and implementation processes were the connection between thought and action (Mintzberg and Waters, 1985; Mintzberg, 2003), albeit the success of the strategic management' process depends of the total integration between the formulators and the implementers (Reid, 1989). These stages should be simultaneously integrated if the company wants to use successfully the strategic management process (Hitt, Ireland and Hoskinsson, 2008), but the strategies, however well chosen, will fail if the implementation is not well done (Whittington, 2002). However, the research's result points to highest weights, and importance, found for the planning and control stages in detriment to implementation. Despite not being considered expressive, it is a paradox pointed out by the study vis-a-vis to the literature about the theme.

The feedback is another element that presents interesting behaviour, due to its importance as antecedent of performance. Nevertheless, feedback is primordial in the strategic management process, because it is the only one capable of processing information in all the stages, creating input for the implementation of strategic changes. The capacity of a strategic feedback system should be to test, validate and modify the hypotheses included in the strategy of a business unit.

Lastly, it is worth mentioning that the main contributions of this paper are related to the gaps that exist in the literature that attest empirically the correlations between strategic management and performance. It is possible to observe that the paper tests empirically these relations, can be of great value, not only for the managers, but, also, for the academics, triggering a subsequent series of replication studies, that not only seek to prove the hypotheses in other sectors, companies' sizes and countries, but, yet, to verify empirically the possibility of generalizing its results. Small companies and their particularities have been included in the strategic management theory building effort (Wernerfelt and Karnani, 1987) mainly because in the early efforts focused on the upper echelons of companies (Chandler Jr, 1962; Hoskisson et al., 1999) or on the industrial sector from an economic macro perspective (Porter 1979, 1998). An argument can be made that the strategic research made about SMEs only evolved after the emergence of the studies of entrepreneurship.

Micro and small companies do not plan or that even do not have an organized management, some argue it. However, when observing companies that show greater emphasis in strategic management, and display a better performance, one can take inferences about the relevance of a greater degree of professionalization of their management that can be obtained either through training or developing strategic management skills. This becomes more important when considering the social and economic relevance of the micro and small companies nowadays.

This study has also contributed to the development of scales that measure the intensity with which companies carry out the strategic management process and its stages. As well as the development of a theory about the theme, by either refinement or application of scales in other countries or organization sizes, enabling studies correlated with strategic management possibly with other antecedents and performance theoretical models, that may advance the knowledge of the field.

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GOVERNMENT-LINKED BANKS' PERFORMANCE IN JORDAN

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Abstract

The main objective of this study is to examine the relationship between government ownership and bank performance in Jordan. The banking sector has been widely ignored in the past corporate governance studies due to its strict system. Using a panel data from 2004 to 2013 (147 observations/years), the multiple regression analysis shows that increasing the percentage of shareholdings leads to higher profitability. Additional government-linked banks (GLBs) generally outperform their unlinked counterparts. However, their outperformance is contingent to the significance percentage of the shareholdings. On other words, if the government shareholdings are not significant (less than 10%) the government ownership does not make a significant difference in the performance. Using panel data provide us with a significant roles played by the period of the study. The banks show increasing in their performance through the period of this study. However, the size and the age of the banks are found to be insignificant while the leveraged banks significantly underperform their counterparts. The results of this study might be of interest of potential investors, policy makers, governance agencies and information users.

1. INTRODUCTION

Profitable firms are more attractive for investors. Previous studies consider the financial profitability and stability as fundamental factors prior to invest in any firms (Mallin, 2007; Khan, Nemati & lftikhar, 2011). As a result of the collapse of the big banks worldwide and locally, the investor has lost their confidence in the markets. Therefore, government ownership seems to play significant roles in attracting foreign and local investors. Presence of government ownership may give the investors more confidence in the government-linked banks (GLBs). Zeitun and Gang Tian (2007) reported that the government ownership play significant roles in reducing the probability of firm default and playing social objectives rather than economic objectives.

Government ownership is considered as a significant factor in the recent studies conducted in the East Asian countries where the government ownership is relatively high such as in China (Lau, Lu & Liang 2014), Malaysia (Mohd Ghazali, 2007; Abdullah, Mohamad & Mokhtar 2011; Ahmed Haji, 2013; Fauzi & Musallam, 2015; Musallam, 2015) and Singapore (Eng & Mak, 2003; Ang & Ding, 2006). In some countries, the states might own the firms and accordingly control them such as in China. Thus, the largest companies are either to be linked to the government or to be owned and controlled by the state. However, less attention is paid to the government ownership in the Arabic region including Jordan. Large companies in the Middle East and North Africa (MENA) are usually unlisted. They are either state-owned or family-owned firms (Omet, 2005). In addition, the state-owned companies are oil or energy companies (Omet, 2005).

In Jordan, the government ownership seems to be insignificant. ASE (2009) reported that the government ownership in the listed firms is less than six percent. Interestingly, Omet (2005) reported that there are only three firms, out of the largest 20 firms in Jordan are not listed and they are owned either by families or by the state. Very few studies have investigated the government ownership in the Jordanian market due its insignificant level.

The objectives of government-linked companies (GLCs) differ from private-owned companies' objectives (Shepherd, 1989; Estrin & Perotin, 1991; Claessens & Fan, 2002; Zeitun & Gang Tian, 2007; Musallam, 2015). Shepherd (1989) argues that government implements its political objectives such as employment through its linked companies. According to Estrin and Perotin (1991) government-owned companies has political and economic objectives, thus, maximizing the firm performance is not the sole objective of the GLCs. However, GLCs may focus on promoting social targets and developing the economy at a country level rather than a company level or political supports (Boycko, Shleifer, & Vishny, 1996; Shleifer &Vishny, 1997; Shen & Lin, 2009). According to Eng and Mak (2003), GLCs may go beyond pure profit objectives and consider objectives related to the interests of the whole nation.

Therefore, the differences in the objectives between the GLCs and private-owned companies may increase the agency costs (Xu &Wang, 1999; Eng & Mak, 2003), weaken the investors' protection (Shepherd, 1989; Shleifer, & Vishny, 1997) and weaken the governance system (Estrin & Perotin, 1991). In addition, the goals of the GLCs may be conflicted with economic objectives of the firms (Mak & Li, 2001). Eng and Mak (2003) pointed out

that GLCs may not consider the maximization of the shareholders' value as a primary objective. Thus, governments might use their firms to implement the social and political goals regardless of the short term profits. However, Eng and Mak (2003) argued that GLCs have better financial and funding resources compared to non-GLCs in Singapore. In addition, GLCs' managers are less likely to face discipline from the market community in issues related to the corporate control because it is expected that the government is long-term investors (Eng & Mak, 2003). Further, it is expected that the government-linked banks (GLBs) might outperform their counterparts.

The rest of the paper is organized as follows; the next section provides a general discussion of the Jordanian banks. Section three presents the hypothesis development. Research methodology is presented in the fourth section following with the data analysis in the fifth section. Finally the conclusion and future works is discussed.

2. BANKS IN JORDAN

The Jordanian Banking Act (2000) is issued to organize the banking sector in the country. The banking sector in Jordan, similar to other countries, is considered as a vital sector. The bank should be listed unless it is a branch of a foreign bank or affiliated to a listed institution or offshore company (Article 6). The bank Act (2000), considers the bank as an affiliated if 50% or more of its shareholdings is owned by another individual or group of individuals who have the same interests (Article 1). Moreover, Jordanian Companies Act (22/1997) and its revision (22/2006), defines the offshore companies as the companies that are registered in the country and operating outside the country. In Jordan, they are 16 operating local banks; 15 are listed banks and one is an affiliated to another Jordanian listed bank. However, the foreign branches are not included in this study due to the focus on the local banks only.

Largest companies in the Middle East are either family-owned or state-owned. In other words, the total number of large listed companies in the Middle East is very small. According to Omet (2005), the largest 20 firms in such Middle East countries are not listed. The case of Jordan is very unique in the region. That is, out of the top largest 20 firms, 17 firms are listed (Omet, 2005). In comparison to the neighboring countries, there are only three firms, two firms and one firm listed in Kuwait, Saudi Arabia and Oman respectively. The three unlisted Jordanian firms are either owned by families (private individuals) or stated-owned such as Royal Jordanian.

Thus, the government ownership in the listed firms is not significant. The government ownership was almost 15% before the privatization process begun in the country in 1998. Recently, based on the ASE's data (2009) the government owned almost five percent. The government owns companies in the mining sector such as Jordan Phosphate Mines, the Arab Potash, Jordan Petroleum Refinery companies and Jordan Cement Factories. In addition, the state owns the Royal Jordanian and appoints its board of directors. However, no previous study has examined the government ownership in the Jordanian banking sector.

Banking sector in Jordan is considered as the leading sector in the market. Based on the statistical published data by the CBJ, the banking sector occupies approximately 44% of the total market capitalization in the country in 2012. Furthermore, the banking sector contributes to the Jordanian JDP by almost 51%. More interestingly, the banks' total assets represent 80% of the total assets in the market in 2012. In addition, 14 listed banks out of 16 are amongst the largest 20 listed firms in the market indicating that the banking sector is the largest sector in Jordan.

3. HYPOTHESIS DEVELOPMENT

3.1. Government Ownership and Bank Performance

The phenomenon of GLCs is common in the Asian region. In Singapore for example, the government owns more than 75% of some companies (Eng & Mak, 2003). In Malaysia, the Government-Linked Investment Companies (GLICs) are described as "companies that have primarily commercial objectives and in which the federal regime of Malaysia has a straight controlling stakes to at least appoint board members" (Musallam, 2015). Due to their significant controlling ownership, the Malaysian government has the power to appoint the directors in the boards, top managements either directly or through GLICs (Amran & Devi, 2008; Esa & Mohd Ghazali, 2012). GLICs play very significant roles in structuring the economy in Malaysia (Musallam, 2015).

Further, it is expected that the information asymmetry is less likely to be problematic in GLBs because those companies have a unique channel of information and they might need to publish their information to the public to signal the government's transparency. Thus, corporate transparency and government ownership might be associated. Moreover, GLBs are trusted by the public. GLCs are less likely to face the default in Jordan (Zeitun & Gang Tian, 2007) which might be easily generalized to GLBs.

Empirically, very limited studies have focused on the impact of the government ownership on the performance (Fauzi & Musallam, 2015). Further, the majority of the existed studies have been done in the markets with high level of government ownership such as in Malaysia (Fauzi & Musallam, 2015; Musallam, 2015) Singapore (Eng & Mak, 2003; Ang & Ding, 2006) and China (Sun, WHS Tong & Tong, 2002). Widely, the banking sector is obviously ignored in the previous studies. Furthermore, the Arabic markets seem to have different ownership structure. Although the state-owned companies in the Arabic countries are the largest in size but they are not listed. Very few large firms are listed in Oman, Saudi Arabia, Qatar, Morocco and Lebanon (Omet, 2005).

In Malaysia, the government ownership is found to significantly enhance the firm performance. Thus, government ownership is seen as a vital mechanism in aligning the firms' activities to obtain higher level of performance (Lau & Tong, 2008; Sulong & Mat Nor, 2010). Furthermore, Ghazali (2010) found that the firms with substantial government ownership outperform their counterparts. Fauzi and Musallam (2015) used panel

data from 190 listed firms in the Malaysian market during the period of 2000 to 2009 to examine the performance of GLICs. Their findings suggest that GLICs ownership improves company performance. In Jordan, the government ownership is found to be negatively associated to firm performance measured by ROE (Zeitun & Gang Tian, 2007). However, the authors argued that the government may not focus mainly on the profit maximization. Thus, the authors suggest the government ownership to decrease the probability of default.

However, the case of Jordan is unique in this context; even the largest companies are publically listed. From the largest 20 firms in Jordan, there are 17 listed firms (Omet, 2005). The other three firms are either state-owned firms such as Royal Jordanian, or family-owned firms. In addition, in the banking sector, there is no any privatized bank. All the banks are established as individual businesses. However, the government, through its Security Social Corporation, may invest in any listed firms. The Security Social Corporation tends to invest in the listed firms for a long term; it may hold the shares in specific firms for very long period. Yet, the Jordanian government owns less than six percent of the total listed firms' shares.

Thus, due to the insignificant percentage of the shares held by the government, the roles of the government might be different. In addition, the government ownership may play security investment roles in the market. Government ownership decreases the probability of firm default in Jordan and they have social objectives rather than economic objectives (Zeitun & Gang Tian, 2007). Thus, the following general hypothesis is stated:

H_i: increasing the percentage of government shareholdings significantly enhances the bank performance (ROA) in Jordan.

4. METHODOLOGY

4.1. Data

The data of this study includes all the 16 local banks operating in Jordan; 15 banks are publically listed and one bank is 100% owned by another bank (affiliated bank). Out of the 16 banks, there are three banks are operating based on the Islam rules (Islamic banks). Interestingly, it is important to notice that the conventional banks are not allowed to open an Islamic window in Jordan. On other words, the bank is either to be Islamic or conventional but not mixture. In this study, the banks' annual reports, and banks' corporate governance reports are the main source to gather the data. The annual reports are downloaded from either the banks' websites or form ASE (http://www.ase.com.jo/). In the case of unpublished annual reports, they are collected manually from the banks. In general, out of 155 annual reports, the study could collect 147 annual reports; 122 annual reports were downloaded online while 25 annual reports were collected manually from the banks. However, eight annual reports were missing. The procedures of data collections are summarized in Table 1.

Table 1. Summary of the sample

Expected Sample	160 (16 banks*10 years)
Non-operating period	(5) (1 bank*5 years)
Possible sample size	155 banks
Missing data	(7)
Final sample size	147 banks/year
Online-downloaded annual reports	122 annual reports
Hand-collected annual reports	25 annual reports
Total collected annual reports	147 annual reports

The data is collected from the Jordanian banks in a period of 10 years (2004-2013). The year of 2013 is chosen because it is the most recent year when conducting this study. However, in the year of 2003, three of the Jordanian banks faced some financial troubles. As a result, two of those banks merged with other banks, and one bank restructured its activities, management and board. Therefore, two of those three banks are not existed anymore. Thus, the year of 2004 is chosen. In the other words, all the banks in this sample have been working during the period of this study except Jordan-Dudi Islamic bank which is listed in the year 2009.

4.2. Research Approach

Secondary sources are used to gather the data for this research, mainly firms' annual reports. In collecting the data, this study uses secondary sources. Secondary data includes both qualitative and quantitative, and can be used for both descriptive and explanatory studies (Kervin, 1999). As well as, it is considered as an interpretation of primary data (Cooper & Schindler, 2003). Secondary data is referred to the data that already exist such as annual reports, published statistics, books and internal reports kept by the firms (Veal, 2005). In regard to government ownership, data is collected from the shareholding statistics Furthermore, the data related to the control variables; bank size, bank age and leverage, is collected from the banks' profiles and banks' financial performance reports. Lastly, data on ROA is extracted from annual reports, more specifically from the financial statement.

4.3. Pearson Correlation

Pearson correlation is used for two main purposes (Weisberg, 2005); firstly to check the correlation between the dependent variable and independent variables in one hand, and between the dependent variables to each other on the other hand and secondly, to check for multicollinearity. The government ownership and ROA are found to be insignificantly correlated while a positive significant correlation is found between ROA and all control variables at one percent. In addition, government ownership is found to be positively correlated with all the control variables at significant level. Further, bank age is found to have positive and significant correlations with bank size and leverage at one percent as presented in Table 2.

Table 2. Pearson correlation Matrix

		1	2	3	4	5	VIF	1/VIF
1.	ROA	1.000						
2.	Government Ownership	0.113	1.000				1.18	0.85
3.	Leverage	0.306**	0.214**	1.000			1.34	0.75
4.	Bank Size (log)	0.223**	0.302**	0.108	1.000		2.87	0.35
5.	Bank Age	0.225**	0.187*	0.367**	0.762**	1.000	3.05	0.33

*Note: ** and * is significant at 1% and 5% respectively.*

Focusing on the multicollinearity, the multicollinearity is said to be problematic if two independent variables are highly correlated. Even the cut-off point is debatable between the statisticians, but the majority of the authors consider the multicollinearity as a problem if the correlation between two independent variables reaches to 0.80 (Gujarati, 2003). Thus, the Pearson correlation matrix indicates that the model of this study is free of multicollinearity problem. The highest correlation between two independent variables is found between bank age and bank size at 0.76.

In alternatives multicollinearity tests, this study uses variance inflation factor (VIF) and tolerance variance inflation (1/VIF). The multicollinearity is considered as a problem if the VIF is more than 10.00 (Hair et al., 2006) or if 1/VIF is less than 0.10 (Pallant, 2011). The results of this study indicates that neither VIF nor 1/VIF present multicollinearity problem as shown in Table 2.

5. DATA ANALYSIS

5.1. Descriptive statistics

As shown in Table 3, relatively low of profitability is found in this study. In average, the ROA is two percent. The best performing bank recorded a profit of six percent while the worst performing bank record a loss of two percent. The lost is recorded in the Jordanian banks by only two banks, one of them recorded lost due to corruption of one of its employees as reported in their annual report. Regarding the government ownership, the government owns almost seven percent of the banks' shares with a maximum of 25%. Interestingly, it is noted that there is no bank controlled by the government. However, some banks have no shares held by the government. Moreover, the government owns insignificant percentage of some banks' shares (less than 10%).

Table 3. Descriptive Analysis

	ROA	GOVOWN	BSIZ	BAGE	LEV
Mean	0.02	0.07	21.	31.6	0.76
Median	0.02	0.04	30	20.9	0.85
SD	0.01	.08	17.9	1.05	0.22
Max	.06	0.25	24.3	1	0.96
Min	-.02	0	19	83	0.19
Skewness	.451	0.84	1.258	.91	-1.82
Kurtosis	5.33	2.34	5.176	3.66	4.68
Obs	147	147	147	147	147

5.2. Panel Data Analysis

Prior to regress the model, the data is checked for normality. Normality is "degree to which the distribution of the sample data corresponds to a normal distribution" (Hair et al., 2010). Several tests can be employed to check the normality distribution of the data. The most common normality tests are skewness and kurtosis. Kline (1998) recommended the data to be normally distributed if the skewness and kurtosis are between ±3 and ±10 respectively. All the variables of this study fill in the range of Kline as shown in Table 3.

We test for heteroscedasticity using Modified Wald test as suggested by Greene, (2000). A written command (xttest3) is provided in STATA. In addition, we test for autocorrelation using Wooldridge test (xtserial). The results indicate that the data of this study is heteroscedastic and autocorrelated. Thus, we use Drisc/Kraay standard errors (xtscc) to solve the both problems as suggested by (Driscoll & Kraay, 1998). The xtscc command is suitable for both balanced and unbalanced panel data. In addition, it handles missing values.

In this study, Multiple Linear Regressions (MLR) is utilized to test the direct relationships between the independent and dependent variables using STATA version 10. Different tests are applied to determine the best model of this study. Firstly, F-test is carried out to compare between fixed-effect model and pooled OLS. Significant F-test result (P-value > 0.05) indicates acceptance of the fixed effect model and vice versa otherwise. Then, Hausman test is applied to choose between the fixed-effect and random-effect (Greene, 2011). The null hypothesis postulates that the unique errors are not correlated with the regressors. Thus, significant P-value (Prob>Chi^2 is less than 0.05) indicates that the null hypothesis is rejected and the hypothesis is accepted and vice versa. The proposed model is given as:

$$PROFT_{it} = \alpha 0 + \beta_1 GOVOWN_{it} + \beta_2 BSIZ_{it} + \beta_3 BAGE_{it} + \beta_4 LEV_{it} + \varepsilon_{it} \quad (1)$$

where:
- PROFT: is the bank profitability, which is the bank financial performance, measured by the return on assets (ROA) which is earnings before tax divided by total assets. Similar

measurement was used in the previous studies (e.g. Ghabayen, 2012; Al-Matari et al., 2012; Saibaba & Ansari, 2013).

- GOVOWN: is the government ownership measured as the percentage of the shareholdings held by the governments (The Security Social Corporation).
- LEV: is leverage and it is the ratio of the book value of long-term debt divided by total assets (Anderson & Reeb, 2003; Alsaeed, 2006; Al Matari et al., 2013; Amran & Che-Ahmad, 2013).
- LOGSIZ: is the natural log of the total assets. This measurement is widely used in the previous studies (e.g. Liu, Ahlstrom & Yeh, 2006; Amran & Che-Ahmad, 2013; Ibrahim & Samad, 2013; El-Chaarani, 2013).
- BAGE: is the bank age measured as the number of years since the bank started incorporated similar to some other studies (e.g., Shumway, 2001; Ghabayen, Mohamad & Ahmad, 2016).
- it: period indicator
- ε: Error Term.

In panel data, if the Hausman specification tests recommend the use of fixed effect, the data needs to be checked for the using of the year as a control variable. In STATA (version 10), a written command (testparm i.year*) is used to check the significant level of the effect of the time period as suggested by (Torres-Reyna, 2007). Significant

p-value indicates that the coefficients for all years are jointly not equal to zero. Therefore the data is needed to be controlled by the time period in this case (Torres-Reyna, 2007). In this study, the effect of the time period is very significant. The R^2 was 11.36% and it increased to 41.7% after controlling the data with time period (as shown in the first model in Table 4). This indicates that the performance of the Jordanian banks is getting better throughout the period of this study.

The main results are presented in the first model (Table 4). The government ownership is found to have significant and positive effects on the banks' performance. Similar results were found previously (e.g. Lau & Tong, 2008; Ghazali, 2010; Sulong & Mat Nor, 2010; Fauzi & Musallam, 2015). In general, the results of this study suggest that increasing the percentage of shares held by the government leads to increase the profitability. It is noted that the government might hold insignificant (less than 10%) percentage of the shares in a specific bank. But, however, wherever the government has shares, they will have a representative director to represent them in the board. Therefore, this raises the question of either the government plays the same roles regardless of the percentage of shares or the roles of the shareholders (government) is linked to the size of shareholdings.

Table 4. Multivariate Analysis

Variables	Model (1)		Model (2)		Model (3)	
	Coef	t	Coef	t	Coef	t
Constant	.0064	0.00	.0235	0.59	.0122	0.29
Government Ownership	.0925	4.87**	.0019	1.63	.0105	2.25*
Leverage	-.0659	-2.94**	-.0669	-2.76*	-.0592	-3.13**
Bank Size (log)	.0029	1.36	.0021	0.93	.0022	0.91
Bank Age	.0001	0.94	.0001	0.69	.0001	0.72
Years	Included		Included		Included	
Observations	147		147		147	
Modified Wald test	0.000		0.0000		0.0000	
Wooldridge test	0.0182		0.0234		0.0136	
Prob > F	0.0000		0.0000		0.0000	
Hausman Test	0.0000		0.0000		0.0000	
R^2 (within)	0.417		0.404		0.424	

*Note: ** and * is the significance level at 1% and 5% respectively.*

Government ownership is measured as percentage of the shares held by the government in the first model, by the presence of the government ownership in the second model and by the presence of the government as blockholder (10% or more of the shareholdings) in the third model.

Thus, two alternative measurements are used to examine the relationship between government ownership and the bank performance. The first measurement is based on the presence of government ownership in the banks while the second measurement is based on the presence of the government as a substantial shareholder (owns 10% or more of the shares). Descriptively, the government has shares in 56.6% of the banks. Further, the government is a substantial shareholder in almost 30.6% of the banks as shown in Table 5. This result indicates the low level of government ownership in Jordan. Mohd Ghazali (2007) reported that government is a substantial shareholder in 64% of the largest 87 firms listed in Malaysia.

The empirical result of the second measurement is presented in the second model.

Presence of government ownership (regardless of the percentage of shareholdings) has no significant effects on bank performance.

Table 5. Descriptive of Government Ownership

	Presence of Government ownership	Presence of government blockholders
No. of observation	83	45
percentage	56.6%	30.6%

However, if the government is a substantial shareholder, the banks will significantly outperform their counterparts. This indicates that the roles played by the government are contingent to the percentage of shareholdings. It is unarguable that the percentage of ownership and voting power are related. Thus, the possible justification of these results may come from the institutional theory. As the Security Social Corporation in Jordan is the government's investment arm in the country, more

conflicts may occur in the banks with insignificant shares owned by the governments especially if we consider that the government has a representative director(s) in all the government-linked banks regardless of the proportion of the shares. Thus, we suggest that different institutional objectives may increase the conflicts in the board.

The banks with a government blockholder may get some financial facilitates from the government. Banks in Jordan rely on the low-cost deposits. Thus, the government may be one of the biggest customers in their connected banks because there is no governmental bank in Jordan. Thus, depositing the government's money in specific banks increases the solvency of the banks. Further, government-linked banks may benefit from the low-cost debt as well. As the government may launch some initiatives to support some projects (such as projects targeted SMEs) with low interest rate, the government-linked banks are more probable to get those funding projects. In addition, the government-linked banks may have substantial resources to the information via their boards.

6. CONCLUSION

The government ownership is the main focus of this paper. Very few studies have linked the government ownership to the firm performance in the Arabic region while the banking sector is widely ignored in the majority of the previous studies. This paper is one of the few papers that focus on the roles of the government ownership on the performance of banks. Interesting results are found in this paper. Increasing the percentage of government ownership enhances the profitability of the banks. However, being linked to the government does not necessarily enhance the performance. The empirical results show that the presence of the government as a shareholder does not have significant effects on performance. However, it is found that the presence of the government as a blockholder (with 10% or more of the shareholdings) enhances the profitability of the banks. The study uses the leverage, bank size and bank age to control the models. In the three models, only the leverage is found to be significant while bank size and bank age are found to be insignificantly related to ROA. The main implication of this study is that the government ownership should be considered as one of the important ownership structure in the MENA. This study found that the percentage of government ownership is not significant but still can play significant role in improving the profitability in the banks. Thus, future works may investigate to which level the government ownership may enhance the performance. In addition, as the ownership structure significantly effects to the board structure, the characteristics of the government-linked banks and the board mechanisms in the government-linked banks may be of interests of the future works.

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DOES A HIGH DIVIDEND PAYOUT RATIO SIGNAL PROPER CORPORATE GOVERNANCE OR HIGH AGENCY COST OF DEBT?

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Abstract

This paper examines the relationship between dividend policy and the cost of debt in Morocco. The results show that high dividend payments reflect a low level of agency costs of equity and low information asymmetries. Consequently, creditors demand lower return for providing their capital to high dividend-paying firms. The findings reveal that creditors are less concerned with agency costs of debt. The study shows that the negative relationship between dividend payout ratios and cost of debt is more pronounced in firms with higher information asymmetries.

1. INTRODUCTION

For investors in emerging markets, corporate governance mechanisms must be closely watched. The United States, Germany, Japan, and the United Kingdom have some of the best corporate governance systems in the world (Shleifer & Vishny, 1997). On the contrary, emerging markets are characterized by weak governance mechanisms at both the country and firm level which may trigger severe agency problems (Claessens, 2003; Denis & McConnel, 2003; Khwaja & Mian, 2006). Furthermore, several studies report that, in emerging economies, the absence of corporate governance mechanisms facilitates diversion of assets and managerial expropriation of many privatized firms (Boycko, Shleifer, & Vishny, 1994). Therefore, in these markets, firms are prone to corruption and abuse of minority shareholders rights through assets tunneling, asset stripping, insider trading and self-dealing (Claessen & Fan, 2002; Sawicki, 2008). As a result, capital markets have witnessed an increase in the fear of investors and dearth of external capital, which limit firms' ability to access external sources of financing, and jeopardize the development of capital markets (Grossman & Hart, 1986; Williamson, 1985).

Prior research has addressed the relationship between dividend policy and agency costs of equity. This research shows the role of dividends as a reputation building tool that not only facilitates access to capital markets, but also enables managers to minimize their cost of equity (Easterbrook, 1984; Jensen, 1986; La Porta et al., 2000b; Rozeff, 1982). The relationship between dividend policy and agency cost of debt has also been thoroughly investigated. The empirical findings show how the firm's dividend policy affects creditors' decisions and their required rate of return (Agrawal & Jayaraman, 1994; Brockman & Unlu, 2009; Crutchley & Hansen, 1989; Faccio, Lang, & Young, 2001; Gugler & Yurtoglu, 2003; John & Nachman, 1985; Nini et al., 2007).

Notwithstanding prior research, the relationship between dividend policy, as an indicator of the quality of corporate governance within the firm and cost of debt can benefit from further investigation. Farooq and Jabbouri (2015) document how dividend payments help firms reduce their cost of debt by improving their reputation and lowering the level of information asymmetry. Conversely, Byun (2007) argues that corporate governance generally benefits shareholders, but at the same time, it could involve different consequences for creditors. The alignment of interests between debtholders and shareholders does not eliminate the potential conflicts of interests between them. Therefore, Byun suggests that the net impact of quality shareholder governance on debtholders is theoretically unclear; hence, this issue remains an empirical question which deserves further exploration (Anderson, Mansi, & Reeb, 2003; Klock, Mansi, & Maxwell, 2005). This paper attempts to bridge this important gap in the literature by investigating the relationship between dividend policy and cost of debt in the Moroccan market in the period between 2004 and 2015. It attempts to answer the following question: Does a high dividend payout ratio signal proper corporate governance or high agency cost of debt?

Morocco appears to be the most stable country in the Middle East and North Africa MENA region thanks to the ongoing and extensive political and economic reforms undertaken by the king and the government in recent years. Reverence and worship for monarchy in Morocco has contributed to a reduced risk of revolts and a more assured political stability in the country. However, due to the domination of the political elites on the decision making power, large segments of the population are being alienated and the trajectory of policy development for many investors is hazed. Yet, the main challenges for this social and political stability come from high unemployment rates, high poverty rates and high discrepancy between the social

classes as well as the widespread of corruption and favoritism. Morocco's economy is expected to remain a relative outperformer compared to other MENA countries over the short and medium term. The positioning of Morocco as an export-oriented manufacturing hub for the European market and progressively to the Sub-Saharan Africa makes it a favorable destination for international investors. Further, the growing tourism industry strengthens the attractiveness of the country and increases its potential growth over the next coming years. The strong ties with the Gulf countries and the new links with Russia and China are expected to materialize in terms of increased investment from these countries over the long term. The massive investments of the kingdom in renewable energy over the last few years and that are expected to continue over the coming period, as part of the National Energy Plan 2020, should lessen its heavy energy bill, advance Morocco's economic growth, and improve its desirability for international investors.

The Casablanca Stock Exchange (CSE), created in 1929, is the official stock market of Morocco and the third largest stock exchange in Africa. Morocco has similar characteristics to mature African markets; hence, the results of this study can be generalized to this region. Poor governance mechanisms at firm and country level, lax information disclosure requirements, and institutional underdevelopment limit the ability of this financial market to stimulate economic growth. Despite all the efforts made by the CSE, it recently started suffering from a reputational problem because of its downgrade from an emerging market to a frontier market. In the past two years S&P and Moody's have downgraded the equities market in Morocco. The downgrade was justified by the liquidity problems CSE was facing. Investors and creditors were shaken by the news of the downgrade, and it is taking time to recover the confidence they had in the Moroccan stock market despite the attempts made by the CSE to energize the underperforming Moroccan market.

CSE addresses corporate governance issues to improve the integrity of local markets with the hope to reassure local investors and attract international investors. Furthermore, most of the actions undertaken by the regulatory authorities over the last two decades in emerging markets in general and more particularly in Morocco, have focused on protecting shareholders' rights. Neglecting creditors' rights may weaken their role as the primary source of financing in this economy and give rise to severe agency problems between shareholders and creditors. Hence, Morocco provides a distinctive environment to explore the impact of good shareholders' governance on debtholders. Moreover, most of the research in finance focuses on the G-7 countries (Bekaert & Harvey, 2003). The authors argue that the conditions in these markets are in harmony with the theoretical model assumptions. In many cases, models based on these assumptions fail to be supported when implemented in emerging markets. This research attempts to contribute to either developing new models or adapting existing ones to the individual characteristics of emerging markets.

The paper proceeds as follows. Section 2 reviews the literature, section 3 describes methodology and discusses the results, while section 4 concludes.

2. LITERATURE REVIEW

The relationship between dividend policy and corporate governance has been studied extensively. As the free cash flow of the firm increases agency problems between insiders and minority shareholders intensify (Jensen, 1986). In their attempt to serve their goals, the agents spend the excess cash on projects with a negative present value, which decreases shareholders' wealth (Hu & Kumar, 2004; Jensen, Solberg, & Zorn, 1992; Smith & Watts, 1992).

Many researchers contend that high dividend payments can be used to alleviate agency conflicts through the reduction of free cash flow available to managers (Holder, Langrehr & Lawrence, 1998; La Porta et al., 2000b). Several studies support this finding showing that firms in emerging countries tend to pay high dividends in order to build a reputation of decent treatment of minority shareholders (DeAngelo, DeAngelo, Stulz, 2004; Rozeff, 1982; Sawicki, 2008). On the same line, Mitton (2004) uses a sample of 365 firms from 19 emerging countries to examine the relationship between corporate governance and dividend policy. The author concludes that firms with stronger corporate governance have higher dividend payouts[18]. High dividend payments also indicate a reliance on capital markets for financing. Paying high dividends reflects management's willingness to undergo analysts' examination, which reduces information asymmetry and mirrors good governance at the firm level (Bhattacharya, 1979; Crutchley & Hansen, 1989; Dempsey & Laber, 1992).

Monitoring and the risk-aversion problems[19] are lessened if the firm is repeatedly in the market for new capital and being scrutinized by financial analysts. If managers decide to raise equity or debt from financial markets, investors (equity and/or debt-holders) will have an opportunity to carefully examine and review the business. In this situation managers are more likely to serve investor interests than agents who are immune from this kind of monitoring (Easterbrook, 1984). Given that firms paying high dividends are perceived to be less risky and experiencing low agency problems, firms can improve their reputation by disgorging high amount of cash and raise capital at competitive rates (Gomes, 2000; Hope, 2003).

It follows from the above discussion that dividend policy is an important determinant of the quality of corporate governance in emerging markets (La Porta et al., 2000). High dividend payouts not

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[18] Mitton (2004) provides evidence that firms with strong corporate governance have a tendency to exhibit a higher profitability. He also shows that the higher profitability provides only a partial explanation of the higher dividend and that the latter is a result of strong corporate governance mechanisms. The author also suggests that firm-level corporate governance and country-level investor protection are complements rather than substitutes since the positive relationship between corporate governance and dividend payouts is limited primarily to countries with strong investor protection.

[19] The problem of avoiding risky projects that could maximize shareholders' value.

only improve the firm's reputation vis-a-vis outside investors, but lower agency problems and information asymmetries as well (Grossman & Hart, 1980). In this research, we argue that a high dividend payout ratio, being an indicator of better governance, lowers agency problems and reduces information asymmetry; hence, it should be associated with a lower cost of debt. Therefore, we hypothesized that there is a negative relationship between cost of debt and dividend payout ratio.

An opposing view contends that in emerging markets characterized by weak protection of creditors and low level of creditor rights, debt-holders would be more concerned with agency cost of debt. Black and Scholes (1973) state that dividend payments always favor stockholders at the expense of creditors. The authors use the following example to illustrate how high dividend payments can be used to transfer wealth from creditors to shareholders:

"To take an extreme example, suppose again that the corporation's only assets are the shares of another company, and suppose that it sells all these shares and uses the proceeds to pay a dividend to its common stockholders. Then the value of the firm will go to zero, and the value of the bonds will go to zero. The common stockholders will have "stolen" the company out from under the bond holders".

This extreme example summarizes the influential role agency cost of debt plays in setting dividend policies all over the world. Shareholders are motivated to substitute assets and invest in high risk projects with high-expected return since shareholders enjoy the gains while losses are shared with creditors. This risk of adverse selection deepens the agency cost of debt and contributes to the transfer of wealth from creditors to shareholders. When taken into consideration by lenders, these potential problems increase the perceived risks and result in more stringent credit terms. Further, when information asymmetry is high, the overall risk perceived by creditors is higher because the firm's environment encourages value destroying actions as well as earning manipulation by management (Roberts & Yuan, 2006).

In an attempt to reassure creditors, management planning to tap the credit market repeatedly, either voluntarily or under creditors' pressure, would accept restrictions on dividend payouts to signal a low level of agency cost of debt within the firm (Agrawal & Jayaraman, 1994; Brockman & Unlu, 2009). One of the most important arguments cited to explain the relationship between a restricted dividend payout policy and a lower cost of debt is that creditors seek additional protection when their rights are weak, legal protection is inappropriate and the confidence to recover their claims is low (Jensen et al., 1992; Nini, Smith & Sufi, 2007). However, creditors are able to restore confidence and lower their risks by ensuring that bond indentures contain covenants that restrict the firm's dividend payout policy (Day & Taylor, 1996; Kalay, 1982; Mather & Peirson, 2006). Yet, there is evidence that covenants can be used to either lower the risk of investments and protect creditors or signal the potential hazard of the borrower (Chava, Livdan & Purnanadam, 2009; Cremers, Nair & Wei, 2006). These mixed results suggest that the role of covenants in protecting creditors is still ambiguous.

Therefore, the insufficient monitoring provided by covenants reflects the important and influential role of firm and country level corporate governance in shaping creditors' decisions and determining their required rate of return (Zhu, 2009).

Several studies suggest that firms planning to access capital markets frequently in the future are keen to establish a good reputation of decent treatment of creditors by restricting dividends (Brockman & Unlu, 2009). These studies show that a restrictive dividend policy minimizes the conflicts between equity-holders and debt-holders and substitutes for the low level of creditors' rights as managers try to establish a decent reputation and minimize future financing costs. A conservative dividend policy would reflect a low level of agency cost of debt, grant creditors more control over the company, and provide a balance against the weak level of creditors' rights (Agrawal & Jayaraman, 1994; Gugler & Yurtoglu, 2003). Therefore, an opposing hypothesis suggests that a restrictive dividend policy may signal low agency cost of debt, which would minimize the firm's risk and result in a lower required rate of return by creditors.

This paper attempts to confront the two contradicting explanations reported by previous research. Some studies consider high dividends a major indicator of proper shareholders' governance, others document that high dividends are associated with an expropriation of creditors by shareholders. This study adds new empirical evidence on the relationship between dividend policy, agency costs of equity, and agency costs of debt and the outcome of this research reveals new evidence on the net impact of shareholders decent governance on debtholders.

3. METHODOLOGY AND EMPIRICAL RESULTS

3.1. Data and Variables

This research includes all firms listed on CSE between 2004 and 2015. The choice of the period is driven by the fact that it has attracted significant interest from investors and regulators resulting in an increased market activity. The study excludes financial firms due to their special financial structures, accounting methods, and corporate governance (Berger et al., 1997). Final sample size includes 715 firm year observations. Datastream and Worldscope are used to assemble data. All data is yearly and expressed in Moroccan Dirham.

3.1.1. The dependent variable: cost of debt

We define the cost of debt (CoD) as the interest rate on the firm's debt, which is equal to interest expense net of capitalized interest for the year divided by average short- and long- term debt for the year (Francis, Khurana & Pereira, 2005; Zhu, 2009). One of the reasons for this choice is the unavailability of data on the yield on outstanding bonds while banks and equity are the main components of the Moroccan capital markets. Panel A of Table 1 shows that the mean cost of debt in the study period is 0.079 and the median is 0.048.

3.1.2. The independent variable: dividend policy

The dividend payout ratio (PoR) is used as a proxy for dividend policy, defined as the ratio of total dividends to operating profits, that is profits before interests and taxes (Chen & Dhiensiri, 2009). This measure helps avoid issues based on traditional measure of dividend payout ratio, computed as total dividends divided by net income, in case the firm incurs losses and decides to pay dividends. Panel A of Table 1 shows that the sample firms have a mean payout ratio around 29.12% and a median of 25.11%.

3.1.3. Control variables

A number of firm specific characteristics that may play a role in driving the results of the study are used as control variables. We use size, leverage, profitability, growth, liquidity, default risk, and expected inflation as control variables.

We use the natural logarithm of total market value of equity as a proxy for the firm's size (SIZE). In this respect, several studies report that larger firms are less risky and enjoy greater access to debt markets compared to smaller firms, which are less diversified on production and distribution side, and hence, would encounter more financing restrictions (Behr & Güttler, 2007; Plattner, 2002). Smaller firms are often charged a higher interest rate due to their lack of diversification as well as their inability to provide appropriate collateral because of their low asset base (D'Auria, Foglia, & Reedtz, 1999; Lehmann & Neuberger, 2000).

Total debt to common equity ratio (LEVERAGE) is added as a proxy for financial leverage (Jensen et al., 1992). Prior literature associates higher leverage with higher risk. Leverage increases firms' obligations including principle and interest

payments on debt, and consequently, results in a higher required rate of return by creditors (Zhu, 2009). Profitable firms are irrevocably in a better position to honor their obligations and enjoy a lower cost of debt. To control for the profitability of the firm we use return on equity (ROE). Fourth, high growth entails more external financing. A possible explanation is the investment in working capital needed to support the growth is higher than the incremental cash flow provided by growth in sales (Higgins, 1981). However, high growth firms benefits from a lower cost thanks to their high profitability (Zhu, 2009). Growth in assets (GROWTH) is used as a proxy for the firm's growth opportunities.

Liquidity is highly important for firms planning to raise debt. More liquid firms enjoy an easier access to debt markets and at lower rates (Morellec, 2001; Shleifer and Vishny, 1992). Quick or acid test ratio is the proxy used for liquidity (Papadopoulo & Charalambidis, 2007). Interest coverage ratio defined as the ratio between earnings before interest and taxes (EBIT) and total interest expenses, is used as a proxy for the default risk of the firm (DEFAULT). Prior literature documents that rating agencies take into consideration business risk, financial risk, and industry risk, amongst others, to arrive at an appropriate credit rating (Altman, Caouette, & Narayanan, 1998). This strand of literature notes that rating agencies pay a special attention to interest coverage ratio while determining the credit ratings (Baker & Powell, 1999). Finally, expected inflation (INFLATION) is a main determinant of risk free rates, and therefore the cost of debt. We use Treasury bill rates for the year to capture the effect of inflation on the cost of debt (Clifton, Douglas & Jerry, 1995). Appendix A contains variables' definition and their various uses in the literature

Table 1. Descriptive statistics for the variables used in the study

Panel A. Mean and median values the variables used in the study

	Mean	Median		Mean	Median
CostOfDebt	0.079	0.048	**GROWTH**	17.43	10.39
PoR	29.12	25.11	**LIQUIDITY**	1.13	.54
SIZE	12.41	12.12	**COVRATIO**	17.63	6.07
LEVERAGE	21.40	18.16	**INFLATION**	2.02	1.90
ROE	14.58	7.21			

Panel B. Correlation matrix

	PoR	**SIZE**	**LEVERAGE**	**ROE**	**GROWTH**	**LIQUIDITY**	**DEFAULT**	**INFLATION**
PoR	1.0000							
SIZE	0.0188	1.0000						
LEVERAGE	-0.0987	0.1542	1.0000					
ROE	0.2315	-0.0398	0.0255	1.0000				
GROWTH	-0.0203	0.0308	-0.0411	0.0346	1.0000			
LIQUIDITY	0.1985	-0.2319	-0.1145	0.2761	0.0511	1.0000		
COVRATIO	0.0105	0.2231	-0.1218	0.0309	0.0398	0.0421	1.000	
INFLATION	0.0327	0.1301	-0.0781	0.0923	0.0429	-0.0221	-0.0856	1.0000

Descriptive statistics for control variables are provided in Table 1. Panel B of Table 1 shows low levels of correlations between control variables. It indicates that all of the variables can be included together in the regression equation[20].

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20 The Variance Inflation Factor (VIF) for each of the explanatory variables is used to scrutinize multicollinearity issues from which the sample may suffer. Fortunately, all the VIF values are low and none of them exceeds 1.24.

3.2. Model and Empirical Results

In order to study the effect of payout ratio on cost of debt in CSE, we employ a panel regression with cost of debt (CoD) as a dependent variable and dividend payout ratio (PoR) as an independent variable. To control for unobserved heterogeneity, dummy variables representing firm-specific fixed effects (FDUM) are also included. The basic regression takes the following form.

$$\text{CoD}_{it+1} = \alpha + \beta_1(\text{PoR}_{it}) + \beta_2(\text{SIZE}_{it}) + \beta_3(\text{LEVERAGE}_{it}) + \beta_4(\text{ROE}_{it}) + \beta_5(\text{GROWTH}_{it}) + \beta_6(\text{LIQUIDITY}_{it}) + \beta_7(\text{DEFAULT}_{it}) + \beta_7(\text{INFLATION}_{it}) + \Sigma\beta^{\text{Fxd}}(\text{FDUM}) + \varepsilon \quad (1)$$

where, the subscript i represents the cross-sectional dimension and t denotes the time-series dimension.

For equation (1), the fixed effects model and the random effects model are produced. Hausman test is used to decide between the two models and resulted in the choice of the fixed effects model. The results of the analysis are reported in Table 2. The adjusted R-squared for equation (1) is relatively high at 0.4211. The coefficient of PoR is negative and significant. For an increase in dividend payout ratio by one unit, the cost of debt decreases by 0.0072 units. High dividend payments convey a low level of information asymmetry and agency problems. Better corporate governance lowers the risks perceived by creditors who require a lower rate of return for properly governed firms. A low level of agency costs of equity signal to debt-holders that the firm's resources are used efficiently, which enhances its performance and increases its ability to service its debt obligations.

These results are consistent with the prior findings reported by Farooq and Jabbouri (2015) for a larger sample of MENA countries. The results support the conclusion that corporate lenders are less concerned with agency cost of debt that may arise from dividends. Plausible explanations for this result include a low level of agency cost of debt, or creditor actions that reduce these potential problems. This finding is consistent with prior studies that document that the use of debt covenants and the active monitoring of lenders, especially banks, the main providers of debt in Morocco, help reduce agency cost of debt and improve firms' organizational efficiency (Agrawal & Knoeber, 1996). The large amounts banks have at stake increase their incentives to monitor the projects of borrowers and establish a long-term relationship (Besanko & Thakor, 1993; Von Thadden, 1995). As a result, corporate lenders seem more focused on the quality of corporate governance, the level of information asymmetry and agency costs of equity that may harm the firm and affect its ability to honor its debt obligations. This result is also in line with the findings of Baker and Jabbouri (2016) who surveyed the managers of CSE listed firms to learn their views about the factors influencing dividend policy. Moroccan managers rank the "Desire to send a favorable signal to current or potential lenders" as one of the main factors taken

into account in setting their dividend policy. The same study reports that Moroccan managers acknowledge the existence of severe agency problems, which justifies the concern of creditors about the quality of corporate governance.

Table 2. Relationship between dividend policy and cost of debt

	Equation (1)
PoR	-0.0072***
SIZE	-0.0164**
LEVERAGE	0.0729***
ROE	-0.0043**
GROWTH	-0.0177**
LIQUIDITY	-0.0081**
COVRATIO	-0.0420*
INFLATION	0.0879***
Constant	-0.0981
Fixed Effects	Yes
No. of observations	715
No. of groups	46
F-value	4.52
R² within	0.4211

*Note: *, **, *** indicate significance at the 10%, 5%, and 1% levels respectively. PoR is defined as the ratio of total dividends to operating profits. SIZE is measured as the natural logarithm of total assets. LEVERAGE is defined as total book value of debt divided by total assets. ROE is used to proxy for profitability. GROWTH is measured as the annual growth in assets. LIQUIDITY is measured as the quick or acid test ratio. COVRATIO is defined as the ratio between earnings before interest and taxes (EBIT) and total interest expenses. Expected Inflation is measure as the annual inflation rate.*

3.3. Effect of growth opportunities on the relationship between dividend policy and cost of debt

Several studies contend that the asymmetric information problem is more severe for firms with significant growth opportunities (Fama & French, 2005; Frank & Goyal, 2003). The argument is that managers of high growth firms have privileged information about the firms' investment opportunities and expected future cash flow to be provided by firms' existing assets (Smith & Watts, 1992). Similar to other studies, we use growth of the firm to proxy for the level of information asymmetry (Clarke & Shastri, 2000; Varıcı, 2013). Hence, Equation 1 is re-estimated with the sample divided into two groups – one group with above median growth of the entire sample and the other group with below median growth of the entire sample. The results show that the earlier findings hold only in high growth firms. Table 3 reports a significant negative coefficient of PoR for high growth firms and an insignificant coefficient of PoR for low growth firms. The analysis documents that the negative relationship between dividend payout ratio and cost of debt is more pronounced in firms with higher information asymmetries. This finding is consistent with other studies (Choi, Mao & Upadhyay, 2008; Farooq & Jabbouri, 2015) that show that the value relevance of dividends is larger for high growth firms subject to greater information asymmetry.

	High Growth	**Low Growth**
PoR	-0.0058***	-0.0283
SIZE	-0.0032**	-0.0024*
LEVERAGE	0.0133**	0.0019**
ROE	-0.0012*	-0.0019*
GROWTH	-0.0405**	-0.0176*
LIQUIDITY	-0.0027***	-0.0035**
COVRATIO	-0.0731**	-0.0082***
INFLATION	0.0431***	0.0672**
Constant	0.0796	0.2004
Fixed Effects	Yes	Yes
No. of observations	364	351
No. of groups	25	21
F-value	7.55	4.66
R^2 within	0.4251	0.3041

Table 3. Effect of growth on the relationship between dividend policy and cost of debt

*Note: *, **, *** indicate significance at the 10%, 5%, and 1% levels respectively. PoR is defined as the ratio of total dividends to operating profits. SIZE is measured as the natural logarithm of total assets. LEVERAGE is defined as total book value of debt divided by total assets. ROE is used to proxy for profitability. GROWTH is measured as the annual growth in assets. LIQUIDITY is measured as the quick or acid test ratio. COVRATIO is defined as the ratio between earnings before interest and taxes (EBIT) and total interest expenses. Expected Inflation is measure as the annual inflation rate.*

Table 4. Effect of size on the relationship between dividend policy and cost of debt

	Large firms	**Small firms**
PoR	-0.0022	-0.0093***
SIZE	-0.0039**	-0.0062**
LEVERAGE	0.0077***	0.0066***
ROE	-0.0048**	-0.0032*
GROWTH	-0.0502**	-0.0435*
LIQUIDITY	-0.0037***	-0.0020***
COVRATIO	-0.0072*	-0.0019**
INFLATION	0.0654***	0.08923***
Constant	0.4381	0.8745*
Fixed Effects	Yes	Yes
No. of observations	328	387
No. of groups	20	26
F-value	4.57	6.71
R^2 within	0.3107	0.4275

*Note: *, **, *** indicate significance at the 10%, 5%, and 1% levels respectively. PoR is defined as the ratio of total dividends to operating profits. SIZE is measured as the natural logarithm of total assets. LEVERAGE is defined as total book value of debt divided by total assets. ROE is used to proxy for profitability. GROWTH is measured as the annual growth in assets. LIQUIDITY is measured as the quick or acid test ratio. COVRATIO is defined as the ratio between earnings before interest and taxes (EBIT) and total interest expenses. Expected Inflation is measure as the annual inflation rate.*

3.4. Effect of size on the relationship between dividend policy and cost of debt

Existing studies show that larger firms enjoy greater analyst coverage (Bhushan, 1989) and more institutional ownership (McNichols, 1990; Chung and Zhang, 2011), which make them subject to external monitoring. The level of information asymmetry and agency costs of equity is lower when external monitoring is exercised. In the same line, Jin (2000) and Yoon and Starks (2004) assert that the reaction of small firms' stock prices to dividend announcements is higher than the reaction of larger firms. This implies that the signalling power of dividend decreases as the size of the firm increases. Eddy and Seifert (1988) argue that the bigger the size of the firm the greater is the publicly available information on the firm and the lower is the level of information asymmetry between insiders and outsiders. The level of information asymmetry would determine the value of the additional information contents embedded in dividends payment.

In this analysis, the sample is divided into two groups – one group with above median size of the entire sample and the other group with below median size of the entire sample. Equation 1 is re-estimated for the two subsamples. The results, reported in Table 4, show that the earlier findings hold only for smaller firms subject to greater information asymmetry. Investors of small firms have scarcity of information. Hence, the incremental information embedded in dividend payments is more valued by these investors. This finding is consistent with prior results reported by Farooq and Jabbouri (2015) and Lang, Lins, and Miller (2004).

4. SUMMARY AND CONCLUSION

Prior literature contends that, in emerging countries, a high dividend payout ratio signals lower agency problems, and information asymmetries. Lower risks should be associated with a lower cost of borrowing. Another strand of literature provides evidence that a high dividend payout ratio reflects agency cost of debt between shareholders and creditors. Hence, higher risks for creditors result in a higher cost of debt. The empirical evidence reported in this study for non-financial firms listed on the Casablanca Stock Exchange shows that high dividend payments reflect a low level of agency costs of equity and low information asymmetries. Corporate lenders focus on the agency costs within the firm and appear less concerned with agency costs of debt. Hence, creditors demand lower return for providing their capital to high dividend-paying firms. The study shows that the negative relationship between dividend payout ratios and cost of debt is more pronounced in firms with higher information asymmetries.

Given the strong economic ties between financial markets and the real economy, this research is expected to have a predominant social impact as well (Bekaert & Harvey, 2000a; Henry, 2000b). Bekaert and Harvey (2003) argue that the impact of a lower cost of capital and the following economic growth in emerging markets "can be measured not just in dollars -- but in the number of people that are elevated from a desperate subsistence level to a more adequate standard of living".

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DETERMINANTS OF VOLUNTARY DISCLOSURE OF INTERNAL CONTROL WEAKNESSES IN TUNISIA

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Abstract

The main objective of this research is to examine the determinants which can push the auditors to reveal the weaknesses of the internal control system in companies listed on the Stock Exchange Securities of Tunisia. We are particularly interested in determinants related to corporate governance, ownership structure and some company characteristics. The conceptual framework referred to this work is the agency theory. We concluded from the results of the logistic regression model that the probability of disclosure of internal control weaknesses was not significantly associated with corporate governance and ownership structure. However, some other company characteristics, e.g. the size are strongly related with probability of firms disclosing internal control weaknesses.

1. INTRODUCTION

In these recent years the economic environment has been marked by perpetual changes, which leads our leaders to think of ways to keep their companies competitive and successful. One of the main ways is to develop an internal control system which is able to control all the functions of the entity and in this context has been developed the internal control culture.

Indeed, this unstable economic environment was punctuated by several slowing bankruptcies and financial and economic scandals such as Enron and BATAM case.

According to Passet and Libermann [35] the Enron case, takes its name from the famous company which artificially inflated its profits while masking its deficits with the use of a variety of dummy companies which have falsified accounts. The goal was no more or less than inflate the stock market value. The bursting of the bubble has precipitated not only Enron company but also Arthur Andersen auditing firm who was its accomplice.

At national level we cite the case of BATAM, according to Boumiza [3] this national giant of food distribution and appliances equipment was considered as the national leader in the distribution, and it is from 2001 that the group's financial situation deteriorates.

After the expansion made through a multiple hasty and contrast acquisitions with the financial imbalances of the group, unpaid debts, unpaid suppliers, internal mismanagement and an economic stagnation of the consumer market from 2000, BATAM was sinking into a debt spiral, leading the group to the implementation of a restructuring plan on October 2001.

The scale and the brutality of these scandals have more than ever the focus on internal control processes and have led legislators at national and international level to put in place new rules such as Sarbanes-Oxley (SOX) (2002) in the USA that requires to the listed companies in addition to the annual report an internal control report and requires to the auditors a statement in their reports of the evaluation of the internal control system.

In France the legislature put in place the Financial Security Act (LSF) (2003) which requires to the public limited companies and publicly traded companies and more precisely to the chairman of the executive board or the chairman of supervisory board a report related to the preparation and the organization of the board's work and the internal control procedures implemented by the company and requires the legal auditors, a report attached to their report to include the comments about the internal control procedures related to the preparation of accounting and financial information. In Tunisia, the legislature established the Tunisian law on strengthening the security of financial relations (LRRSRF) (2005) which impose the inclusion of a paragraph about the internal control processes in the annual management report of publicly traded companies.

Besides, according to a survey "Global Economic Crime Survey (2011) "done by Price water house Coopers, talking about the increase of fraud between 2009 and 2011, communications and insurance sectors remain at the top of the ranking in terms of the number of reported fraud. And the public sector fraud increased by 9% compared to the results of the 2009 survey, which places this sector among the top five targets of economic crime.

This survey was also interested in the types of economic crimes in 2011 spread worldwide which can take various forms. The most common crime

reported by respondents is asset misappropriation by officers, trustees or employees. Then comes the accounting fraud, bribery and corruption. 72% of companies surveyed globally, who have been victims of economic crime in 2011 have suffered from asset misappropriation, which increased of 5% compared to the results of the 2009 survey.

We can see that generally, the absence or the lack of the internal control dispositive is not directly sanctioned but it has important and significant indirect consequences. If the entity is controlled by a legal auditor, he can in some cases refuse the certification of the accounts or he can be unable to certify them when he finds that the internal control system contains weaknesses or when he notices its absence.

Power [36] thinks that "The development of the financial audit seems trapped in failure dialectic, every crisis triggering new institutional changes."

Academic and professional studies have also given more importance and interest to the internal control reporting in listed companies such as the study of Le Maux and Alloul [26] conducted by Deloitte. This study show that diffused reports are increasingly heterogeneous and reveal the absence of the signature of the Managers which means a commitment rejection of their responsibility to the information published in the reports.

In addition, according to Ghosh and Lubberink [18] "Entities with big seize have more resources to invest in internal control therefore they have fewer weaknesses in their devices", Ge and Mc Vay [18] and Doyle and al [12] think that "Previous studies show that companies who report material weaknesses tend to be younger", Krishnan [24] has demonstrated that "Poorly performing companies may not be able to invest in an adequate internal control system and financial results can confirm that. Also, according to Asbaugh-Skaife and al [1] "The entities with an ineffective internal control tend to be younger, more volatile, with higher sales growth, and less profitable than companies with effective internal control system.", on the other hand, Zhang and al [51] affirm that "Entities with good corporate governance quality are expected to have fewer internal control weaknesses."

Following to the financial scandals and the increase of fraud and economic offenses globally, managers are more encouraged to implement a robust internal control system which can guarantee the quality of information. However, the internal control system in Tunisia should be evaluated by an independent person who is the legal auditor as specified in the Commercial Companies Code in its Article 266 (Paragraph 2) but the legal auditor may find himself in situations which can refrain him from disclosing the weaknesses of internal control system.

The main objective of this research is to examine the determinants which can push the auditors to reveal the weaknesses of the internal control system in companies listed on the Stock Exchange Securities of Tunisia. We are particularly interested in determinants related to corporate governance, ownership structure and firm characteristics.

2. EVOLUTION OF THE REGULATORY CONTEXT OF INTERNAL CONTROL AND OBLIGATIONS OF THE AUDITOR IN TUNISIA

Following to measures taken by USA and France, Tunisia too was among the countries who introduced a new Financial Security Act 2005-96 which is the Tunisian law on strengthening the security of financial relations which impacted the legal auditing by few changing like:
- A rotation of auditors and the law stipulates that when the auditor is a natural person cannot exceed 3 mandates and if he is a legal person with three members from the Certified Public Accountant Order, he cannot exceed 5 mandates with the change of the team responsible of the mission every three years.
- New measures to nominate two auditors who must be members of the Certified Public Accountant Order for the following companies: Financial institutions making public savings, multi-line insurance companies, companies required to establish consolidated financial reports and companies with liabilities total to credit institutions exceed an amount set by decree.
- Communication by auditors of a copy of each report prepared by themselves to the attention of the shareholders for ordinarily or extraordinarily assembly, also to the Central Bank of Tunisia and to the financial market board, for publicly traded companies and to the Central Bank of Tunisia for companies required to prepare consolidated financial statements if the consolidated assets total exceed an amount set by decree; or whose with liabilities total to credit institutions exceed an amount set by decree. As the auditors of public companies making savings, must report to the financial market board any matter likely to jeopardize the interests of the Company or the holders of its securities.
- Obligation to evaluate periodically the internal control systems for publicly traded companies, after the evaluation, the auditor has to in serta paragraph in his auditing report.

According to the opinion of the Minister of Justice in the parliamentary debates (Yaich, [48]), "The auditor proceed to an annual audit of the effectiveness of internal control system in parallel with the audit of financial statements to prepare the auditing report destined to the annual general assembly. Thus, significant deficiencies in internal control system must henceforth be mentioned in a paragraph in the auditing report of the auditor who may, if the volume of comments is important, mention them in a separated report which will be communicated to the assembly".

Tayechi [43] says that "These measures remained till this day are limited to the financial institutions, insurance, the undertakings for the collective investment of transferable securities and associations authorized to grant microloans. As a matter of fact, no reference, no operating guide, or professional standard for auditor related to the internal control issue, like it has been in the international level, have emerged, making the nature and the scope of work, on the one hand and internal control disclosing on the other hand, superfluous."

3. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

According to Xu-dong Ji and al [46], studies have demonstrated that which motivates more firms to provide voluntary disclosures is the decrease of the cost of capital and the cost of debts through decreasing information asymmetry (Botosan [5]; Diamond and Verrecchia [11]; Meek and al [33]); the decrease of the agency costs in monitoring management behavior, (Lang and Lundholm [25]); the decrease of potential litigation risk by voluntarily disclosing of bad news (Skinner [41]) and the distinction from lower quality firms (Watson and al [51]).

In this study, we are interested in factors which can push auditors to reveal the weaknesses of the internal control system in companies listed on the Stock Exchange Securities of Tunisia: corporate governance, ownership structure and company characteristics, on which our hypotheses are based.

3.1. Corporate governance

Companies with good corporate governance quality have less and less internal control weaknesses (Zhang and al [52]). Previous studies which examined the Chinese corporate governance mechanisms suggest that when the size of the directors' board is larger, greater is the board independence, also a larger size of the board supervisory engender more independence to this board, so the internal audit committee can be more competent and we will have more factors which contribute to have an effective corporate governance while the duality between Chairman of the Board and the chief executive officer can distort the effectiveness of corporate governance (Cho and Rui [9]; Firth and al [16]; Xiao and Yuan [44]; Xiao and al [45]; Xu and Wang [47]).

In our study, three characteristics retain our attention, which are the degree of independence, the duality between the chief executive officer and the Chairman of the Board, the existence of an audit committee and the auditing by a BIG4.

3.1.1. Board independence

The variable through which we can analyze the independence of the board is the percentage of independent directors and according to Boutan [4] "A director is independent when he has not any kind of relationship with the company, its group or its management that could compromise their freedom of judgment". Independent directors have the power to make better the audit quality by requiring further auditing work and it is in this sense that O'Sullivan [34] shows that the proportion of independent directors impacts positively the audit quality and push the auditor to disclose all forms of failures. We even see that Beasley and Petroni [2], Carcello and al [6], Lennox [27],Goodwin and al [19] and recently Xu-dong Ji and al [46]found that independent directors have an important role in making effective the control function of the administration board and therefore they require a better audit quality. We formulate our hypothesis as follows:

H1: The presence of a significant proportion of independent directors in the board affects positively

the audit quality to disclose the weaknesses of the internal control system.

3.1.2. Duality of chairman of the board and CEO

Makni and al [30] found after studying a sample of 29 Tunisian entities between 2005 and 2009 that the duality of roles can positively affects the quality of the external audit and this leads us to conclude that the independence of the board in this situation may be affected and this could cause an increase of the agency costs. Moreover a study on 1998 of more than 800 Chinese listed companies by Xu and Wang [47] have shown that the duality between chief executive officer and the chairman of the board generates generally a negative association with the disclosure of internal control weaknesses by the auditor engendered by schemes or scams which can be used to hide failures in the entity from external auditors. This was once again confirmed by another study between 2010 and 2011 by Xu Ji-dong and al [46] of 1365 Chinese listed companies on 2010 and 1389 listed Chinese companies on 2011. Our second hypothesis is developed as follows:

H2: The duality of chairman of the board and CEO affects negatively the disclosure by the auditor of the internal control system weaknesses.

3.1.3. The internal audit committee

Krishnans (2005) indicated that companies with more effective internal audit committees than others and which employ more skills and expertise within the committee, they are those whom have less internal control problems. Zhang and al. [52] found also similar results, so companies with high audit committees' quality are least likely to have internal control problems. In addition, Stephens [42] demonstrated that internal audit committees with competent members will be able to discover the internal control weaknesses and his study shows that the existence of good audit committees within the company can generates a sincere disclosure of internal control deficiencies. In China, the audit committee is one of the most important corporate governance mechanisms, its quality and the level of competence of its members will push therefore the management of the company to report all troubles and problems discovered in the internal control system and thereafter this will facilitate the work for to the auditor. Our third hypothesis is developed as follows:

H3: The presence of an internal audit committee affects positively the disclosure by the auditor of the internal control weaknesses.

3.1.4. Auditing by BIG4

According to Healy and Palepu [21] previous studies see that the quality of the external audit can play a positive role in improving the quality of voluntary disclosure of their clients pushed by the auditor. Specifically, regarding to the failures disclosure of internal control system Ashbaugh-Skaife and al. [1] found that companies controlled by a Big 4, are more likely to put in their reports the internal control weaknesses detected otherwise the auditor should put that in his report to avoid any damage

for the reputation of the Big 4 for which he works. Our fourth hypothesis is developed as follows:

H4: The presence of an audit firm belonging to the Big 4 affects positively the audit quality and pushes the auditor to disclose internal control weaknesses.

3.2. Ownership structure

Authors such as Ashbaugh-Skaife and al. [1] demonstrate that the ownership structure is another factor influencing the disclosing of the internal control weaknesses. This was also demonstrated by Xu Ji-dong and al [46] that studied between 2010 and 2011 a sample of listed Chinese companies and conclude that there is a strong association between the ownership structure and the disclosing of internal control weaknesses. In our case our study will be based on two parameters which are the concentration of ownership and the direct or indirect state participation in the share capital of the company.

3.2.1. Ownership concentration

According to Demsetz [10], Shleifer and Vishny [40] the concentration of ownership is a guarantee for management control whose objectives are similar to the internal control objectives, shareholders consider it as a tool to limit and controlling agency costs. A majority shareholder is more encouraged than others to invest in the management control and internal control system of the entity to remove subsequently the resulting benefits. Besides, Mtanios and Paquerot [32] found that the majority shareholders have more important role than minority shareholders because they are required to control more directors and to preserve their interests. On the other hand, Chan and al [7] argued that when we have major shareholders this will lead to a limited audit and conversely when the capital is dispersed this leads to a more thorough audit which will impact positively its quality therefore we will have a better internal control weaknesses disclosure. In additions, Mitra and al. [31] show a negative relationship between the existence of majority shareholders and the level of audit fees. Our fifth hypothesis is formulated as follows:

H5: The presence of concentrated ownership affects negatively the disclosure of internal control weaknesses by the auditor.

3.2.2. The direct or indirect state participation in the share capital of the company

The state participation in the share capital is important and even interesting in our case as it can has a significant role in corporate governance. Moreover financial resources which can detain a partner such as the state will conduct to a good control and eventually to a good management (Jensen and Meckling [22]). Besides Velury and al. [50] and Velury and Kane [49] demonstrated that there is a positive relationship between the state participation in the share capital and the requirement for a good audit quality. In addition, previous studies such as that of Chen and al [8] which studied the cases of Chinese listed companies found that companies in which the state holds a stake in their capital is generally less concerned with the quality of information disclosed by them, on the other hand Ashbaugh-Skaife and al. [1] found that US companies with state participation have greater incentives to correct their failures in the internal control system due to a good oversight. Our sixth hypothesis is developed as follows:

H6: The presence of direct or indirect involvement of the state in the capital of the company affects positively the disclosure of the weaknesses of internal control system by the auditor.

3.3. Firm characteristics

The Most of the studies which showed an interest to the disclosure of internal control weaknesses, Ge and McVay [17] found that disclosure is negatively associated with firm size and profitability because small firms have fewer resources to improve their internal control systems, Ghosh and Lubberink [18] found that large firms have more resources to invest in internal control, therefore they have less failures in their internal control system, and are less likely to disclose weaknesses. On the other hand, Doyle and al. [12] found that the internal control weaknesses are usually found in smaller firms, younger, financially weaker and more complex. Ashbaugh-Skaife and al. [1] demonstrated that firms with more complex activities, with fewer available resources to improve the internal control system, having a small size and lower profitability are more likely to disclose their internal control weaknesses and its age can be negatively related with the disclosing of the weaknesses, in addition, Doyle and al. [12] demonstrated that a company with a high debt ratio and growth opportunities and more complex business is more likely to have problems with the internal control system. We have five hypotheses formulated as follows:

H7a: The financial performance of the company affects negatively the disclosure of the internal control weaknesses by the auditor.

H7b: The leverage of the company affects positively the disclosure of the internal control weaknesses by the auditor.

H7c: The size of the company affects negatively the disclosure of the internal control weaknesses by the auditor.

H7d: The age of the company affects negatively the disclosure of the internal control weaknesses by the auditor.

H7e: The growth of the company affects positively the disclosure of the internal control weaknesses by the auditor.

4. RESEARCH DESIGN AND MODEL SPECIFICATION

4.1. Sample selection

Our study focuses on the study of determinants which will push and motivate the auditor to disclose internal control weaknesses. At the beginning we selected 38 Tunisian industrial and commercial companies listed on the Stock Exchange of Tunis, after deleting firms with missing data we have kept only 22 companies. Furthermore, for this study, neither banking sector nor insurance sector has been taken into account do to its specific characteristics.

The period of our research is focused on three years 2012, 2013 and 2014 and we have chosen these periods because they represent a transitional period for Tunisia, a new step towards democracy and towards greater economic and financial transparency and because during these years we have lived one of the biggest financial scandals in Tunisia related to Syphax Airlines company. The Accounting and financial data as well as corporate governance data are manually collected from the annual audit reports and the annual management reports provided from the financial market board, we have got also the official bulletins of the firms from the securities exchange of Tunis. Finally, our sample is composed of 60 observations.

4.2. Model for the determinants of disclosing Internal Control Weaknesses

Building upon voluntary disclosure theories and recent studies of internal control weaknesses disclosure (Xu-dong Ji and al. [46]; Ashbaugh-Skaife and al. [1]), we will use the following logistic regression model to investigate the probability of auditors' disclosing internal control weaknesses in their reports. When designing the model, we include all possible factors which can impact on auditors' disclosing; these factors are related to the corporate governance, the ownership structure and firm characteristics.

$$ProbFCI = \beta0 + \beta1AIND + \beta2CUMUL + \beta3COMAUD + \beta4BIG4 + \beta5TOP3 + \beta6CODESTATE + \beta7aLEV + \beta7bROA + \beta7cTAILLE + \beta7dAGE + \beta7eGROWTH + \in \quad (1)$$

Our Model is applied to investigate the determinants of the likelihood of disclosing internal control weaknesses. FCI is equals to 1 when auditors disclose internal control weaknesses in their reports, otherwise it equals to 0. For our hypotheses, we include the following variables for corporate governance: (AIND; CUMUL; COMAUD;BIG4), the following variables for the ownership structure (TOP3; CODE STATE) and the following variables for firm characteristics (LEV; ROA; TAILLE; AGE; GROWTH).

AIND represents the percentage of independent directors on the board of directors; CUMUL is equal to 1 if a chief executive officer is also the chairman of the board of directors, otherwise it is 0; COMAUD is equal to 1 if the entity has an audit committee otherwise it is 0; BIG 4 is equal to 1 if the entity is audited by a big4 otherwise it is 0.

TOP3 is the percentage of top 3 shareholders' ownership interests in firms; CODE STATE is a dummy variable that is equals to 1 if there is a direct or indirect state participation in the share capital of the company otherwise it is 0.

LEV is the measurement of a firm's leverage, it's equal to the total liability divided by total assets; ROA is the net income or the total profits after taxes divided by total assets; TAILLE is the logarithm of total assets; AGE is based on the number of years the firms have operated; GROWTH is based on changes of total sales revenue divided by total sales revenue.

5. EMPIRICAL RESULTS

5.1. Descriptive statistics

The descriptive analysis has to explain the nature of the companies studied (The minimum and the maximum, mean and standard deviation of the study variables). The following table represents the descriptive statistics of the variables:

Table 1. Descriptive Analysis

VARIABLES	Observations	Minimum	Maximum	Mean	Standard deviation
FCI	60	0	1	0,62	0,490
ADIND	60	0,000	0,429	0,05648	0,116222
CUMUL	60	0	1	0,35	0,481
COMAUD	60	0	1	0,92	0,279
TOP3	60	0,297	0,888	0,63047	0,159097
CODESTATE	60	0,000	0,798	0,15611	0,265322
BIG4	60	0	1	0,27	0,446
ROA	60	-0,239	0,190	0,00516	0,090972
LEV	60	0,078	2,647	0,65541	0,492212
TAILLE	60	6,177	8,970	7,78205	0,512503
AGE	60	2	65	28,45	16,359
GROWTH	60	-0,448	2,665	0,16758	0,502663
N	60	-	-	-	-

For FCI variable, we see that for 60 observations, we found a mean of 0.62 which means that the disclosure of weaknesses internal control system by the auditor is represented by a percentage of 62% of the sample and because we treat a categorical variable so we have 0 and 1 as a maximum and a minimum. For ADIND variable in our sample, 5.6% is the mean of the independence of the board, according to the study done by (Xu Ji-dong and al [46]) during 2010 and 2011, this percentage is 37.11% for a sample of 1141 observations composed of listed Chinese industrial companies, it is 44.2% for another study (Dumontier P. and al [13]) who studied on 98 Tunisian companies, 21 listed non-financial companies and 77 unlisted companies during 2002.

35% of our sample represents a duality between the chief executive officer and the chairman of the directors' board, whereas, for the study published by Xu-dong Jiand al [46], the percentage is 11.74%. We can also see that 92% of companies which are represented in our observations have an internal audit committee. The mean of ownership concentration TOP3 in our sample reached a percentage of 63,047%, this percentage is 18.18% with Xu Ji-dong and al [46], on the other hand, the percentage of direct or indirect participation of the state in the share capital is 15.61%. We can see also

that 27% of our sample is audited by a BIG 4, this mean is considered high compared to the mean found by Xu Ji-dong and al [46] which is 11.66% representing the Chinese market, but if we take a look of the American market we find that Zhang and al [52], between November 2003 and July 2005 for a sample of 208 industrial companies, showed that 80% of these companies are audited by BIG 4.

The mean of financial performance in our case is 0.516% this mean is 5.97% in the study presented by Xu Ji-dong and al [46] and the mean of leverage is 65.54%, Xu Ji-dong and al, [46] found 52.91%. The Size is also interesting in our sample we found a mean of 7.78.

Xu Ji- dong and al [46] found 22.53. The average age of our observations is 28.45 years, it is 14.97 years for Xu Ji-dong and al [46] in another study of Doyle and al [12] who worked on a sample of 779 listed companies between August 2002 and 2005, this age is 8.274 years. Concerning the average growth of our observations, it is 16.75%, Xu Ji-dong and al, [46] found 32.47%and Doyle and al, [12] found 22.20%.

5.2. Bivariate Analysis

We have to study the bivariate correlations between the different variables of our model using the Pearson parametric test to ensure that the variables with strong correlations between them will not been considered in the model and to avoid any possible problems of multicollinearity.

The detection of the bivariate multicollinearity is done with the use of the correlation matrix. If the correlation coefficient is greater than 0.7 which is the limit provided by (Kerwin, 1992) we conclude that we have multicollinearity problem. The author provides an "r = 0.7" to decide about the serious problem of multicollinearity between the independent variables included in the regression model, with "r" the coefficient of bivariate correlation. The limit set by Kennedy (1985) is 0.8. In our study, we will retain, as in the most studies, the limit set by (Kervin, 1992).

From the table 2 below, representing the correlations through the test of Pearson, we have ensured that none of the variables present between each other a strong correlation that could lead us to an eventual multicollinearity problem.

Table 2. Pearson Correlation Matrix

Pearson Correlation	FCI	ADIND	CUMUL	COMAUD	TOP3	CODE STATE	BIG4	ROA	LEV	TAILLE	Age	GROWTH
FCI	1	0.119	-0.653	-0.238	-0.112	0.116	-0.532	-0.458	0.286	-0.048	0.005	0.084
ADIND		1	-0.360	0.073	-0.140	-0.269	-0.296	-0.356	0.459	0.007	-0.070	-0.089
CUMUL			1	0.221	0.052	-0.077	0.506	0.463	-0.312	-0.117	-0.055	-0.077
COMAUD				1	0.142	0.179	0.182	0.052	0.073	0.219	0.335	-0.217
TOP3					1	0.392	-0.102	0.101	-0.259	-0.041	0.373	0.035
CODESTATE						1	-0.157	-0.115	-0.176	-0.075	0.573	-0.178
BIG4							1	0.401	-0.230	0.152	-0.154	0.001
ROA								1	-0.574	0.029	-0.086	-0.091
LEV									1	0.105	0.023	0.008
TAILLE										1	-0.031	0.242
Age											1	-0.314
GROWTH												1

5.3. Multivariate analysis

According to Evrard and al [15], a multivariate analysis is used for simultaneous treatment of all variables. We choose for our study the use of the chi-square test, also the Hosmer & Leme show test to see how well the model fits the data which will indicate a poor fit if the P-value is less than 0.05. We have also to assess the strength and significance of the connection between the dependent variable and the independents variables and we will use the coefficient of determination "R^2" to measure the proportion of variance (the dependent variable Y) returned by the model.

The table 3 provides us the logistics estimation of our study model. As we can see, the Chi-Square used to see the adjustment is equal to 60.051 significant at the 1% level which allows us the reject of the null hypothesis stating the invalidity of all beta coefficients.

Table 3. Multivariate Analysis

Variables	Coefficient	Significativity	StandardError
ADIND	-17.718	0.036	8.436
CUMUL	11,175	0,017	4,661
COMAUD	13,522	0,999	14013,505
TOP3	-6,334	0,239	5,378
CODESTATE	7,768	0,259	6,879
BIG4	2,153	0,229	1,789
ROA	-27,971	0,185	21,079
LEV	0,449	0,841	2,238
TAILLE	-6,740	0,043	3,338
Age	-0,099	0,272	0,091
GROWTH	3,538	0,286	3,317
CONSTANTE	51.264	0.051	26.255

Note: Chi-square = 60.051; Hosmer-Lemeshow = 1.7 (0.989); R² of Nagelkerke = 0.859

The test Hosmer & Lemeshow show aχ^2 equal to 1.7 which is not significant and revealing a good fit between the values predicted by the model and those observed in reality with a P-value of 0.989.

The R² of Nagerlkerke indicates that 85.9% of the disclosure of the internal control weaknesses by the auditor is explained by all the variables included in the model.

The "Table 3" is a summary of all our study, so if the P-value is less than 0.05 we have a useful parameter for our model, therefore the parameters having a significant P-value are the independence of directors (ADIND) with a significance of 0.036, the duality of functions (CUMUL) with a significance of 0.017 and firm size (TAILLE) with a significance of 0.043, but only this variable related to the hypothesis (7c) and to the firm characteristics is confirmed.

5.4. Results Analysis

From the results of the logistic regression model we have to explain the determinants that push the auditor to disclose internal control weaknesses and we can conclude that: Our first hypothesis assuming a presence of a significant proportion of independent directors in the board affects positively the audit quality to disclose the internal control weaknesses is significantly negative, so our first hypothesis is rejected.

In fact, we are not surprised by this result because according to Boutan [4],"a director is independent when he has no relationship of any kind with the company, its group or its management that could compromise his judgment", this says that an external administrator must not have contractual relationships with the company and even family relations with those who have the power of decision and according to Ebondo [14] who done a study based on the French market which assimilate the management of a company to the government of a nation, reported us that the method of appointment of internal and external directors presents few irregularities. Indeed, directors are chosen between friends meet in the club, school or between people from the same social class. In these circumstances, it is unrealistic to expect from these directors to effectively carry out their role to monitor the managerial action. Moreover, Richard and Miellette [38] sum up the mood of the board when he writes: "The board is one of the most distinguished ways of wasting time. It is the front of the house; but whereas for fronts 'shops fashion demands a little decoration and plenty of light but we often prefer a board with a little light and a lot of decoration." He added that "The internal and external directors use their powers when business is bad, it is only at this time when they suddenly wake up to try to exercise their control right to penalize opportunistic chief executive officers."

By the way, Dumontier P. and al [13] that made a study based on a Tunisian sample confirms this by concluding that the extent of the independence of external directors on the board seems quite subtle (this is only an appearance of independence).

Regarding our second hypothesis, we found a significant positive association between the duality of the chief executive officer and the chairman of the Board and the disclosure by the auditor of the internal control system weaknesses, our hypothesis is therefore rejected, this result did not surprise us because the study done by Gul and Al[20],on 246 listed Australian companies in 1998 demonstrated that there is a positive association between the duality of the chief executive officer and the chairman of the board and the level of audit fees. According to the author this situation conducts to a greater need for a better audit quality result, therefore the fee increases and of course when we talk about audit quality, it means more incentives for the auditors to disclose internal control. Besides the study of Makni and al [30] based on a sample of 29 Tunisian companies between 2005 and 2009 concluded that duality of the chief executive officer and the chairman of the Board has a positive relationship with the quality of external audit. The duality of the chief executive officer and the chairman of the board can compromise the board independence. The owners sacrifice their interests for the directors, who will take advantage of this situation, which will engender an increase of the agency costs. So a company will require a good audit quality in order to protect the interests of shareholders and to limit the opportunistic behavior of directors.

Regarding our third hypothesis assuming that the presence of an internal audit committee affects positively the disclosing by the auditor of the internal control weaknesses is rejected because the P-value of the variable (COMAUD) which is (0.999) is not statistically significant although the coefficient for the same variable is positive (13,522) so we are obliged to reject this hypothesis. In that case, we can say that we are in contradiction with the significant results found by Xu Ji-dong and al [46], but we should mention that the results of Zhang and al [52] showed that companies with high audit committees quality are the least likely to have internal control problems, eventually the auditor will not have any failures to disclose in the internal control system. We add to this that we noticed in the sample on which our work is based, that some companies do not have an internal audit committee and they are those who have the most of internal control weaknesses. We noticed too that the financial market board in Tunisia requires to these companies newly introduced in the stock exchange to set up an audit committees.

Concerning our fourth hypothesis that assumes the presence of an audit firm belonging to the Big 4 can affects positively the audit quality and pushes the auditor to disclose internal control weaknesses is rejected because the P-Value of the variable (BIG4) which is (0.229) is not statistically significant although the coefficient for the same variable is positive (2.153). We are obliged to reject this hypothesis and once again we are in contradiction with the significant results found by Xu Ji-dong and al [46] who conclude that the number of companies that have internal control weaknesses verified by an auditor from the Big 4 is significantly less than the number of companies that do not have internal control weaknesses verified by a Big 4, which means that Big 4 auditors impose strong internal control standards to their customers. To explain more our result we have to mention that only 16 observations from our sample which is composed of 60 observations have an auditor belonging to the Big 4 for the external auditing.

Our fifth hypothesis that assumes the presence of concentrated ownership affects negatively the quality of disclosure by the auditor of internal control weaknesses is rejected because the P-value of the variable (TOP3) which is (0.239) was not statistically significant although the coefficient for the same variable is negative (-6.333) we are obliged to reject this hypothesis. This does not confirm the significant results of Demsetz [10], Shleifer and Vishny [40] and Ashbaugh-Skaife and al [1]. Moreover we think that we have to expand our samples to see if this result persists but according to Chan and al [7] when we have major shareholders this will lead to a limited audit and conversely when the capital is dispersed this leads to a more thorough audit which will generate a better audit quality and a better disclosure of internal control weaknesses.

Likewise for our sixth hypothesis that assumes the presence of direct or indirect participation of the state in the capital of the company affects positively the quality of the disclosure by the auditor of the weaknesses of internal control system is rejected because the P-Value of the variable (STATE CODE) which is (0.259) is not statistically significant although the coefficient for the same variable is positive (7.768). We are obliged to reject this hypothesis and once again we are in contradiction with the significant results of Velury and al [50], Velury and Kane [49] and Ashbaugh-Skaife and al [1]. However, other previous studies like the study of Chen and al [8] show that listed companies and state controlled tend to be less concerned by the quality of financial information so it does not give enough importance to their internal control system and to the disclosure made by the auditor at that level.

Similarly, our seventh hypothesis (a) implies that financial performance of the company affects negatively the disclosing by the auditor of the internal control weaknesses is rejected because the P-value of the variable (ROA) which is (0.185) is not statistically significant although the coefficient for the same variable is negative (-27,971) we are obliged to reject this hypothesis.

Our seventh hypothesis (b) assumes that the leverage of the company affects positively the disclosing by the auditor of the internal control weaknesses is rejected because the P-value of the variable (LEV) which is equal to (0.841) is not statistically significant although the coefficient for the same variable is positive (0.449) we are obliged to reject this hypothesis.

The same thing for our seventh hypothesis (d) assuming that the age of the company affects negatively the disclosing by the auditor of the internal control weaknesses is rejected because the P-value of the variable (AGE) which is equal to (0.272) is not statistically significant although the coefficient for the same variable is negative (-0099) we are obliged to reject this hypothesis.

The seventh hypothesis (e) is also rejected, it assumes that the growth of the company affects positively the disclosing by the auditor of the internal control weaknesses, the P-Value of the variable (GROWTH) which is (0.286) is not statistically significant although the coefficient for the same variable is positive (3.538).

Finally the seventh hypothesis (c) implies that the size of the company affects negatively the disclosing by the auditor of the internal control weaknesses is confirmed, this confirms the hypothesis of Ge and Mc Vay [17] who found that the disclosure failures is negatively associated with the company's size because small businesses have fewer resources to improve their internal control systems, and according to Ghosh and Lubberink [18], large companies have more resources to invest in internal control systems, therefore they are less likely to disclose weaknesses.

The results that we found for the seventh hypothesis does not agree in general with the results of Xu-dong Ji and al [46] who concluded that the disclosure of weakness is influenced by all parameters representing the firm characteristics which are the leverage ratio (LEV), financial performance (ROA), age (AGE), size (SIZE) and growth (GROWTH) and not only the size (TAILLE) as we found.

6. CONCLUSION

This paper investigates the issue associated with the determinants disclosure of the internal control weaknesses by the auditor. The determinants on which our work is based are: The governance mechanisms so we choose as mechanisms, the form of the directions' board, the audit committee and the external audit quality, we worked too on the ownership structure and more precisely, we were interested to the ownership concentration and the direct and indirect state participation in the capital share company. Then we were interested to the company's characteristics, such as financial performance, leverage, size, age and growth.

To find more significant results compared to what we found, we think that we need to expand our sample, but as we have already mentioned that we have chosen to work on 2012, 2013 and 2014 because these years represent a transitory period for the political and economic future of Tunisia.

Furthermore, We think that we can go even further in our study of determinants disclosure of the internal control weaknesses by focusing on the independence principle of the auditor, because according to the Article 266 of the Commercial Companies Code in Tunisia, the auditor has no right to interfere in the company's management during its auditing work and at the same time under the Article 270 of the same code, the auditor is forced to "report to the general assembly the discovered irregularities and inaccuracies. Moreover it is required to the auditor to disclose to the public prosecutor the criminal acts which he discovered ", otherwise the auditor risk an imprisonment term for one to five years and a fine which can be from1200 to 5000Tunisian Dinars or one of these penalties, according to Article 271 of the same code. The auditor in this case is in a deadlock and we even find that the legal texts are contradictory knowing that criminal acts could be directly related with the internal control system which is one of the pillars of management and the good corporate governance. On the other hand we may be interested in the study of the psychological behavioral components of the statutory auditor in Tunisia who is faced to difficult business situations in which independence may be compromised.

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CEO Duality and Corporate Social Responsibility Reporting: Evidence from Malaysia

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Abstract

This study aims to examine the impact of CEO duality on Corporate Social Responsibility (CSR) reporting by public listed companies in Malaysia. Content analysis was used to determine the extent of CSR reporting. A reporting level index consisting of 51 items was developed based on six themes: General, Community, Environment, Human Resource, Marketplace and Other. In order to determine the relationship between CEO duality and CSR reporting, an Ordinary Least Square regression was employed. The finding of the study is that, there is no significant association between CEO duality and CSR reporting. CEOs have little interest to promote CSR as it is not cost free and may lead to loss of individual wealth. The finding of this study implies that dual leadership structure reduces checks and balance and makes CEOs less accountable to all stakeholders. As for regulators, this study will provide valuable input to assist in their continuous efforts to improve corporate governance and social responsibility practices that may promote the interest of all stakeholders.

1. INTRODUCTION

An issue receiving considerable recent attention in the field of corporate governance is whether the posts of Chief Executive Officer (CEO) and Chairman of the Board should be held by different individuals or whether it is appropriate for both positions to be held by the same person (referred to as CEO duality). This issue is important because the leadership structure has a significant impact on corporate governance given senior personnel have the greatest influence on the running of a company and its performance. Furthermore, earlier studies indicate that reporting policies predominantly emanate from the board (Ho and Wong, 2001; Gul and Leung, 2004). Therefore, it is expected that the type of leadership structure adopted will shape a company's reporting pattern.

This study aims to examine the relationship between structural independence of the board or the existence of CEO duality and firm CSR practices in Malaysia. Malaysia provides an interesting platform for investigating the issue on several grounds. First, ownership structures commonly display significant participation by major shareholders in management (Claessens et al., 2000). This creates incongruous interests between majority and minority shareholders, potentially leading to corporate misconduct. Second, the Malaysian Code of Corporate Governance (MCCG) (2007) strongly recommends as best practice to separate the powers between the CEO and chairman to ensure shareholders' interests are protected. Yet, evidence on the effectiveness of the implementation of this separation is lacking and inconclusive. Finally, since 2007 Bursa Malaysia has made CSR reporting mandatory for public listed companies. Companies are required to report on four areas: Community, Environment, Workplace and Product, however the details of the report depend very much on management discretion. Given CEO duality is common the level of CSR reporting can be questioned. Given this context, together with the paucity of evidence in developing countries, it would be interesting to know if this relationship holds in the Malaysian context.

CEO duality is likely to lead to a concentration of power and self-utility maximizing behaviour by managers (Dalton and Dalton, 2005). CEO duality gives the CEO excessive power over the decision-making process (Jensen, 1993) such as the ability to influence board composition and tenure, set agendas and control information flows and also resist change despite performance decline or instability (Baliga et al., 1996). Accordingly, the board as the representatives of shareholders fails to exercise its governance role effectively through a reduction in monitoring and accountability. When a company is led by a dominant personality, shareholders' interests are likely to be maltreated (Kholief, 2008). If the CEO and the chairman are the same person, there will not only be less room for discussion, but also a narrower range of skills, knowledge, and expertise to draw on, which could affect company performance (Shakir, 2009). In addition, Goyal and Park (2002) found that it was more difficult for the board to remove a poorly performing CEO when the CEO and Chairman duties were vested in the same individual (Zhang, 2012). ACEO who is also the Chairman is in a position of self-evaluating themselves. Hence, their ability to exercise independent self-evaluation is indeed questionable (Rechner and Dalton, 1991; Petra, 2005).

Companies that practice clear separation between CEO and chairman positions are viewed as more reputable by stakeholders (Lu et al., 2015). Separation of the two roles has not only been recommended as good corporate governance but is now widely adopted in many countries: China Securities Regulatory Commission in 1992 (Huafang and Jianguo, 2007), Bangladesh Securities and Exchange Commission in 2006 (Khan et al., 2013) and also the Australian Stock Exchange in 2007. In the U.S. the separation is recommended (Chen et al., 2008); resulting in the percentage of S&P 500 companies choosing to separate the roles doubling from 20% to 40% over 15 years (Krause et al., 2014). In Malaysia, the MCCG (2007) implicitly recommends separation of both roles and emphasizing on the importance of having a clearly accepted division of responsibilities whenever the roles of chairman and CEO are combined.

This study contributes to an emerging body of literature by showing the links between corporate governance and CSR practices, in a different institutional setting. Despite the legislative reforms on corporate governance structure, the relationship between corporate governance and CSR reporting remains relatively understudied. Therefore, this study provides interesting evidence on one aspect of corporate governance research as well as offering further evidence from an Asian perspective. This study also adds to the understanding about the impact of CEO duality on CSR reporting in an agency setting characterized in many instances by family majority shareholdings.

The remainder of this paper is organised as follows. The next section reviews the literature. The third section describes the corporate board practices in Malaysia. The fourth section outlines the theoretical framework and hypothesis. The fifth section details the research method. The sixth section discusses the results followed by conclusions in the final section.

2. LITERATURE REVIEW

There is a clear distinction of what drives companies to undertake CSR practices between developed and developing countries. Developed countries like the US, UK and Australia generally operate in a shareholder-focused corporate governance system where directors' and managers' run the company only for the benefit of its shareholders (Devinney, Schwalbach and Williams, 2013). Therefore, they have a vested responsibility to increase the share price as part of shareholders' wealth maximization strategy. Managers are motivated to be involved in CSR practices as it may promote a company's reputation and thereby increase its share price. In recent years managers have become more concerned with other stakeholders' interests. As a result, such obligations have increasingly become part of a company's responsibilities (Devinney, Schwalbach and Williams, 2013). More importantly, failure to consider broader interests such as human rights obligations may cause companies to face legal risks (Devinney, Schwalbach and Williams, 2013). Hence, operating in an "enlightened shareholder" corporate governance regime makes directors accountable to a broader range of stakeholders while still acting in the best interests of the company's shareholders (Devinney, Schwalbach and Williams, 2013).

While CSR is highly recognized in developed countries, it is viewed from a different perspective in developing countries. The domination of closely-held companies sees the principal owners of companies also acting as senior managers (Abdul Rahman and Haniffa, 2005). Profit maximization plays a central role in the companies' continued existence. This explains why managers have less incentive to pursue CSR activities which are generally not cost free. Further to that, stakeholders in developing countries are still hesitant to accept the concept of CSR since it reduces company earnings. Given these issues, developing countries are commonly associated with low levels of CSR practices. Nevertheless, CSR has assumed a greater level of prominence in developing countries in recent times. Government and regulators play important roles as catalysts to the adoption of CSR practices. In Malaysia for instance, publically listed companies are now mandated to report on CSR activities (Haji, 2013). Companies also tend to imitate the CSR practices of other similar companies (Amran and Siti Nabihah, 2009, Visser, 2008).

Companies with sound corporate governance are normally more socially responsible (Ntim and Soobaroyen, 2013). It is not surprising, as a result, that governments have begun to promote best corporate governance practices with the aim of assisting companies' management to better execute their responsibilities to all stakeholders (Devinney, Schwalbach and Williams, 2013). This argument provides a strong foundation to relate the practice of CEO duality with CSR. CEO duality is common in developing countries due to the prevalence of family ownership. As such, there is a probability that this duality role may adversely affect CSR practices.

The duality of roles has long been a subject of much debate and research. The literature has three main strands: company performance and relatedly company value, and corporate reporting patterns.

The U.K. "Cadbury Report 1992", the first corporate governance code of best practice recommended the structural independence of the board "there should be clearly accepted division of responsibilities at the head of the company, which will ensure a balance of power and authority, such that no one individual has unfettered powers of decisions." Many countries also publish mandatory or voluntary corporate governance codes, for example, Bouton Report 2002 in France and the Cromme Commission Code 2002 in Germany (see Chahine and Tohmé, 2009), Toronto Stock Exchange, Canada (see Kang and Zardkoohi, 2005). The Sarbanes-Oxley Act (2002) was enacted following the corporate scandals in the United States (such as Enron, WorldCom) which led to a number of additional checks and balance in place to monitor the actions of CEOs (Dey et al., 2009).

Generally, most research on CEO duality seems to focus on how it affects company performance. Abor (2007) found significant and positive associations between capital structure and CEO duality among Ghanaian companies. Similarly, in the U.S., Harjoto and Jo (2008) found a positive relationship between CEO duality and company values and performance. Schmid and Zimmermann (2005) studied 152 Swiss companies. Regardless of

whether the roles are combined or separated, company value remained unchanged. Likewise, in Egypt, Elsayed (2007) demonstrated that CEO duality was insignificant to company performance and further suggested that the impact of dual roles on board and company performance is different from one country to another. This view seems to support the finding by Yusoff and Alhaji (2012). Insignificant results were also reported by Kao and Chen (2004), Xie et al. (2003) and Haniffa et al. (2006) on the association between CEO duality and earnings management activity.

The board may also be indifferent towards the duality issue. As long as the CEO is capable of undertaking both responsibilities effectively, the board is content to let duality prevail (Baliga et al., 1996). It is also argued that duality role will improve company performance because management's compensation is tied to it (Rechner and Dalton, 1991). Dehaene et al. (2001) confirmed a significantly higher return on assets when CEO duality is practised. The tenacity of combining the CEO and chairman role was justified when several studies reported a rather comparable company performance between companies with CEO duality and those that separate the two roles (e.g Rechner and Dalton, 1991; Dalton et al., 1998). This not only suggests that opting for combined role is far from being unprofitable but might recognize duality as a superior company structure (Baliga et al., 1996).

Meanwhile, in Australia, Sharma (2004) revealed that when the chairman of the board is also the CEO, the board's monitoring role is weakened and the likelihood of fraud increases. In China, Lu et al. (2015) confirmed that CEO duality adversely influences the effectiveness of the board in performing the governance function. Cerbioni and Parbonetti (2007) found evidence in a sample of European biotechnology companies that concentration of power is negatively associated with voluntary disclosure of intellectual capital information. Similar results were reported by Huafang and Jianguo (2007) on listed Chinese companies.

Empirical analysis yields diverse results on the impact of role duality on reporting. Companies dominated by a single person led to financial reports being issued much later than those with separation of roles (Abdullah, 2006). This implies that duality role could be detrimental to board effectiveness. Gul and Leung (2004), studying a sample of 385 Hong Kong-listed companies, show empirical evidence that the CEO duality is associated with lower levels of voluntary disclosure.

Allegrini and Greco (2013) reported a negative impact of CEO duality on voluntary disclosure in Italy. To them diligent monitoring through separation of the two important roles contributes to greater transparency. In Egypt, duality role was found to have a negative bearing on corporate governance disclosure as reported by Samaha et al. (2012). Likewise, Muttakin and Subramaniam (2015) reported a negative relationship between CEO duality and CSR disclosure of Indian companies. They suggest that CEOs in dual positions may not be motivated to be visibly accountable to the interests of the broader stakeholders and are likely to avoid the costs of CSR disclosure.

Alternatively separation contributes to a positive impact on company disclosure (Nandi and Ghosh, 2013). Nevertheless, contrary to their assumption, a study by Al-Janadi et al. (2013) revealed a positive impact of CEO duality on voluntary disclosure of companies in Saudi Arabia. They believe that duality roles provide a centralised focus to achieve company's goals.

Meanwhile, several studies failed to find any relationship between CEO duality and the extent of CSR reporting such as Said et al. (2009), Khan et al. (2013), Michelon and Parbonetti (2012), Ghazali and Weetman (2006) and Arcay and Vazquez (2005).

Proponents of CEO duality argue that the duality role can reduce communication barriers (Carver and Oliver, 2002). This helps to reduce costs for the company especially when transferring critical information between the CEO and the chairman (Dahya and Travlos, 2000). Accordingly, Samaha et al. (2015) believes that CEO duality may result in more voluntary reporting. Sundarasen et al. (2016) showed that CEO duality affects company CSR initiatives negatively; which warrants a further examination on the practice of CEO duality in Malaysia.

Evidently, the practice of CEO duality exhibits conflicting impacts on a company's overall performance including reporting. On the one hand, CEO duality provides significant benefit to the company through efficient leadership when expectations of the board and management intersect. On the other hand, it might threaten directors' independence and impair good governance practice. There is extensive yet inconsistent evidence on CEO duality and its impacts.

3. CORPORATE BOARD PRACTICES IN MALAYSIA

Malaysian companies most commonly have a one-tier board structure where the company is governed by a unified board performing both management and supervisory functions. The CEO is responsible for the running of the board and the company's operation. There is also an overwhelming presence of family ownership dominance in the Malaysian corporate sector. The practice of CEO duality in Malaysia is very common and increasing. The increasing trend of CEO-duality in Malaysia is evident in the study by Abdul Rahman and Haniffa (2005). Despite the absence of mandatory separation of the roles the MCCG strongly recommends it as best practice. This is to make certain that power and authority is balanced to avoid the existence of individual directors having unrestrained power in the decision-making process (Ponnu, 2008). The segregation of these positions is seen as a key characteristic of an effective independent board. Nevertheless, should duality exist then the MCCG recommends sufficient strong independent board members. However, compliance with the MCCG (2007) recommendation remains an issue as family owned companies are prevalent in Malaysia. 72% of companies listed on Bursa Malaysia are family controlled (Himmelberg et al. 2002). It is common for companies with this type of ownership structure to practice CEO duality (Ho and Wong, 2001).

4. THEORETICAL FRAMEWORK AND HYPOTHESIS

Two contrasting theories: agency theory and stewardship theory, are used primarily to explain CEO duality.

Agency theory is based on the belief that there exists an inevitable conflict between parties that delegate (principals) and those who execute (agents) (Jensen and Meckling, 1976). As managerial actions depart from maximising shareholders returns, this gives rise to agency problems such as moral hazard and information asymmetry. Moral hazard is present when there are self-interested utility-maximising individuals running the company while information asymmetry occurs when management is reluctant to share information regarding the accurate state of the company with stakeholders (Hashim and Devi, 2008). Fama and Jensen (1983) assert an agency problem to more likely occur when a key decision maker has little or no financial interest in the outcome of their decisions. Agency theorists believe that the board is the primary internal control mechanism for aligning the different interests of shareholders and management (Boyd, 1995). Hence, shareholders' interests are safeguarded when different people occupy the two positions of the CEO and the chairman of the board of directors (Kholief, 2008). This non duality permits the board of directors the means to effectively monitor and control the potential shareholder-value-destroying actions of managers. On the contrary, by serving as Chairman, the CEO will acquire a wider power base and locus of control, thereby weakening control by the board. This facilitates the pursuit of the CEO's agenda, which may differ substantially from shareholder goals. In the absence of a non-dual structure, not only do shareholders suffer from lack of separation of decision management and control, it also elevates agency costs (Braun and Sharma, 2007) and negatively affect company performance. In light of those problems, agency theory recommends the separation of CEO and Chairman's positions to ensure maximization of company performance as well as enhancing reporting levels.

Stewardship theory embraces a more positive perspective. Directors are perceived as caretakers of the company's assets and want to maximise them (Donaldson and Davis, 1991). Proponents of stewardship theory believe that the combination of the two roles enhance the decision making process and allow a CEO with strategic vision to guide the board to implement a company's objectives with the minimum of interference from the board. Stewardship theory claims that separating the roles of CEO and Chair deters directors' autonomy to shape and execute the company's strategy. This lack of authoritative decision making is likely to negatively impact the performance of the organization (Braun and Sharma, 2007). Donaldson and Davis (1991) view that combining the two roles would facilitate company's effectiveness through promotion of leadership unity and consequently lead to higher performance and disclosure.

It is argued here that CEO duality reduces overall accountability, thus making companies less transparent not only for shareholders but for all relevant stakeholders. With consolidation of powers this dual leadership structure will make CEOs less concerned about discharging their societal and environmental responsibilities. This discussion leads to the following hypothesis: H1: CEO duality is negatively associated with company CSR reporting

5. METHODS

5.1. Data

This study considers a sample of non-financial companies listed on the Main Market of Bursa Malaysia from 2008 until 2013. A company which was not listed during the whole six-year period were excluded. There were 813 companies listed as at 31st December 2013. However, only 613 companies met the criteria. In general, companies in the finance sector are subject to different regulatory and disclosure requirements and also material differences in their types of operation. Consequently, prior studies have not considered them (e.g Mohd Ghazali, 2007; Said et al., 2009; Haniffa and Cooke, 2005). So 136 finance companies were excluded from the sample, reducing the potential population to 477 companies. There were 27 companies omitted from the sample due to incomplete data. Finally, 450 companies were included as illustrated in Table 1.

In general, there is no 'standalone' sustainability report by companies in Malaysia. Although a handful of companies make such disclosures in their web pages, these are duplications of information disclosed in their annual reports. Furthermore, disclosures made on the web page are not helpful for content analysis because it is difficult to know when web pages are published or updated (see Michelon and Parbonetti, 2012). Therefore, annual report was the only source of financial and non-financial information of a company.

Table 1. Sample company characteristics

No	Sector	Number of firms in the sample	Observed firm years	Observation in %
1	Agricultural Production - Crops	25	150	5.56
2	Agricultural Production - Livestock	5	30	1.11
3	Fishing, Hunting and Trapping	1	6	0.22
4	Metal Mining	3	18	0.67
5	Oil and Gas Extraction	4	24	0.89
6	Food and Kindered Products	32	192	7.11
7	Tobacco Products	1	6	0.22
8	Textile Mill Products	2	12	0.44
9	Apparel and Other Textile Products	8	48	1.78
10	Lumber and Wood Products	25	150	5.56
11	Furniture and Fixtures	13	78	2.89
12	Paper and Allied Products	19	114	4.22

Table 1. Sample company characteristics (Continued)

No	Sector	Number of firms in the sample	Observed firm years	Observation in %
13	Printing and Publishing	7	42	1.56
14	Chemicals and Allied Products	11	66	2.44
15	Petroleum and Coal Products	4	24	0.89
16	Rubber and Misc. Plastics Products	18	108	4.00
17	Leather and Leather Products	1	6	0.22
18	Stone, Clay and Glass Products	21	126	4.67
19	Primary Metal Industries	23	138	5.11
20	Fabricated Metal Products	6	36	1.33
21	Industrial, Machinery and Equipment	15	90	3.33
22	Electronic and Other Electric Equipment	24	144	5.33
23	Transportation Equipment	11	66	2.44
24	Misc. Manufacturing Industries	23	138	5.11
25	Electricity, Gas and Sanitary Services	5	30	1.11
26	General Building Contractors	21	126	4.67
27	Heavy Construction, Ex. Building	14	84	3.11
28	Wholesale Trade- Durable Goods	11	66	2.44
29	Wholesale Trade- Non-Durable Goods	9	54	2.00
30	General Merchandise Stores	4	24	0.89
31	Food Stores	1	6	0.22
32	Automotive Dealers and Service Stations	3	18	0.67
33	Apparel and Accessory Stores	2	12	0.44
34	Eating and Drinking Places	1	6	0.22
35	Hotels and Other Lodging Places	8	48	1.78
36	Trucking and Warehousing	4	24	0.89
37	Water Transportation	11	66	2.44
38	Transportation By Air	1	6	0.22
39	Transportation Services	6	36	1.33
40	Communications	7	42	1.56
41	Real Estate	11	66	2.44
42	Business Services	18	108	4.00
43	Educational Services	1	6	0.22
44	Health Services	8	48	1.78
45	Amusement and Recreational Services	2	12	0.44
	Total	**450**	**2700**	**100.00**

5.2. Variable definitions

5.2.1. Dependent variables

Content analysis was used as it is the dominant technique used by accounting scholars to investigate CSR disclosures in annual reports (e.g Chan et al., 2014; Abdullah et al., 2011; Ibrahim and Samad, 2011; Haji, 2013). Content analysis is a technique which replicates and makes valid inferences from data to their context (Krippendorff, 1989). It involves both qualitative and quantitative methods and converts information in annual reports into scores (Djajadikerta and Trireksani, 2012).

A checklist of items was constructed by examining previous CSR reporting checklists (e.g Hackston and Milne, 1996; Barako and Brown, 2008). Additionally, specific Malaysian checklists by Haji (2013) and Abdullah et al. (2011) as well as the framework introduced by Bursa Malaysia in 2006 were also referenced. The focus of the framework was fourfold: Environment, Community, Marketplace and Workplace. To form a comprehensive checklist,

checklists by Abdullah et al. (2011), Mohamed Adnan (2012), Kolk (2010) and Chan et al.(2014) were specifically referenced. The final checklist containing 51 items is outlined in Table 2.

A dichotomous procedure is used to compute a disclosure score for each company. Each disclosure item is assigned a score of "1" if it is disclosed and "0" if it is not disclosed. This measurement would address the presence or absence of CSR information (Mohd Ghazali, 2007) and has been extensively employed previously (e.g Haji, 2013; Haniffa and Cooke, 2005; Rashid and Lodh, 2008). The scores were then transformed into a CSR reporting index by dividing the disclosure score of each company to the maximum possible score (i.e 1 x 51= 51).

$$CSRI = \frac{\sum_{t=1}^{nj} X_{ij}}{n_j} \qquad (1)$$

where: CSRI = CSR reporting index; nj = number of items expected for jth company; Xij = 1 if ith item disclosed; 0 if ith item not disclosed.

Table 2. CSR Reporting checklist

CSR Reporting Items	
A	**General (maximum 7 scores)**
1	Acknowledgement or management of corporate social responsibility
2	Disclosure of corporate objectives or policies with regard to corporate social responsibility
3	Company's strategy for addressing sustainability
4	Mission/ values/ codes of conduct relevant to CSR topics
5	Commitments to external initiatives (e.g. membership)

Table 2. CSR Reporting checklist (Continued)

	CSR Reporting Items
6	Awards received relating to social, environmental and best practices
7	Discussion on stakeholder engagement
B	**Community (maximum 9 scores)**
8	Charitable donations and activities (such as donations of cash, products or employee services to support established community activities, events, organizations, education and the arts)
9	Supporting government/ non-governmental organization campaign (such as supporting national pride/government-sponsored campaigns)
10	Support for public health/ volunteerism (such as blood donation, sponsoring public health or recreational projects)
11	Aid medical research
12	Sponsoring educational programs/ scholarship (such as sponsoring educational conferences, seminars or art exhibits, funding scholarship programs or activities)
13	Discussion on public policy involvement
14	Graduate employment
15	Sponsoring sports project
16	Acquisition from local suppliers
C	**Environment (maximum 14 scores)**
17	Statements indicating that pollution from operations have been or will be reduced
18	Discussion on recycling efforts (such as recycled inputs/ recycled waste)
19	Preventing waste
20	Disclosure on significant spills/ environmental accidents
21	Hazardous waste disclosure
22	Fines/ sanction for non-compliance
23	Design facilities that are harmonious with the environment/ landscaping (such as contributions in terms of cash or art/sculptures to beautify the environment, restoring historical buildings and structures)
24	Impacts on biodiversity
25	Strategies/ plans for managing impacts on biodiversity (such as wildlife conservation, protection of the environment, e.g., pest controls)
26	Environmental review and audit (such as reference to environmental review, scoping, audit, and assessment including independent attestation)
27	Conservation of energy in the conduct of business operations (using energy more efficiently during the manufacturing process)
28	Utilizing waste materials for energy production
29	Disclosure of carbon/ green gas emissions
30	Initiatives to reduce carbon/ green gas emissions
D	**Workplace (maximum 14 scores)**
31	Employee profiles (such as number of employees in the company and/or at each branch/ subsidiary, information on the qualifications and experience of employees recruited)
32	Employee appreciation (such as information on purchase scheme/ pension program)
33	Discussion of significant benefit program provided (such as remuneration, providing staff accommodation or ownership schemes)
34	Employee training (such as through in-house training, establishing training centers)
35	Support to employee education (such as giving financial assistance to employees in educational institutions; continuing education courses)
36	Information on management-employee relationship/ efforts to improve job satisfaction (such as providing information about communication with employees on management styles and management programs which may directly affect the employees)
37	Employee diversity (such as disclosing the percentage or number of minority and/or women employees in the workforce and/or in the various managerial levels)
38	Employee receiving regular reviews
39	Recreational activities/ facilities
40	Establishment of a safety department/ committee/ policy
41	Provision of health care for employee
42	Compliance to health and safety standards and regulations
43	Award for health and safety
44	Rates of work-related injury/ illness/ deaths (such as disclosing accident statistics)
E	**Marketplace (maximum 5 scores)**
45	Information on any research project set up by the company to improve its products in any way (such as the amount/percentage figures of research and development expenditure and/or its benefits)
46	Verifiable information that the quality of the firm's products has increased (such as ISO9000)
47	Disclosure of products meeting applicable safety standards (such as information on the safety of the firm's product)
48	Product sustainability/ use of child labour
49	Customer service improvements/ awards/ ratings
F	**Other (maximum 2 scores)**
50	Value added statements
51	Value added ratios

5.2.2. Independent and control variables

The independent variable is CEO duality. The presence of CEO duality is measured by a dummy variable coded 1 if the CEO is also the Chairman of the board and 0 otherwise. This is consistent with Allegrini and Greco (2013) and Rashid (2013).

Numerous studies have shown that CSR reporting is influenced by various governance attributes and company's characteristics. Hence, to eliminate their impact on the level of reporting, this study considered board independence, board size, directors' ownership, CEO founder, CEO tenure, debt ratio, liquidity, company age, company size, profitability, company growth and market capitalization were conceptualized as control variables.

Board independence refers to independent directors who have no affiliation with the company except for their directorship (Bursa Malaysia, 2006). They have important impact on monitoring activities (Fama and Jensen, 1983). Board independence (BIND) is defined as the number of independent directors on the board relative to the total number of directors, which is consistent with Arora and Dharwadkar (2011), Harjoto and Jo (2011) and Das et al. (2015). Board size refers to the number of directors to make up the board (Ntim and Soobaroyen, 2013; Jizi et al., 2014). Board size (BSIZE) is defined as the natural logarithm of total number of directors as used by Rashid (2013). Allegedly, directors' ownership determines their willingness to monitor managers and enhance shareholders' value (Shleifer and Vishny, 1997). It motivates directors to do their monitoring job effectively. However, in owner-managed companies, directors are less concern with public accountability due to a relatively small number of outside shareholders. Hence, they tend to disclose less CSR information. Directors' ownership (DIROWN) is expressed as the ratio of total director shareholdings to total number of shares. This is consistent with the approach adopted by Bathala and Rao (1995) and Rashid (2013).

CEO founder is associated with greater power by virtue of his/her role in the company's history and his/her influence on the board. As such, the decisions will have impact on company's performance including reporting. Following Daily and Dalton (1993), CEO founder (CEOFOUNDER) takes the binary code of 1 if CEO is also the founder and 0 if otherwise. CEO tenure (CEO TENURE) is represented by the natural logarithm of the number of years the CEO has held the post. Mohd–Saleh et al. (2012) revealed that long-tenured CEOs are associated with low levels of reporting. They feel secure with their positions hence demotivated to continue acting in line of shareholders' interests. There are mixed results pertaining to leverage in relation to CSR reporting. Barnea and Rubin (2010) believed that companies with high debt levels will incur high monitoring costs which suggest a negative relationship between leverage and CSR disclosure. Alternatively, these high debt companies disclose more information to reduce the costs (Esa and Mohd Ghazali, 2012) and to meet the needs of their lenders (Abdullah et al., 2011). Following Wan Abd Rahman et al. (2011), leverage (DR) was measured by the ratio of total liabilities to total assets.

Liquidity is also found to be positively related to both financial and non-financial disclosure (Ho and Taylor, 2007). They suggest high liquidity companies have stronger incentives to disseminate more information in their annual reports. Company liquidity (LIQ) was measured as current ratio (Rashid, 2013, 2014; Ho and Taylor, 2007). Company age (AGE) was represented by the number of years it has been listed on Bursa Malaysia, expressed in natural logarithm (Rashid, 2009). The level of CSR reporting increases with company age. A more mature company tends to report more on CSR activities due to reputational concern (Khan et al., 2013). Cormier et al. (2011) and Lu and Abeysekera (2014) indicate that size is one of the major factors determining CSR reporting. Availability of money

and expertise in large companies enables them to engage in more activities (including CSR activities), produce more information on these activities and bear the cost of such processes (Andrew et al., 1989). The natural logarithm of total assets as the proxy for company size (SIZE) was used and is consistent with Das et al. (2015), Sartawi et al. (2014) and Rashid (2014).

Profitability has the ability to influence CSR practices. Highly profitable companies are able to absorb the costs associated with CSR activities, thus disclosing more information to stakeholders. Haniffa and Cooke (2005) and Khan (2010) confirm the importance of profitability when reporting social information. Profitability is proxied by Return on Assets (ROA) following Rashid (2014) and Sartawi et al. (2014). When companies grow rapidly they tend to pay less dividends and seek outside financing, thus inducing more disclosure (Naser et al., 2006). Accordingly, financing costs are reduced and improve a company's ability to pursue potentially profitable projects. Companies are also believed to have greater information asymmetry and agency costs (Eng and Mak, 2003). To reduce those problems, companies are expected to disclose more information. Following Rashid (2013), company growth (GROWTH) is expressed as percentage of annual change in sales. Market capitalization (CAP) is expressed in its natural logarithm. While some view market capitalization as representing company size, the investing public considers it as an external measure of a company's importance (Wallace and Naser, 1996). Watts and Zimmerman (1990) argue that companies with high market capitalization are generally exposed to political attacks, such as demands by the society for the exercise of social responsibility or for greater regulation such as price controls and higher corporate tax. Such potential action can be minimized by disclosing more comprehensively.

5.3. The Model

The following model is developed in this study:

$$CSRI_{i,t} = \alpha + \beta_1 CEOD_{i,t} + \beta_2 BIND_{i,t} + \beta_3 BSIZE_{i,t} + \beta_4 DIROWN_{i,t} + \beta_5 CEOFOUNDER_{i,t} + \beta_6 CEOTENURE_{i,t} + \beta_7 DR_{i,t} + \beta_8 LIQ_{i,t} + \beta_9 AGE_{i,t} + \beta_{10} SIZE_{i,t} + \beta_{11} ROA_{i,t} + \beta_{12} GROWTH_{i,t} + \beta_{13} CAP_{i,t} + \mathfrak{C}_{i,t}$$

(2)

where: for it h firm at time t;
- $CSRI_{i,t}$ is CSR index;
- $CEOD_{i,t}$ is CEO duality;
- $BIND_{i,t}$ is board independence;
- $BSIZE_{i,t}$ is board size;
- $DIROWN_{i,t}$ is percentage of director ownership;
- $CEOFOUNDER_{i,t}$ is CEO as the founder of the firm;
- $CEO\ TENURE_{i,t}$ is natural logarithm of CEO service length;
- $DR_{i,t}$ is debt ratio;
- $LIQ_{i,t}$ is liquidity ratio;
- $AGE_{i,t}$ firm age;
- $SIZE_{i,t}$ is firm size;
- $ROA_{i,t}$ is profitability;
- $GROWTH_{i,t}$ is company growth in sales;
- $CAP_{i,t}$ is the market capitalization;
- α is the intercept, β is the regression coefficient and $\mathfrak{C}$ is the error term.

To perform the statistical analysis, it is necessary to meet the assumptions of normality, multicollinearity, heteroscedasticity and endogeneity. The normality assumption requires that observations be normally distributed in the population. However, the normality assumption will be relatively insignificant when involving large samples (Pallant, 2007). The Residual Test/Histogram-Normality Test of the regression equation produced a 'Bell Shape', confirming the normality of the data. Multicollinearity refers to high correlations among the independent (or explanatory)

variables or when the explanatory variables are significantly correlated with one another. When a high degree of correlation is found among explanatory variables, these variables must be removed. The correlation matrix of the explanatory variables (in table 3) shows that the correlation between company size and market capitalization is 0.839 indicating a multicollinearity. However, the Variance Inflation Factor (VIF) of each explanatory variable does not exceed 4.0. A VIF value exceeding 10 shows multicollinearity is present (Gujarati, 2003).

Table 3. Correlation matrix of the explanatory variables

		1	2	3	4	5	6	7	8	9	10	11	12	13	VIF
1	CEOD	1.000													1.038
2	BIND	-0.010	1.000												1.293
3	BSIZE	-0.084**	-0.414**	1.000											1.418
4	DIROWN	-0.041*	0.057**	-0.089**	1.000										1.066
5	CEO FOUNDER	0.125**	-0.076**	0.034	0.053**	1.000									1.116
6	CEO TENURE	0.081**	-0.090**	0.027	0.016	0.236**	1.000								1.094
7	DR	-0.037	0.085**	0.007	-0.035	0.009	-0.046*	1.000							1.137
8	LIQ	0.037	0.094**	-0.045*	-0.008	-0.055**	0.083**	-0.274**	1.000						1.135
9	AGE	-0.062**	0.151**	-0.011	-0.177**	-0.162**	0.024	0.005	0.063**	1.000					1.239
10	SIZE	-0.016	-0.053**	0.339**	-0.181**	-0.032	-0.024	0.055**	-0.067**	0.337**	1.000				3.908
11	ROA	-0.008	-0.009	0.084**	-0.073**	0.043*	0.042*	-0.129**	0.049*	0.051**	0.111**	1.000			1.057
12	GROWTH	0.005	-0.029	0.025	-0.009	-0.009	-0.006	0.018	-0.059**	0.000	0.073**	0.039	1.000		1.011
13	CAP	-0.010	-0.063**	0.321**	-0.156**	-0.055**	-0.047*	-0.069**	0.035	0.268**	0.839**	0.174**	0.071**	1.000	3.705

*Note: ** Correlation is significant at the 0.01 level (2-tailed); * Correlation is significant at the 0.05 level (2-tailed)*

Homoscedasticity occurs when the error term is constant across all values of the independent variables. Standard estimation methods become inefficient when the error term varies. Examining the scatter plot of the residuals (ZRESID) against the predicted value (ZPRED) of the model showed a classic cone-shape pattern of heteroscedasticity. The Breusch-Pagan test was then conducted with both the chi-square and corresponding p values also indicating heteroscedasticity. To correct it, heteroscedasticity-consistent standard errors of the White (1980)'s method was applied.

Endogeneity occurs when the independent variables are correlated with the error terms. This causes the regression coefficients in the Ordinary Least Square (OLS) regression to be biased. One way of addressing this problem is to use the Instrumental Variable approach. The F-test for the

predicted value of CEO duality in this model was considered insignificant. Following Rashid (2014), when the CSR index was used as a proxy for CSR reporting, F = 1.67 with p = 0.1965. The results showed that: (1) endogeneity is not an issue; and (2) OLS and Instrumental Variable regression are consistent.

6. RESULTS AND DISCUSSION

Table 4 indicates that on average the level of CSR reporting is 21.67%. This result is lower than CSR disclosure reported by companies in a developing country, such as Bangladesh. Khan et al. (2013) in their study reveal that average CSR by firms in Bangladesh is 22%.

Table 4. Descriptive statistics of the variables

	Mean	Median	Minimum	Maximum	SD
CSRI	0.2167	0.1961	0.0392	0.7255	0.1198
CEOD	0.1400	0.0000	0.0000	1.0000	0.3500
BIND	0.4519	0.43000	0.1700	1.0000	0.1281
BSIZE	7.0000	6.6869	3.0004	18.1741	1.2960
DIROWN	0.0438	0.0030	0.0000	0.5680	0.0879
CEOFOUNDER	0.1400	0.0000	0.0000	1.0000	0.3450
CEO TENURE	6.7255	8.0045	0.4966	46.0625	2.5659
DR	0.4024	0.3775	0.0030	10.3190	0.3623
LIQ	3.0531	1.7845	0.0070	96.1110	5.1989
AGE	13.9782	15.0293	1.0000	52.9845	1.6403
SIZE (LogTA)	12.8784	12.6500	9.3690	18.4110	1.4467
ROA	0.0619	0.0580	-2.8980	5.5470	0.1782
GROWTH	0.0533	0.0265	-4.9410	8.5780	0.4777
CAP (LogCAP)	18.7976	18.5030	12.3710	24.8100	1.8112

This number is fairly low in the context of a developed country, Michelon and Parbonetti (2012) reveal that such diclosure is 49% in the US and Europe.

The CEO duality result portrays that on an average there are only 14% of companies that have the same individual acting as CEO and Chairperson. This rate is much lower than that of some other countries. For example, 61% in the context of Egypt

(Samaha et al., 2012), 41% in the context of Italy (Allegrini and Greco, 2013) and 46% in the context of Bangladesh (Rashid, 2013). The regression coefficient of the relationship between CEO duality and CSR reporting is shown in Table 5.

Table 5. Relationship between CEO duality and CSR reporting

	Dependent variable	
	Panel A	Panel B
	(before controlling for industry)	(after controlling for industry)
	CSRI	CSRI
Intercept	-0.525	-0.587
	(-18.460)***	(-16.789)***
CEOD	-0.004	-0.003
	(-0.684)	(-0.482)
BIND	0.028	0.016
	(1.607)	(0.959)
BSIZE	0.042	0.030
	(4.585)***	(3.358)***
DIROWN	-0.041	-0.014
	(-1.738)*	(-0.619)
CEOFOUNDER	0.003	-0.001
	(0.441)	(-0.151)
CEO TENURE	-0.011	-0.010
	(-4.893)***	(-4.456)***
DR	-0.001	0.004
	(-0.032)	(0.803)
LIQ	-0.000	-0.000
	(-1.124)	(-0.583)
AGE	0.023	0.027
	(4.765)***	(5.513)***
SIZE	0.028	0.037
	(10.239)***	(13.776)***
ROA	0.060	0.045
	(5.569)***	(4.341)***
GROWTH	-0.001	-0.002
	(-0.243)	(-0.394)
CAP	0.013	0.008
	(6.228)***	(3.610)***
F statistic	106.861	34.707
Adjusted R^2	0.380	0.465

Note: The t tests are presented in the parentheses
*p< 0.10; ** p< 0.010;*** p< 0.001*

The adjusted R^2 value in Panel A denotes that 38% of changes in CSR reporting are explainable by the independent variables. The regression coefficient shows that, there is a negative, but non-significant relationship between CEO duality and CSR reporting. This result is in accord with Said et al. (2009), Michelon and Parbonetti (2012) and Khan et al. (2013). Given the backdrop of family owned companies dominating the Malaysian business setting, this result is unanticipated as CEO duality is synonymous with family owned companies. The low value also suggests that companies are moving towards a more independent board in order to elevate shareholders' confidence.

Board independence and CSR reporting was positive but not significant. Board size, director ownership, CEO tenure, firm age, firm size, profitability and market capitalization were found to be significantly related to CSR reporting. Generally, companies with moderately large boards benefit from board diversity. This in turn results in better involvement in CSR activities and increased reporting, supporting the findings of Esa and Mohd Ghazali (2012), Ntim and Soobaroyen (2013) and Akhtaruddin et al. (2009). Contrarily, directors' ownership has been found to negatively affect CSR

reporting, supporting Chau and Gray (2010), Oh et al. (2011) and Khan et al. (2013). Given investment in CSR practices are costly, the result is as anticipated. Meanwhile, long tenured CEO may become complacent and confident they will not be removed, and therefore loosen their grip on company's management (Shakir, 2009). They are likely to refuse to adopt to the changing environment such as disclosing more CSR information. Hence, extremely long tenures may be detrimental to shareholders' interests (Vafeas, 2003). As predicted, mature companies tend to disclose more CSR information to demonstrate their already high reputations. Larger companies have the ability to report more CSR activities since the costs of disclosures are funded by profits (Brammer and Pavelin, 2008). Companies with high market capitalization are also more likely to produce high levels of CSR reporting; conceivably as part of their image building exercise.

Kolk (2003) asserts that CSR reporting is industry specific due to different interests, priorities, rules and regulations. Earlier studies have confirmed a significant systematic disparity across industries concerning their inclination to make CSR reporting (Gamerschlag et al., 2011; Brammer and Pavelin, 2008).

Companies with high consumer visibility, a high level of political risk or concentrated and intense competition disclose significantly more CSR information in their annual reports (Hackston and Milne, 1996; Mohd Ghazali, 2007).

It is important to control for the effect of industry on reporting activities as the sample in this study constitutes companies from multiple industries. Hence, the model was modified by adding INDUSTRY dummies. This study used two-digit Standard Industrial Classification (SIC) codes. The augmented regression model was:

$$CSRI_{i,t} = \alpha + \beta_1 CEOD_{i,t} + \beta_2 BIND_{i,t} + \beta_3 BSIZE_{i,t} + \beta_4 DIROWN_{i,t} + \beta_5 CEOFOUNDER_{i,t} + \beta_6 CEOTENURE_{i,t} + \beta_7 DR_{i,t} + \beta_8 LIQ_{i,t} + \beta_9 AGE_{i,t} + \beta_{10} SIZE_{i,t} + \beta_{11} ROA_{i,t} + \beta_{12} GROWTH_{i,t} + \beta_{13} CAP_{i,t} + \gamma INDUSTRY + \epsilon_{i,t} \quad (3)$$

In general, the results shown in Panel B of Table 5 are indifferent when the regression equation is controlled with industry dummies. With the exception of directors' ownership that has become insignificant, the remaining variables remain unchanged.

7. CONCLUSION

This study investigated the impact of CEO duality on firm CSR reporting. The findings of the study are as expected in that there is a negative but non-significant relationship between CEO duality and CSR reporting. It is to be noted that despite various attempts by Malaysian regulators to promote CSR practices, the rate remains at a disappointingly low level (Lu and Castka, 2009). The dual leadership structure could be one of the contribution factors to this outcome. The findings of this study supports agency theory constructs about CEO duality.

CEO duality is depicted as a double-edged sword (Finkelstein and D'aveni, 1994). Despite its ability to enhance unity of command, having a dominant personality can have detrimental effects

on the company. Most importantly, it can impair the monitoring function of the board due to power concentration. There are also potential conflicts of interest. A CEO/Chairman tends to keep control in their hands potentially jeopardising accountability. These effects can restrain good corporate governance practice. As a result, shareholders will have less confidence in the management of the company. It was the potential costs of CEO duality overriding the benefits which lead to the recommendation by the MCCG that the two top management roles be separated. Gray (1988) suggests that managers in Asia are more inclined to be secretive. Consequently, they have less incentive for transparent reporting (Aaijaz and Ibrahim, 2012). Given this and consolidation of power CEOs may be less accountable to all the stakeholders.

Perhaps it will be beneficial for regulators evaluating present corporate governance practices. In effect, it is desirable for all companies to opt for more independent boards to ensure a robust corporate governance system. Nevertheless, regulators need to ensure a robust monitoring measure is put in place to ensure the effectiveness of CSR practices. This study provides information to assist regulators in their continuous attempt to improve corporate governance. While there are many corporate governance attributes that can be linked with a company's inclination towards CSR reporting, this study only focused on CEO duality. Future research could provide additional insights by examining the role of independent directors in reporting activities. Inevitably, independent directors have a pivotal role to play in enhancing board independence and reporting practices. Another source of weakness in this study concerns the selection of the items in the disclosure score, the construction of the score and the content analysis, which are mainly based on subjective assessments.

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ARE RATING AGENCIES STILL CREDIBLE AFTER THE SUBPRIME CRISIS?

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Abstract

Reputational concerns should discipline credit rating agencies (CRAs), eliminate any conflicts of interest, and motivate them to provide unbiased ratings. However, the recent financial crisis confirms models of CRAs' behavior that predict inflated ratings for complex products and during booms. We test whether CRAs suffered a reputational damage for this behavior. We find strong support in the data for our hypothesis. The stock price reaction to rating revisions is significantly lower after the financial crisis, particularly in the financial sector. In multivariate tests, we find that the stock price reaction is lower, on average, in the post-crisis period by 2.3%.

1. INTRODUCTION

The Financial Crisis Inquiry Report": "We conclude the failures of credit rating agencies were essential cogs in the wheel of financial destruction. The three credit rating agencies were key enablers of the financial meltdown."

The Final Report of the National Commission on the Causes of the Financial and Economic Crisis in the United States published in 2011, concluded that the three major credit rating agencies (CRAs) had a key responsibility in the development of the recent financial crisis. The Report blamed the credit rating agencies for failing to properly evaluate the credit risk of collateralized securities, and even claimed that "This crisis could not have happened without the rating agencies." We ask the important question of whether the credit rating agencies suffered a reputational damage for their behavior.

Investors rely on CRAs to reduce information asymmetries in financial markets (Brealey, Leland, and Pyle (1977), Diamond (1984). Reputational concerns should discipline CRAs, eliminate any conflicts of interest, and motivate them to provide unbiased ratings (Schwarcz (2002). Upward biased ratings would in fact ex post hurt their reputation and lead to the loss of future business.

However, due to different incentives, CRAs could, ex-ante, optimally deviate from minimizing information asymmetries. There could be equilibrium outcomes where the credit rating agencies optimally inflate their ratings. Mathis, McAndrews, and Rochet (2009) provide a theoretical framework where the reputation mechanism disciplines CRAs actions only if rating complex products is not a major source of income. But in the years leading to the financial crisis, the business of rating complex products boomed, and this likely weakened the CRAs' reputational concerns. According to the predictions of the model, Cornaggia and Cornaggia (2013) empirically document that issuer-paid agencies tend to cater to issuers' interests and understate credit risk. CRAs did inflate their ratings and this, as underlined by

the Financial Crisis Inquiry Report, critically contributed to the recent financial meltdown.

Furthermore, in the model of Bolton, Freixas, and Shapiro (2012) CRAs are more likely to inflate ratings during economic booms. This happens because during booms a larger clientele of investors (naive investors) take ratings at face value and because during booms there is also a lower risk of issuer failure that could damage the raters' reputation. This results in profits from rating inflation that are larger than the expected reputation costs. However, the collapse of the housing market triggered an extremely high (and unexpected) rate of failure among issuers.

In this paper, we empirically test whether the rating agencies suffered, ex-post, a reputational damage. To identify the effects of the reputational damage, we investigate the informational content of credit ratings by looking at the stock price reactions to rating announcements before and after the crisis. If rating agencies suffered a reputational damage, we should observe a weaker stock price reaction to rating announcements.

Using a sample of downgrades and upgrades relative to the biggest fifty stocks of the American, European, and Asian markets over the period 2003-2013, we find results that provide strong support for our hypothesis. We find that the stock price reaction is significantly lower after the financial crisis. The effect is both statistically and economically significant. In multivariate tests, we find that the stock price reaction in the post-crisis period is, on average, lower by 2.3%. These results provide evidence consistent with a significant reputational damage suffered by the rating agencies. Rating agencies had weaker incentives to protect their reputational capital in the wake of the financial crisis due to the increasing importance of rating complex products. This led to inflated ratings and to a reputational damage following the financial meltdown.

The second hypothesis we test is that the CRAs' reputational damage has been particularly severe in the financial sector where the rating

agencies made the biggest mistakes. Our results strongly support this hypothesis. In univariate results and in multivariate tests, the reduction of the stock price reaction is always stronger in the subsample of financial institutions.

Our results are important to better understand the incentives of CRAs and to complement the reputational mechanism with more regulatory oversight. Rating agencies play a fundamental role in the financial market. However, the reputational concerns could not be enough to discipline their actions.

2. LITERATURE REVIEW

This paper relates to two main strands of the literature. On the one hand, it is related to the literature about CRAs' reputation as a disciplining mechanism as in Schwarcz (2002). It is motivated by the theoretical models of Bolton, Freixas, and Shapiro (2012), Mathis, McAndrews, and Rochet (2009), and Bar-Isaac and Shapiro (2013) that predict inflated ratings during booms. The role of reputation is critical for financial intermediaries. Gopalan, Nanda, and Yerramilli (2011) claim that the poor performance of borrowers damages the lead arranger's reputation. In the context of rating agencies, we show that the poor performance of the rated collateralized securities, led to a severe reputational damage.

On the other hand, it contributes to the literature on the information content of credit ratings. Jorion, Liu, and Shi (2005) claim that the information content of downgrades and upgrades is greater in the post-Regulation Fair Disclosure period. Xia (2014) documents a deterioration in the incumbents' ratings quality following the entry of a third investor-paid credit rating agency. Grothe (2013) claim that downgrades have, on average, a greater impact than upgrades have. Afonso, Furceri, and Gomes (2012) show a significant response of government bond yield spreads to rating changes, particularly for negative announcements.

3. DATA AND SUMMARY STATISTICS

To assess the impact of the reputational shock on the information content of ratings, we analyze the stock market reaction to rating revisions before, during, and after the financial crisis. We define the start of the financial crisis with the bankruptcy of Lehman Brothers (September, 15th, 2008). The post-crisis period starts from October 16th, 2009 when the CBOE volatility index (VIX) came back to the pre-crisis mean level. The sample consists of 1,153 rating revisions from November 1st 2003 to November 1st 2013.

We consider the rating revisions of the three major rating agencies, i.e. Standard & Poor's (S&P), Moody's Investors Service, and Fitch Inc. The rating revisions are related to the 150 most representative companies traded on the American, European, and Asian/Pacific markets. In particular, we look at the components of the STOXX USA 50, EURO STOXX 50, and STOXX Asia/Pacific 50.

Afonso, Furceri, and Gomes (2012) perform a numerical transformation of the alphanumerical rating codes. Following a similar procedure, we standardize the conventional alpha-numerical scale that goes from excellent to poor: AAA (or similar) is equal to 17, while CCC+ (or similar) is equal to 1. The positive and negative watches are equal to -0.25 and + 0.25 respectively.

To perform multivariate tests, we need to control for variables that previous research claimed to be related to the level of abnormal stock market reactions. We proxy the issuer's stock risk using the standard deviation of the daily stock returns (DEVST) calculated over the 50 days leading to the rating action. We use the level of the VIX index to proxy for expected risk in the market (Bollerslev, Tauchen, and Zhou (2009)). We obtain the rating revisions and other market data from the Bloomberg database.

The summary statistics are reported in Table 1. All data are winsorized at the 1% and 99% levels. It is interesting to note that 22% of the rating actions are anticipated by a previous watch (Steiner and Heinke (2001)). In robustness, we control for this effect. On average, the starting rating is equal to 12.10 (equivalent to the A rating). Finally, the absolute size of the rating change is slightly bigger for downgrades (0.74 versus 0.67).

Table 1. Summary statistics

	Mean	Median	P25	P75
DEVST (%)	1.87	1.55	1.13	2.17
VIX	18.58	17.57	10.34	25.26
DUMMY_ANTICIP	0.22	0	0	0
LAST_RATING	12.10	12	10.75	14
CHANGE_NOTCH (+)	0.67	0.75	0.25	1
CHANGE_NOTCH (-)	-0.74	-0.75	-1	-0.25

Note: This table reports descriptive statistics for the sample of rating revisions over the period 2003-2013. The table reports the mean, the median, the 25th and the 75th percentile of the control variables used in the multivariate analysis. DEVST is the standard deviation of the daily stock returns calculated over the 50 days leading to the rating action. VIX is the value of the VIX index on the announcement day of the rating revision. DUMMY_ANTICIP is a dummy variable that is equal to one if the rating action is the realization of the previous forecasted watch. LAST_RATING is the value of the rating before the rating action. CHANGE_NOTCH (+) and CHANGE_NOTCH (-) is the positive and negative rating change, respectively.

4. EMPIRICAL ANALYSIS

The objective of this study is to test whether the major CRAs suffered a reputational damage after the subprime crisis. Ratings are signals sent by the CRAs to the market. The magnitude of these signals is observable and is given by the value of the ratings. However, the precision and accuracy of these signals cannot be observed directly. The CRAs' reputation is critical for these signals to be credible. A CRAs' better reputation reinforces the market's beliefs of the precision and accuracy of the CRAs' ratings.

To test whether the CRAs suffered a reputational damage, we empirically estimate the information content of rating revisions before and after the financial crisis. Rating changes are signals of new information about the issuers quality. If CRAs suffered a reputational damage, we should see lower stock price reactions for rating changes after the financial crisis. To capture the effect of the reputational channel on the market's beliefs about the precision of the signals, in univariate and multivariate tests, we employ a standard event study methodology, and we compare the stock price reaction to rating changes before and after the financial crisis. Cumulative abnormal returns (CARs) are calculated over a three-day window centered on the announcement date. We consider the absolute values of the Cumulative Abnormal Returns, CARs (Grothe (2013). This allows to isolate the beliefs of the precision of the signals independently from the information that is already incorporated in the prices before the rating actions.

4.1. Univariate analysis

Table 2 reports the mean absolute value of the CARs around the rating actions for investment grade firms. Panel A reports CARs before and after the crisis. Panel B repeats the same analysis excluding the crisis period.

The univariate evidence supports our hypothesis. Even without controlling for other factors, after the crisis the market reaction is statistically and economically significantly lower. Panel A shows that the average difference is equal to 1.2% that, compared to the average value of the stock price reaction before the end of the crisis of 3.5%, represents a decrease of 34%.

In line with previous research (Holthausen and Leftwich (1986)) the stock price reaction is bigger for downgrades compared to upgrades (4.1% vs. 2.2%). This confirms that the information content of downgrades is higher compared to upgrades. Consistent with the reputational damage hypothesis, it is exactly for downgrades that the reduction is bigger. The decrease is equal to 1.7%, a reduction of 41% compared to the mean value of 4.1% before the end of the subprime crisis.

Panel B shows qualitatively similar results excluding the crisis period. The overall difference before and after the crisis is equal to 0.7%, that compared to the average value pre-crisis of 2.9% represents a decrease of 24%. The decrease for downgrades only is equal to 1.2%, a reduction of 33% compared to the pre-crisis mean value of 3.6%.

Table 2. Univariate results

		Downgrades	Upgrades
	(1)	(2)	(3)
Panel A. Entire sample			
Pre-Crisis + Crisis	0.035	0.041	0.022
	N=551	N=362	N=157
Post-Crisis	0.022	0.024	0.019
	N=261	N=130	N=107
Difference (Post - Pre)	-0.012***	-0.017***	-0.003
Panel B. Entire sample			
Pre-Crisis	0.029	0.036	0.018
	N=485	N=305	N=152
Post-Crisis	0.022	0.024	0.019
	N=261	N=130	N=107
Difference (Post - Pre)	-0.007***	-0.012***	-0.001
Panel C. Subsample financials			
Pre-Crisis	0.035	0.045	0.017
	N=204	N=127	N=72
Post-Crisis	0.020	0.022	0.016
	N=81	N=45	N=31
Difference (Post Pre)	-0.015***	-0.023***	-0.001
Panel D. Subsample financials			
Pre-Crisis + Crisis	0.045	0.054	0.025
	N=252	N=170	N=76
Post-Crisis	0.020	0.022	0.017
	N=81	N=45	N=31
Difference (Post – Pre)	-0.025***	-0.032***	-0.007

Note: Panel A reports the means of ABS_CAR for rating revisions of investment grade firms (no border) before and after the financial crisis. Column (1) considers the entire sample. Column (2) only downgrades, Column (3) only upgrades. The number of observations are reported under the mean values. The last row reports the difference of the mean value post- and the mean value pre-crisis. Panel B includes the crisis together with the pre-crisis period. ***,**,* indicate statistical significance at the 1%, 5% and 10% level, respectively.

Finally, Panel C and Panel D repeats the same analysis of Panel A and B, respectively, on the subsample of financial institutions. The results are consistent with the hypothesis that the CRAs suffered a bigger reputational damage in the financial sector. Both pooling downgrades and upgrades together and looking at downgrades alone, the stock price reaction is negative and always bigger (in absolute terms) compared to the entire sample.

These preliminary results suggest that the CRAs' reputational damage had a significant impact on how the market interprets the signals sent by CRAs. However, there could be determinants of the CARs correlated with the timing of the crisis that could drive the results. In the following section we examine the impact of the reputational damage in a multivariate framework.

4.2. Multivariate analysis and robustness

In order to evaluate the impact of the reputational damage, we need to control for variables that previous studies have identified as determinants of the CARs. We estimate the following model for the entire sample, separately for downgrades and upgrades, and for the subsample of financial institutions to test our hypotheses:

$$ABS\_CAR_i = \alpha + \beta_1 POST\_CRISIS_i + \beta_2 NO\_BORDER_i + \beta_3$$
$$POST\_CRISIS_{ix} NO\_BORDER_i + \beta_4 VIX_i + \beta_5 DEVST +$$
$$\delta_i + \varepsilon_i \tag{1}$$

where, for the rating change $ABS\_CAR_{i,t}$ is the absolute value of the cumulative abnormal return around the rating change of firm i at time t; $POST\_CRISIS_{i,t}$ is a dummy variable that equals one if the rating change of firm i at time t happens after the financial crisis, and zero otherwise; $NO\_BORDER_{i,t}$ is a dummy variable that equals one if the rating change of firm i at time t concerns a company whose last or current ratings are investment-grade; VIX_t is the CBOE volatility index at time t; $DEVST_i$ is the standard deviation of the issuer's daily stock returns calculated over the 50 days leading to the rating action of firm i at time t. To control for unobservable characteristics specific to the American, European, and Asian/Pacific regions we include region fixed effects (δ_i).

The reputation hypothesis predicts a negative coefficient on the variable POST_CRISIS, which suggests that after the financial crisis the information content of the rating changes is lower. When the variable NO_BORDER and the interaction term NO_BORDER x POST_CRISIS are included, our hypothesis predicts a negative value for the sum of the coefficients β_1 and β_3. This sum represents the differential mean value of the absolute CAR before and after the financial crisis for investment-grade companies.

Table 3 reports the results. Panel A considers the entire sample. The coefficient on the variable POST_CRISIS is negative and both statistically and economically significant. After the financial crisis the mean absolute value of the CAR is 2.3% lower (Model (1). Controlling for stock-specific risk and market-expected risk (Model (2), the mean absolute value of the CAR is 2.4% lower. Model (3) allows to isolate the effect on investment-grade companies looking at the sum of the coefficient on POST_CRISIS and the interaction term NO_BORDER x POST_CRISIS. The estimated value (-2.3%) does not change the previous results.

Panel B considers the downgrades and the upgrades separately. Consistent with univariate results, the reduction of the information content of rating changes is greater for downgrades compared to upgrades. This further supports the reputation hypothesis. It is exactly where the CRAs' reputation is more valuable, i.e. for downgrades as documented by previous research (Holthausen and Leftwich (1986)), that the market's beliefs about the precision of the CRAs' signals have been significantly revised after the financial crisis.

Table 3. Main Results

	Dep. Variable: ABS_CAR			Dep. Variable: ABS_CAR			
				Downgrades	Upgrades	Downgrades	Upgrades
	(1)	(2)	(3)	(1)	(2)	(3)	(4)
	Panel A: Entire sample			**Panel B: Downgrades and Upgrades**			
Intercept	0.0534***	0.042***	0.036***	**0.063***	**0.021***	0.057***	**0.021***
	(0.002)	(0.005)	(0.005)	**(0.007)**	**(0.006)**	(0.007)	**(0.006)**
POST_CRISIS	-0.023***	-0.024***	-0.012**	**-0.035***	**-0.011***	-0.007	-0.010*
	(0.004)	(0.001)	(0.006)	**(0.005)**	**(0.005)**	(0.013)	(0.006)
NO_BORDER			0.002			0.002	-0.001
			(0.002)			(0.004)	(0.003)
NO_BORDERx POST_CRISIS			-0.011*			-0.030**	-0.001
			(0.006)			(0.013)	(0.005)
VIX		0.001***	0.001	**0.001***	**0.001***	0.001***	**0.001***
		(0.001)	(0.001)	**(0.001)**	**(0.001)**	(0.001)	(0.001)
DEVST		0.446***	0.526***	**0.560***	**0.399***	0.456)**	0.395
		(0.172)	(0.168)	**(0.210)**	**(0.255)**	(0.210)	(0.259)
Region FE	Yes	Yes	Yes	**Yes**	**Yes**	**Yes**	**Yes**
N	1,153	1,105	1,071	**587**	**414**	587	414
R²	0.02	0.16	0.16	**0.14**	**0.18**	0.16	0.18

*Note: This table reports the results of following OLS model (1). The dependent variable is the absolute value of issuers' CAR around the rating revision. POST_CRISIS is a dummy variable that is equal to one after October 15th, 2009 and zero otherwise. The Region Fixed Effects refer to the American, European, and Asia/Pacific regions. Panel A considers the entire sample. Panel B analyses the downgrades and the upgrades separately. For each model the robust standard errors are reported in parenthesis under the coefficients. The final rows of each column report the number of observations and R2. ***,**,* indicate statistical significance at the 1%, 5% and 10% level, respectively.*

Table 4 reports the results on the subsample of financial institutions. The main takeaway of the table is that the reduction of the information content of rating changes is bigger for the financial institutions. After the financial crisis the mean absolute value of the CAR is 3.3% lower (Model (1).

The reduction for downgrades (4.5%) is also bigger if compared to the entire sample. This, together with the univariate results, supports the hypothesis that the reputational damage has been more severe for financial institutions, where the CRAs made the biggest mistakes.

Table 4. Subsample of financial institutions

	Dep. Variable: ABS CAR		
	(1)	Downgrades (2)	Upgrades (3)
Intercept	0.053***	0.073***	-0.007
	(0.011)	(0.015)	(0.010)
POST_CRISIS	-0.051***	-0.066***	0.008
	(0.012)	(0.016)	(0.011)
NO_BORDER	-0.011	-0.014	0.021
	(0.009)	(0.010)	(0.008)
NO_BORDERx	0.018*	-0.021	-0.013
POST_CRISIS	(0.011)	(0.015)	(0.009)
VIX	0.002***	0.001***	0.005****
	(0.001)	(0.001)	(0.001)
DEVST	0.512*	0.778***	-0.404
	(0.220)	(0.272)	(0.481)
Region FE	Yes	Yes	Yes
N	347	223	115
R²	0.29	0.22	0.58

*Note: This table reports the results of the subsample of the financial institutions. Model (1) considers both downgrades and upgrades. Models (2) and (3) analyse the downgrades and the upgrades separately. For each model the robust standard errors are reported in parenthesis under the coefficients. The final rows of each column report the number of observations and R2. ***,**,* indicate statistical significance at the 1%, 5% and 10% level, respectively.*

Table 5 reports some robustness tests. Model (1) explicitly controls for the rating actions that are simply the realization of previous watches. We include a dummy variable (DUMMY_ANTICIP) that is equal to one if the rating action is the realization of the forecasted watch. Finally, we also control for the size of the rating change (Model (2). The results are qualitatively unchanged.

Table 5. Robustness

	Dep. Variable: ABS_CAR	
	(1)	(2)
Intercept	0.040***	0.040***
	(0.005)	(0.004)
POST_CRISIS	-0.015**	-0.013**
	(0.006)	(0.006)
NO_BORDER	0.002	0.001
	(0.003)	(0.003)
NO_BORDERx	-0.012**	-0.013**
POST_CRISIS	(0.006)	(0.006)
VIX	0.001***	0.001***
	(0.001)	(0.000)
DEVST	0.464**	0.422**
	(0.164)	(0.164)
DUMMY_ANTICIP	-0.003	
	(0.003)	
CHANGE_NOTCH		-0.040***
		(0.001)
Region FE	Yes	Yes
N	1,004	1,004
R²	0.16	0.18

*Note: This table reports the results of robustness tests. Model (1) includes a dummy variable (DUMMY_ANTICIP) that is equal to one if the rating action is the realization of the forecasted watch. Models (2) controls for the size of the rating change (CHANGE_NOTCH). For each model the robust standard errors are reported in parenthesis under the coefficients. The final rows of each column report the number of observations and R2. ***,**,* indicate statistical significance at the 1%, 5% and 10% level, respectively.*

5. CONCLUSION

We investigate whether the credit rating agencies are still credible after the financial crisis. In particular, we investigate whether the rating agencies suffered a reputational damage after the crisis. Our results strongly support the hypothesis that they suffered a reputational damage. The empirical evidence also supports the hypothesis that the damage has been

particularly severe for financial institutions, where they made the biggest mistakes.

Our results are important to better understand the behavior of CRAs. Rating agencies play a fundamental role in the financial market. However, the reputational concerns could not be enough to discipline their actions.

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SECTION 2

COMPOSITION OF BLOCKHOLDERS IN PUBLICLY TRADED FIRMS

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Abstract

The outside blockholder has become an important agent in the corporate governance literature in the United States. Understanding how his monitoring role changes as economic circumstances deteriorate is rarely considered. In this study, we examine whether the number of certain types of blockholders, as well as their ownership concentrations, will increase during recessions. By categorizing blockholders by type: affiliated, outside, employee (through Employee Stock Ownership Plans), non-officer director, and officer director, we are able to track how blockholder composition changed within firms when the economy moved from expansion in 1999 to recession in 2001. Using nonparametric tests, we show that the number of outside blockholders and their ownership stake go up during the recessionary period examined. This suggests a more important monitoring role for the outside blockholder when the economy worsens. Though we do not find a statistically significant change overall in the average number of blockholders or the total percentage of shares held across the firms in our sample for the other blockholder types when the economy moves from expansion to recession, we do see noteworthy changes in the behavior of the affiliated and ESOP blockholder at specific ownership concentration levels when the economy shifts.

1. INTRODUCTION

Blockholders, shareholders that own at least a 5% share of a publicly traded company, are significant stakeholders that may serve as good monitors for the other, more dispersed shareholders (Shleifer & Vishny, 1986). There is some debate in the literature on corporate governance as to whether these significant investors share the same investment time horizon as the average common stockholder or if they tend to vote with their feet, or at least, can threaten to exit, acting on better market information than possessed by the typical small shareholder (Admati & Pfleiderer, 2009; Bates, et al., 2015; Bharath, et al., 2013). In order to be able to characterize the mechanisms behind good corporate governance, we need a better understanding of the motivations behind blockholder behavior and this requires a better understanding of the types of blockholders operating in publicly traded firms today. While a significant amount of research has been done on blockholder composition in the

American corporation, not a lot has considered the evolution of that composition across time. This paper will examine whether the number of certain types of blockholders, as well as their ownership concentrations, will increase during recessions. We consider that evolution for several types of blockholder--affiliated, outside, ESOP, non-officer director, and officer—across changing business conditions between 1996 and 2001. We seek a better understanding of the role different blockholder types may play in the mitigation of the agency problem.

The ownership pattern of large shareholders over time matters because of the signal it sends to the rest of the market. Will certain blockholder types act more in concert with shareholder value than others? A number of institutional investors may own blocks in corporations, but if their interests are affiliated with those of the firm, the institutional investor may not provide the critical monitoring desired by small shareholders. The outside blockholder—a mutual fund, foundation, or pension plan—who is less influenced by managerial

decisions will be a better watchdog than the bank or the insurance company seeking to do business with the firm (Brickley, et al., 1988; Shivdasani, 1993). The interaction of governance factors inherent in actor characteristics and incentives is more complicated than first glance might suggest, but if the investor can distinguish among blockholder types and their likely behavior, he might gain better insight into the corporate governance structure at work.

We find that type of blockholder is an important characteristic for who remains invested when economic conditions worsen. The outside blockholder increases in number and in ownership stake in a statistically significant way during a downturn, while insiders do not seem to alter their ownership patterns. Whereas the other blockholder types do not alter their patterns of ownership in a significant manner overall, there is some movement downwards for specific ownership levels that seems interesting. Although we can only see changes in the pattern of blockholding over time in this paper, and can't distinguish among the motivations for that change, this examination is a worthy one because it further parses out important factors in the agency relationship. Because different types of blockholders have different impacts on corporate governance (Edmans, 2014; Clifford and Lindsey, *forthcoming*), it is good to know what economic factors lead to changes in the structure of ownership.

The paper proceeds as follows: section 2 discusses the previous literature. Section 3 explains the hypotheses to be tested. Section 4 details the data and the methodology we employed. Look to section 5 for an examination of the empirical results. Finally, section 6 concludes by summarizing our findings, situating them within other research, and understanding the implications for companies, regulators, and investors.

2. LITERATURE REVIEW

In seminal work on the agency problem and its implications, we learned that there is a tradeoff within corporate governance between monitoring and liquidity; ownership concentration and the capital market are substitute mechanisms for controlling managerial behavior (Jensen and Meckling, 1976; Coffee, 1991; Bhide, 1993; Holmstrom and Triole, 1993; Kahn and Winton, 1998; Edmans, et al., 2013). Monitoring manager behavior is one way to mitigate the agency problem, but the costs of doing so for the small shareholder may be greater than the benefits, creating a free-rider problem especially where ownership is generally dispersed (Grossman and Hart (1980). Shleifer and Vishny (1986) argued that the large shareholder has the potential to act as monitor of the firm thereby defusing the principal agent problem for small shareholders. But does the owner of a large block of shares in practice willingly assume this role or have the same incentives and time horizon? Because the empirical evidence is so mixed, researchers continue to search for evidence that clarifies the role of the blockholder in corporate governance.

Many have considered whether having blockholders with share ownership translates into better corporate governance, expanded monitoring,

or improved operating performance and firm value (Maury & Pajuste, 2005; Konijn, et al., 2011; Becker, et al., 2011; McCahery, et al., 2016). There is some evidence that block ownership can provide a substitute for compensation in governance (Mehran, 1995; Ryan and Wiggins, 2001), but the motivation of the large shareholder may not always be aligned with long term investment horizons (Gaspar et al., 2005).

Other studies accept the growing presence of the large shareholder and focus on his role in a firm's decision making (See Demsetz & Lehn (1985), Holderness and Sheehan (1988), and Ang et al. (2000) for early contributions). Singh and Davidson (2003) expand the Ang et al. analysis to large firms, finding that incentivizing the manager lowers agency costs more than monitoring through an outside blockholder. However, Chen et al. (2007) show that blockholder benefits of monitoring increase with ownership percentage, investment time horizon, and institutional independence.

There are a few ways researchers postulate that governance can be improved by the presence of the blockholder. It certainly looks like the large shareholder that owns more than 5% of the shares in a publicly traded corporation will often be able to sell their shares at a premium, which suggests that there are significant private benefits to blockholding (Barclay & Holderness, 1989). The informational advantage of the blockholder allows him to incorporate firm-specific information and this is what gets captured in the stock price (Brockman & Yan, 2009; Edmans, 2009). Having a representative on the board may be important in this monitoring role, however. A firm with a blockholder board member is more likely to see a change in the control of the firm than a firm with outside blockholders and no board membership (Mikkelson & Partch, 1989).

Parrino et al. (2003) would argue that when company performance flags, it is easier for the blockholder to sell his shares, thereby "voting with his feet." Maug (1998), in investigating the pros and cons of a liquid market for company shares, argues against the existence of such a tradeoff because a more liquid market means that additional shares are actually easier for the institutional investor to obtain. Admati & Pfleiderer (2009) model the large shareholder's threat of exit as passive activism, where the manager becomes less likely to take value-reducing actions, but also less likely to engage in costly, value enhancing ones as well when the threat of exit is credible. The threat of exit is enough to add some managerial discipline and act as a substitute for blockholder activism (Edmans, 2009; Bharath, et al., 2013).

Different types of holders may have different effects on measures of good governance. The identity of the blockholder is likely to be very important for determining activism (Edmans, 2014; Clifford & Lindsey, forthcoming). Denis et al. (1997) found that the chance of a significant managerial change was greater the higher the proportion of outside blockholders and lower the greater the presence of inside blockholders. The role of the outside blockholder in situations of possible takeover can also be viewed by considering the abnormal portfolio return earned with a strategy of buying promising takeover targets and shorting

doubtful ones. Cremers and Nair (2005) discovered a 10-15% abnormal return using this strategy only where outside blockholding was high.

Beyond the initial distinction of insiders versus outsiders, it can be useful to identify active blockholders from inactive ones, or affiliated versus business-pressure insensitive. One pension fund, CalPERS, has been identified as a very active large shareholder and Smith (1996) found that 72% of the publicly traded firms targeted by CalPERS did make governance changes as a result of the investment. Brockman and Yan (2009) find a strong relationship between block ownership and firm-specific return whether the blockholder is an insider or an outsider, but nothing for the ESOP, which is viewed as affiliated, but inactive (p.309). Operating performance is actually better for a firm where the block shareholders are not also seeking a future business relationship (Cornett et al., 2004). Using panel data, Cronqvist and Fahlenbrach (2008) find that blockholders make a significant contribution to many areas of corporate policy and are notably different from one another. Still Konijn et al. (2011) argue that the existence of many, smaller blockholders within the same firm lowers operating performance.

Some evidence suggests that ownership and governance structure may vary with changing economic conditions. If blockholder types specialize in different roles within the structure of governance, it might be interesting to know if different business conditions might attract participation of different blockholders. Kaya and Lumpkin (2014) argue that the number of blockholders and the ownership percentage held go up during business cycle's expansionary periods. Not so surprisingly, Hermalin & Weisbach (1988) found three significant factors for changes in governance: poor firm performance, CEO turnover, and changes in product markets, and hence, the expertise needed to support those products. Finally, Kole and Lehn (1997) look at the ways that governance structures adapt to deregulation. Their base case is airlines (they have a more thorough paper on this) but they also look at the telecommunications and the health industries as places where these forces are operating too. Denis & Sarin (1999) look for patterns in ownership structure and board composition for a sample of publicly traded firms over a ten-year period of time. They found that 65% of their sample experienced a significant change in either ownership structure or board composition for the time period and these changes were not reversed after three years. Very often, these significant changes are preceded by fundamental changes in business conditions for the firm in question and significant managerial changes, share price concerns, and corporate control threats were often factors in the changes observed (p. 189).

3. HYPOTHESES

We add to the discussion of blockholder composition in the United States stock market by considering the presence and prevalence of various blockholders during good and poor business conditions. Here, we seek to understand the pattern and dispersion of the different blockholder types within a firm as the economic environment changes. When does a certain blockholder type become a more important component in the ownership structure of a firm? We test three hypotheses:

Hypothesis 1: In the United States stock market, the number of outside blockholders and their ownership stake increases during times of recession.

This hypothesis is related to whether the big institutional investors are timing the market or not. If outside blockholder presence waxes and wanes with business conditions, it might suggest a limited general interest in corporate governance. The outside blockholder may become an even more important source of monitoring when business conditions become less welcoming, and may increase ownership stake to reflect the increased importance of their role. We expect to see both the number of outside blockholders and their ownership stake rising in bad conditions when the potential value added to the firm is greater.

Hypothesis 2: The number of non-officer director blockholders and officer blockholders, as well as their ownership concentrations, will increase during recessions.

The inside blockholder has staked a lot in the success of the firm. There is every incentive for these actors to signal their increased belief in the future of the company and/or to adjust compensation packages towards future cash flows by increasing their ownership percentage held in the face of tougher economic circumstances, if the insider believes the future is bright. These leaders are the risk takers in the firm, making the important decisions, and possessing the insider knowledge necessary for understanding future prospects. The capital market actively seeks confirmation of a promising tomorrow through insider holdings today. There is therefore a strong incentive for the directors on the board to invest more in the firm during tough times. Because the public understands that members of the board and company officers have better company information than the public, such actions can be viewed as signals for future positive returns.

Additionally, when the market value of the firm falls relative to its book value, the threat of takeover by the capital market becomes a bigger threat to the insiders. To confirm control, it becomes advantageous to have a bigger ownership stake. It seems likely that the number of inside blockholders and the percentage of shares held by them will increase as a signal of their belief in the long term profitability of the firm.

Hypothesis 3: The number of affiliated and ESOP blockholders and their ownership concentration goes down in recessionary cycles.

These last two blockholder types do not have the same incentives within the firm as the outside and inside blockholders. The affiliated blockholder is likely to realize that repeated business dealings decrease under adverse business circumstances, as opportunities for growth slow. When the present value of future cash flows fall, so will the number and ownership concentration of affiliated blockholders. They will neither have the same access to relevant information as the insiders nor will they possess the skills or resources necessary for effective investment monitoring that the outside blockholder is apt to have.

Employees in an ESOP will be seeking to diversify their risk of loss during a recession. When the company is not doing well, the chances for job loss increase, and it simply does not make sense to increase uncertainty by increasing ownership stake under such conditions. Remember the average employee does not make the decisions that direct the strategy and the future for the company. Each operates one part of a larger engine and is therefore less likely to have control of future firm-wide decisions. The expected behavioral response for employees is to reduce ownership stake when business conditions are poor.

4. DATA AND METHODOLOGY

We use the data set from Dlugosz, *et al.* (2006) to identify how the composition of blockholding changes over the 1996-2001 period. The data set represents a standardized, cleaned version of the information usually downloaded from *Compact Disclosure*, which tends to contain many mistakes and biases when left on its own. Because the identity of the blockholder is a fairly recent topic of academic research, good data are available over very limited periods of time. It becomes important to stress that any conclusions must be considered tentative until additional data are available. Nonetheless, using the clean data that are readily available is a worthy exercise. In total, there were 7,649 blockholder observations during that period for 1,913 individual companies.

Table 1 shows our sample of firms over the 1996-2001 period segmented across time and categorized into expansion and contraction observations.

Table 1. Sample firms over time

Panel A							
	1996	**1997**	**1998**	**1999**	**2000**	**2001**	**All**
All	1,130	1,046	1,510	1,387	1,336	1,240	7,649
Panel B							
	Expansion		**Recession**		**All**		
All	6,409		1,240		7,649		

Panel A shows the number of firm observations in each year, while Panel B shows the number of firm observations across the expansionary (1996-2000) and the recessionary (2001) time periods. This particular categorization stems from the National Bureau of Economic Research classifying the March 2001-November 2001 period as a recession. Because our data is annual, we designate the entire year 2001 as a recessionary period.

Table 2 summarizes the number of observations by blockholder type per firm across the expansionary (1996-2000) and the recessionary (2001) periods. We have identified five types of blockholder in our sample of firms: affiliated, outside, Employee Stock Ownership Plan (ESOP), non-officer director, and officer. So, the first line of Table 2 shows that the average number of affiliated blockholders per firm during economic expansion was 0.136 and fell to 0.132 in the recession of 2001. The ***all*** column shows the average number of affiliated blockholders per firm across the entire time period, 1996-2001. Similarly, on the second line of Table 2, the average ownership stake of the affiliated blockholder per firm went from 2.308% during the expansionary period to 2.138% during the recession. Over the entire time period, the average percentage ownership stake by affiliated blockholders among the total sample of firm observations was 2.28%.

Table 2. Type of shareholders across business cycles

	Expansion	**Recession**	**All**
Number of Affiliated Shareholders	0.136	0.132	0.135
% Held by Affiliated Block.	2.308	2.138	2.281
Number of Outside Blockholders	1.803	1.970	1.830
% Held by Outside Blockholders	16.568	18.015	16.802
Number of ESOP Shareholder	0.101	0.095	0.100
% Held by ESOP Block.	1.086	1.029	1.077
Number of Non-Officer Directors shareholders	0.111	0.107	0.110
% Held by Non-Officer Director Block.	1.276	1.285	1.278
Number of Officer Shareholders	0.188	0.198	0.190
% Held by Officer Block	2.548	2.550	2.548
N	6,409	1,240	7,649

Each blockholder type can be understood in the same way as the affiliated blockholder discussed above. The blockholder type that emerges as important in Table 2 above is the outside blockholder. The average number of outside blockholders per firm rose in recessionary times from 1.803 to 1.970. The percentage ownership held by the outside blockholder also rose from 16.568% to 18.015% in the recession of 2001. Noticeably, the number of each type and the percentage stake held is much smaller than the outside blockholder for our sample of observations. Even though the affiliated, ESOP, and both types of insider shareholder types do qualify as blockholders—each owns at least a 5% ownership stake in his respective company—none really exhibits the prevalence or pervasiveness of the outside blockholder over our sample time period.

In the next section, we show the number of shareholders in each category type and total percentage ownership over time classified according to blockholder stake. First, we show the trend in the

number of blockholders and the percentage ownership of blockholders for each type in graphical form. Then, we show these trends in tabular form and compare them to the business conditions during the same period (1996-2001). Are the trends in the number of blockholders and the percentage sum of blockholder ownership similar to the trends in the business condition levels? Finally, we run nonparametric tests to see if the differences are statistically significant.

5. EMPIRICAL RESULTS

Graphically, we can examine the pattern of shareholder composition across time. Figure 1 below shows what happens to the average number of affiliated blockholders per firm over the sample time period.

**Figure 1.** Number of Affiliated Blockholders
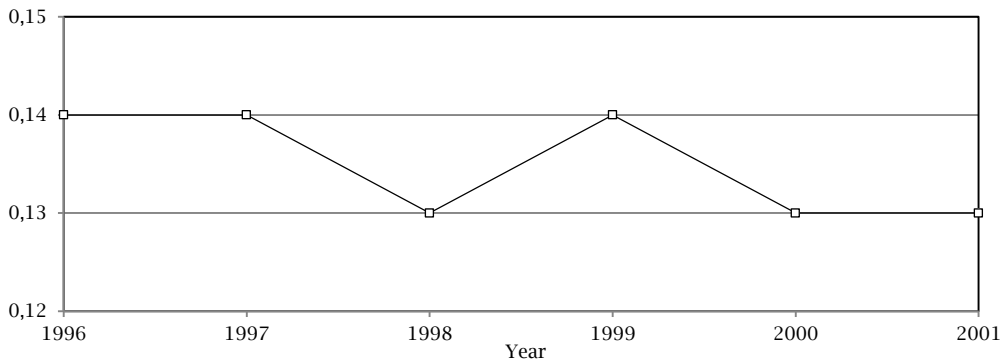
As is clear in the graph above, the number of affiliated blockholders per firm falls in 1998, rises in 1999 and then falls again in 2000. The trend is not a consistent one.

Of course the pattern of blockholding that stands out is the trend in the average number of outside blockholders per firm over time. Figure 2 shows an uptrend in the number of outside blockholders from 1997 through 2000, with no noticeable loss in the period of recession.

Figure 2. Number of Outside Blockholders
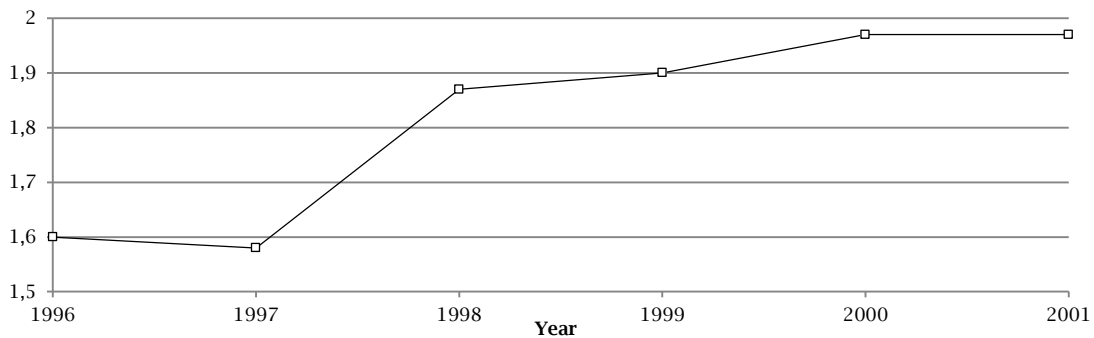
Our main question in this paper is what happens to shareholder composition in terms of the number and percentage of ownership held during positive and negative business conditions. Here it looks like the outside blockholder increases his participation in firm ownership as the expansion evolves and that he does not noticeably reduce his exposure over the recessionary period.

The pattern we see for the number of outside blockholders, however, is not apparent for the remaining shareholder types. As can be seen in Figures 3-5, ESOP, non-officer, and officer types all show a drop in the average number of blockholders per firm over time. Interestingly, in Figure 3, the "number of ESOP shareholders" peaks in 1997, then drops from 1998-2000, only to rise slightly in 2001. The fact that the number of ESOP shareholders is well below one across the sample period would indicate that a number of the firms in this sample did not have an ESOP in place for their employees; the popularity of these plans appears to have dropped after 1997.

Figure 3. Number of ESOP Blockholders
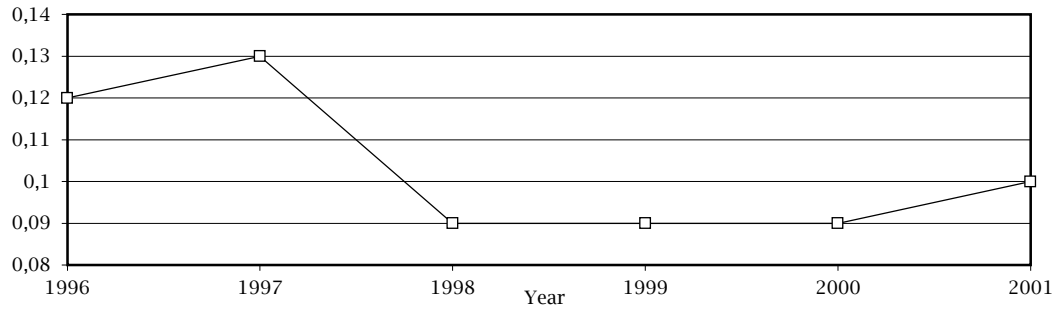
Figures 4 and 5 show a fairly similar trend for the average number of blockholders in the director role per firm once the recession hits in 2001. Both the non-officer director and the officer types show a drop in the average number per firm in the last period of the sample. The early pattern of participation for non-officer directors shows a steady increase throughout the expansionary period, while there is a slight drop in officer shareholders during 1997, as shown in Figure 5 below.

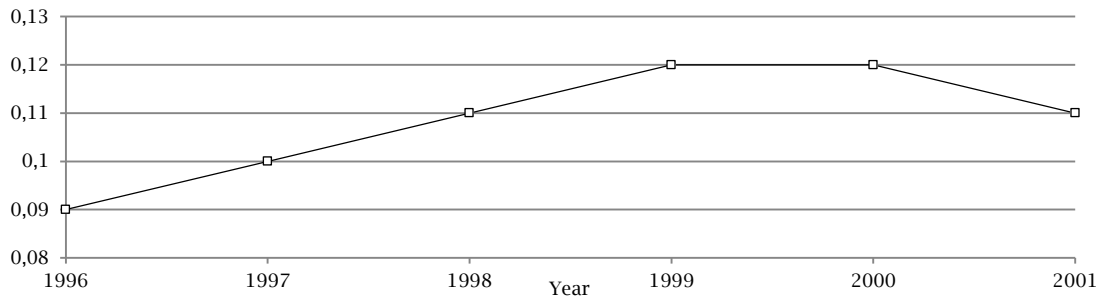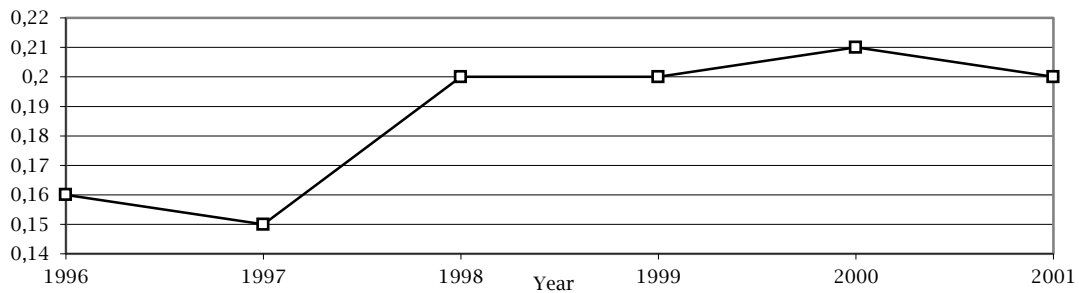**Figure 4.** Number of Non-Officer Director Blockholders

Figure 5. Number of Officer Blockholders

In general, as the market advances, there are more inside blockholders per firm and also the share of blockholding in each firm is higher. When the business cycle begins to decline, however, so does blockholder participation in most instances. Except for the number of outside blockholders, participation in share ownership falls overall for each identifiable shareholder type when the economy moves from a period of expansion to recession.

The real question becomes whether the changes in the composition of share ownership are significant across time as the economy moves into recession. To investigate this, we utilize non-parametric tests to see if the differences are statistically significant.

In table 3, we run Wilcoxon tests in order to understand how the "number of affiliated shareholders" changes across the expansionary and the recessionary periods. Our tests show that, for the full sample (denoted All) of affiliated blockholders, although there were fewer shareholders per firm during the recessionary period (i.e. 2001) compared to the expansionary period (1996-2000), the change was not a statistically significant one for the sample overall (statistical significance at 73.6%).

Table 3. Comparison of Affiliated Blockholders Across Business Cycles

Panel A. Number of Affiliated Blockholders			
	Expansion	Recession	Wilcoxon
All	0.136	0.132	0.736
5%-10%	0.072	0.072	1.000
10%-15%	0.107	0.105	0.835
15%-25%	0.100	0.043	0.005
25%-50%	0.177	0.181	0.955
>50%	0.385	0.386	0.774
Panel B. Percentage Held by All Affiliated Blockholders			
	Expansion	Recession	Wilcoxon
All	2.31	2.14	0.688
5%-10%	0.487	0.558	0.929
10%-15%	0.897	0.940	0.816
15%-25%	0.987	0.412	0.005
25%-50%	3.053	2.765	0.9135
>50%	10.187	8.731	0.985

The extension of panel A and panel B to ownership concentration levels will provide a sense of the distribution of blockholder type across increasing levels of block ownership. Thus, for the affiliated blockholder in Panel A, you can see that he is fairly evenly distributed between levels of ownership, though his presence is a little lower on average, at .072 than at higher ownership levels.

When we breakdown the affiliated blockholder sample into ownership concentration, the only statistically significant change (at the .5% level) is for the affiliated blockholder that owns between 15% and 25% of the shares in their respective firms. Here, the average number of affiliated blockholders with this particular stake level (Panel A) fell from .1 to .043 over the entire sample. The affiliated blockholder may vote with his feet during difficult economic downturns though the change is not statistically significant at lower or higher levels. The percentage of shares held by the affiliated blockholder (Panel B) at the 15%-25% ownership level also drops precipitously. This drop is statistically significant at the .5% level of statistical significance. It is possible that at lower levels of ownership, the affiliates do not hold enough to make much of a

difference. At the higher levels of ownership, they hold enough to exert significant influence. Here, in this middle range, though, the affiliates hold enough to be concerned but not enough to influence decisions, so they sell off some of their holdings. Whatever the motivation, at this level of ownership stake, the affiliated shareholder votes with his feet. Note that this is the only level of affiliated blockholding in line with hypothesis 3 above.

Table 4 shows that the outside blockholders in the sample overall do increase in number and in percentage held in a statistically significant way. The average number of outside blockholders goes up as the economy moves into recession (Panel A), from 1.803 to 1.970 with a statistical significance level of .1%. Further the percentage of shares held by the outside blockholder changes in a statistically significant manner (Panel B), rising from an average of 16.568% to 18.015% when the economy moved from one of expansion to contraction. The distribution of the outside blockholder is not even; it increases as the ownership concentration level increases.

Table 4. Comparison of Outside Blockholders Across Business Cycles

Panel A. Number of Outside Blockholders			
	Expansion	Recession	Wilcoxon
All	1.803	1.970	0.001
5%-10%	0.724	0.804	0.047
10%-15%	1.227	1.218	0.780
15%-25%	1.921	1.992	0.238
25%-50%	2.726	2.882	0.058
>50%	2.931	3.197	0.125
Panel B. Percentage Held by All Outside Blockholders			
	Expansion	Recession	Wilcoxon
All	16.568	18.015	0.001
5%-10%	5.067	5.507	0.375
10%-15%	9.067	9.168	0.848
15%-25%	15.489	16.095	0.238
25%-50%	24.670	26.089	0.044
>50%	38.250	38.085	0.943

Two levels of ownership concentration are statistically significant within the outside blockholder category. For outside blockholders with a relatively lower ownership concentration, between 5%-10%, the number of blockholders goes from .724 to .804 with a level of significance at 4.7%. Then, at a much higher concentration level, 25%-50%, the number of outside blockholders increases in a statistically significant way at a level of significance

of 5.8%. Percentage of shares held also significantly changes during a recession at the 25%-50% ownership concentration level. With this sample outside blockholders increase their ownership stakes during more difficult economic times.

For the sample overall, ESOPs do not play a statistically significant role when business conditions change as table 5 demonstrates. Although ESOP blockholders are evenly dispersed

across ownership concentration levels--just about the same number of ESOP blockholders appear across ownership concentration levels--the average number and the magnitude of total shares held across all firms in the sample is much lower than the outside blockholder.

What stands out sharply for the ESOP blockholder is the lack of loyalty to the company during recession for the lowest level of blockholder status. At the 5%-10% ownership concentration level, the number of firms with ESOPs drops from an average of .113 to .043 across the entire sample. This is statistically significant at the 1.3% level of significance. The percentage held by ESOP shareholders also drops during the recession, from .816% to .326% of the total shares in the sample.

This is a statistically significant decrease at a level of 1.4%. For ESOPs with a relatively low blockholder stake, recessionary times are correlated with a sell off of shares in such plans. Perhaps the ESOP at this block level is not so well established and the firm, in an effort to cut costs, cuts back on employee benefits. This is the only level of blockholding where hypothesis three is supported with respect to the ESOP type.

It is worth noting that in Table 6 and 7, neither the change in the number nor the change in percentage of shares held is statistically significant overall, or within any category of ownership concentration.

Table 5. Comparison of ESOP Blockholders Across Business Cycles

Panel A. Number of ESOP Blockholders			
	Expansion	Recession	Wilcoxon
All	0.101	0.095	0.647
5%-10%	0.113	0.043	0.013
10%-15%	0.144	0.188	0.160
15%-25%	0.139	0.122	0.444
25%-50%	0.104	0.111	0.466
>50%	0.075	0.061	0.670
Panel B. Percentage Held by All ESOP Blockholders			
	Expansion	Recession	Wilcoxon
All	1.086	1.029	0.650
5%-10%	0.816	0.326	0.014
10%-15%	1.224	1.530	0.180
15%-25%	1.400	1.179	0.416
25%-50%	1.346	1.336	0.496
>50%	1.120	1.155	0.680

Directors with shares, whether they be officers or not, do not appear to make statistically significant changes in their number or shares held given changing business conditions. Given this, we do not find support for hypothesis 2.

Table 6. Comparison of Non-Officer Director Blockholders Across Business Cycles

	Expansion	Recession	Wilcoxon
All	0.111	0.107	0.759
5%-10%	0.047	0.029	0.350
10%-15%	0.069	0.053	0.579
15%-25%	0.072	0.087	0.581
25%-50%	0.187	0.160	0.280
>50%	0.225	0.235	0.735
	Expansion	Recession	Wilcoxon
All	1.276	1.285	0.803
5%-10%	0.310	0.209	0.360
10%-15%	0.510	0.396	0.578
15%-25%	0.656	0.787	0.580
25%-50%	2.102	1.727	0.302
>50%	3.837	4.303	0.691

Table 7. Comparison of Officer Blockholders Across Business Cycles

	Expansion	Recession	Wilcoxon
All	0.188	0.198	0.340
5%-10%	0.044	0.051	0.734
10%-15%	0.101	0.113	0.987
15%-25%	0.128	0.150	0.415
25%-50%	0.301	0.274	0.277
>50%	0.493	0.508	0.257
	Expansion	Recession	Wilcoxon
All	2.548	2.550	0.433
5%-10%	0.324	0.405	0.717
10%-15%	0.917	0.808	0.922
15%-25%	1.299	1.487	0.412
25%-50%	3.974	3.182	0.141
>50%	9.000	9.462	0.255

6. CONCLUSION

This study seeks to recognize patterns in the composition of block ownership over expansionary and recessionary time periods. Our premise is that different types of blockholders will have incentives that guide their behavior when business conditions change. We hypothesize that on average both outside and insider blockholder presence and prevalence will increase, but that affiliated and ESOP blockholder investment will decrease during recessionary episodes. An informational advantage and decision-making power are likely to be important in the correlations between blockholder type and general business conditions in the United States between 1996 and 2001.

Our tests strongly support the idea that the number of outside blockholders and the percentage of shares owned by them is higher when the National Bureau of Economic Research indicates a recession. This statistically significant relationship does not hold, however, when considering the pattern of ownership behavior of non-officer director and officer director investment. Despite the issues of corporate control that might be strong in an economic downturn, inside block ownership does not alter in a statistically significant way over our sample. Finally, while affiliated and ESOP blockholding does not change in a statistically significant way for the sample overall, there are two notable changes at the 15%-25% blockholding level for affiliated, and 5%-10% blockholding level for ESOPs. In both of these categories, we found that the number of blockholders and the percentage of shares held falls in statistically significant ways, as we hypothesized. Yet this hypothesis does not hold for the other levels of block ownership.

Our work contributes to the literature on blockholding by showing that the identity of the blockholders within a firm may provide an important signal when business conditions change. Because the outside blockholder does appear to increase ownership stake during tough times on average, monitoring is likely to increase for those firms. Small shareholders might see signalling in such behavior. During tough economic times, a sell-off by an outside blockholder is not the norm and might indicate an expected poor return in the future. At the same time a small investor should not expect to see big changes in insider block ownership. So when there are big changes, this might signal something about future expectations.

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DIRECTOR REMUNERATION, FAMILY OWNERSHIP AND FIRM PERFORMANCE: AN ANALYSIS FROM MALAYSIAN LISTED FIRM FOR PERIOD OF 2005 TILL 2013

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Abstract

This study examines the association between directors' remuneration, corporate governance structures and firm performance of 140 Malaysian listed firms which 70 firms are family firm and 70 firms are non-family. Data has been collected through annual reports in Bursa Malaysia's database from 2005 till 2013. The results show that firm performance is positively and significantly related to directors' remuneration, firm's growth and size measured by ROA, ROE and Tobin's Q. However, firms' performance in this study is not responsive to anticipated future market valuations in Stock returns. The study also finds that family ownership leads to lower performance than non-family owned firms on accounting measurement (ROA and ROE) and market measurement (Tobin's Q) after controlling company specific characteristics. The findings also reveal that role duality has no significant effect on accounting and market performance. Meanwhile the study explores that firm performance is negatively and significantly related to leverage. The findings can be useful to regulators to limit director's influence over remuneration packages especially in family firm. The study also contributes to the growing literature on executive and directors' remuneration and it provides international evidence on the effects of corporate governance reforms in recent years in influencing boardroom remuneration and ownership structure on a firm's efficiency and performance.

1. INTRODUCTION

The development of corporate governance in Malaysia can be basically divided into two different time frames - before and after the 1997 Asian Financial Crisis (AFC). Before the AFC, the term 'corporate governance' was seldom heard in Malaysia and the importance of corporate governance was often overlooked (Liew, 2007). However, the 1997 AFC revealed the serious weaknesses of corporate governance in the region. It has been acknowledged that weak corporate governance is one of the factors that caused the impact of the 1997 AFC to become more serious in many countries in the region including Malaysia (Haniffa and Hudaib, 2006). The performance of many firms was seriously affected during the crisis period. The minority shareholders in family owned companies were among the victims that were particularly hurt by the crisis (Haniffa and Hudaib, 2006). For example, Morck *et al.* (1988) showed that as ownership becomes more concentrated, the value of the firms decreases, suggesting that large shareholders are diverting wealth to themselves. When large investors become so powerful that they control the firm, they could pursue their own interests to the detriment of minority shareholders, creditors and other stakeholders (Maury, 2006).

Thus, the central issue for corporate governance under these conditions is therefore how to prevent insiders (or the controlling shareholders/family-owners) from expropriating the assets of the minority (or non-controlling) shareholders. Better corporate governance would help to remedy this and ensure that minority shareholder's rights are protected.

Malaysia established its High Level Finance Committee on Corporate Governance in 1998, after the AFC, to improve and strengthen the corporate governance system in the country (Sharif and Zaidansyah, 2004). The committee identified a number of lapses in corporate governance practices in the country, which among others were mainly attributable to ownership concentration, efficiency of boards of directors, enforcement mechanisms, and lack of responsibilities awareness by directors (Othman, 1999). The problem with ownership concentration in Malaysia is due to the domination, in most companies, by large shareholders who exercise control rights, putting minority shareholders at high risk (Claessens *et al.*, 1999). There also exists scepticism about the ability of boards, especially the non-executive directors, to monitor management, as they are selected for reasons other than monitoring (Haniffa and Cooke, 2002). The committee reported in March 2000 with a

detailed corporate governance code; the Malaysian Code of Corporate Governance (hereinafter the MCCG). The MCCG addressed four main issues: board of directors, directors' remuneration, shareholders and accountability and audit. The Bursa Malaysia (formerly known as the Kuala Lumpur Stock Exchange) has adopted the Code's recommendations and with effect from 2002, listed companies have to include a statement of their compliance with MCCG and explain any areas of the MCCG that they do not comply with.

One of the most extensively debated issues in corporate governance concentrates on the issue of the directors' remuneration[21] (Mallin, 2004). The debate has tended to focus on four areas (i) the overall level of directors' remuneration and the role of share options; (ii) the suitability of performance measures linking directors' remuneration with performance; (iii) the role played by the remuneration committee in the setting of directors' remuneration; and (iv) the influence that shareholders are able to exercise on directors' remuneration[22].

The directors' remuneration debate clearly highlights the important aspect of the principal-agent problem addressed by agency theory. Agency theory notes that the shareholders' objective is to increase wealth via better company performance and hand over of authority to the board of directors to run the business on their behalf. Thus, the board of directors has the responsibility to achieve the firm's objectives, enhance the firm's performance, increase shareholder wealth and protect shareholders' interests. However, personal interest is the main objective for the board of directors, which drives them to work harder. In this context it highlights that shareholders are viewed as the 'principal' and the board of directors as their 'agent' (Conyon and Mallin 1997). These dissimilar interests between the principal and agent have implications for a firm's operation. This conflict should be dealt with to ensure the firm's operation is not impeded. Thus, a well-designed compensation contract can play a major role as a means to align the interests of the board of directors and the shareholders.

Bebchuk & Fried (2003) suggest levels of remuneration should be sufficient to attract, retain and motivate directors of the quality required to run the company successfully, but a company should avoid paying more than is necessary for this purpose. Therefore, the remuneration committee is responsible for designing better remuneration for the board of directors. A significant proportion of executive directors' remuneration should be structured so as to link rewards to corporate and individual performance. However, remuneration is difficult to link with performance in family firms

because the uniqueness of family firms provides opportunities to manipulate remuneration for private benefit, indeed decreasing minority shareholder wealth.

Family-controlled firms are the most common type of corporations in many countries around the world (La Porta *et al.*; 1999, Bhaumik and Gregoriou; 2010) and a common practice in Asian countries (Tam & Tan 2007). A study by Claessens *et al.* (2000) on the separation of ownership and control in nine East Asian corporations (Hong Kong, Indonesia, Japan, South Korea, Malaysia, Philippines, Singapore, Taiwan and Thailand), showed Malaysia has the third highest concentration with 67.2% of family control after Thailand and Indonesia. Furthermore, family is the most common block-holder controlling two-thirds of publicly listed firms in Malaysia (Claessens *et al.,* 2002; Business Times, 2010).

Family ownership has a unique attribute, which is believed to be able to give rise to greater competitive advantage to the firms and improve their performance (Habbershon *et al.,* 2003). They represent a special class of large shareholders that have a unique incentive structure and strong motivation of owner-managers (Demsetz and Lehn, 1985), which is not found with other large shareholders such as institutional investor-controlled firms. This is due to the owner-managers having a tendency and obligation to pass on wealth to the next generation and thus they possess longer-term commitment compared to non-family firms where the professional managers may be short-term in their management approach. Furthermore, family ownership may bring along some significant benefits or advantages to the firms and the advantages could be enhanced with an increase in the level of ownership (Anderson and Reeb, 2003). This is because family ownership is able to reduce the agency problems commonly found in the dispersed ownership structure and also provides the controlling families with both the power and incentive to improve the firm's efficiency and performance.

However, at the same time, an increase in family ownership also means an increase in the control (voting) power of the families. Moores and Craig (2008) note that family firms prefer to keep top management for family members rather than hiring qualified outsiders to run a business due to increased personal interest. Family groups on committees actively influence the committee decision making to benefit them. Therefore, as the controlling shareholders, they have the 'ability and inclination' to carry out strategies, activities or practices that benefit them but may not benefit, or may even be detrimental to, the efficiency and performance of firms and minority shareholders (Young *et al.,* 2008; Dharwadkar *et al.,* 2000).

The relationship between ownership-related variables and a firm's performance may be caused by the difference in political and corporate environments, legal systems and enforcement, taxation or accounting rules (Filatotchev *et al.*, 2005; Joh, 2003). Undertaking a single country ownership study (Malaysia) instead of a cross-country study, can control for the outlined country-specific factors and has the advantage of avoiding endogeneity problems between ownership structure and other

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21 Directors' remuneration refers to the total remuneration received by the directors of a firm (Firth et al. 1999; Mehran 1995). According to Murphy, (1986), "remuneration is every form of Salary, Bonus, Stock Options, (Restricted) Stock Award, Phantom Stock Plans (as in common stock but has no ownership claims. CEO will be entitled to share price appreciation and dividends as well as the actual stock) and Stock Appreciation Rights (The right to collect a number of shares at a specified price at a certain time).

22 Director remuneration can be consist from executive and non-executive director remunerations. This study will use executives rather non-executives especially in family firms. According to Moores and Craig (2008), family firms prefer to keep top management for family member rather than hiring qualified outsiders. Non-executive hass less power to argue or oppose actions in family firms because family appoints them..

related variables and country-specific institutional characteristics.

Finally, this study focuses only on publicly listed family-controlled firms and does not include privately held family-controlled corporations, in order to avoid the difficulty of obtaining data in privately held corporations. Data on publicly listed firms are publicly available and more importantly trustworthy as their source is mainly audited company annual reports. As shares of listed firms are publicly traded, market-based performance measures can also be employed in the study and therefore the problem of performance measures being constrained only to accounting-based measures can be avoided.

There are many studies around the world comparing family and non-family firms' performance (i.e. Ibrahim and Samad 2011; Miller & Breton-Miller 2006; Villalonga & Amit 2006; Castillo & Wakefield (2006 and Anderson & Reeb 2003). However, there is limited research carried out in Asian countries particularly Malaysia. Additionally, research on the relationship between a firm's performance and executive compensation does not identify consistent and significant relationships between executives' remuneration and firms' performance. Not all firms experience the same levels of agency conflict, and external and internal monitoring devices may be more effective for some than for others. Thus, this study tends to bridge this gap by providing insight into the directors' remuneration and performance in different ownership structures in Malaysia.

The study intends to investigate the impact of corporate governance mechanisms such as directors' remuneration, role duality and agency problem/cost proxy on performances in Malaysian Listed Firms by using recent data and explores a longer period. Specifically, this study will explore the performances and corporate governance mechanisms between family and non-family ownership in Malaysia and will examine the influence of control variables such as firm size, leverage and growth on performance.

The study will examine the impact of improved corporate governance mechanisms such as directors' remuneration in Malaysian public listed firms' especially family-owned firms. It aims to provide a significant contribution as it recognizes the importance of corporate governance in the integrity of financial reporting and in harmonizing the objectives of both the firm's management and its stakeholders. In this research, the study also will provide a window of opportunity for Malaysian regulators to take a deeper look at the MCCG regarding directors' remuneration and other corporate governance characteristics. It is most important to regulators, investors, academics and others who contend that good corporate governance is important for increased market liquidity, and the confidence of the public and investors in Malaysian public listed firms, especially family firms. This leads to a lower cost of capital, therefore more investment opportunities yield a positive NPV leading to more employment or taxes and generally will benefit society. This is an important point of corporate governance, which should not be lost.

The rest of paper is organized as follows. In the next section, we present our theoretical framework and hypothesis regarding the effect of director remuneration, corporate governance on firm performance of family and nonfamily firm. Data describes the Malaysian database and the empirical strategy. This is followed by the presentation of our results. We conclude in the final section.

2. THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

2.1. Agency Theory

Agency theory addresses the issue of how better remuneration can possibly align the interests of powerful and sometimes opportunistic executives and shareholders (Jensen and Murphy, 1990; Baker *et al.*, 1988; Fama, 1980). According to Lazear (2000), in order to motivate the board of directors, incentives are required where providing an incentive may possibly affect performance. When both parties have similar interests, they are able to work together and create better strategies and planning for long-term success. Agency theory suggests diversity based payment performance has been challenged in recent years due to an exorbitant amount for compensation packages paid to corporate executives (Friedrichs, 2009). Inability to refine the cross-country differences means the agency theory has also been criticized (Filatotchev and Allcock, 2010; Bruce *et al.*, 2005).

The organization theory limiting the agency theory by examining executive remuneration as a political process and focuses particularly on powers of the CEO and the Board of Directors, where there are factors which may influence the decision of the executive compensation decisions (Elhagrasey *et al.* 1999; Finkelstein, 1992). Organizational theorists examining executive remuneration as a political process as CEOs are in a unique position to determine their own compensation, based on their power and ability to influence board behavior. Several factors that have been suggested by the literature that are potentially associated with the power of the CEO are CEO ownership, board size, firm size, and ownership of the board (Elhagrasey *et al.*, 1999).

The family ownership firm tends to provide positions for family members rather than hiring more qualified managers (Moores & Craig 2008) even if they are not talented enough to run a business (Faccio *et al.* 2001). Family groups on committees can actively influence the committee's decision making and can use remuneration to benefit them. Non-executives have less power to argue or oppose actions taken by family members because the family appoints them. This fact influences the direction of family group divergences from maximizing profit towards increasing personal wealth. This relationship is not against regulations because the firm belongs to them and has a right to be awarded higher remuneration, even though they are unqualified as long as it is not proven risky to the firm (Yatim, 2012). Thus, the agency problem becomes serious between majority shareholders and minority shareholders (Jiang & Peng 2010; Young *et al.* 2008). Therefore, effective remuneration is very important in influencing the majority shareholder to

switch personal interest towards fulfilling the firm's objectives.

On the other hand, agency theory also suggests a number of mechanisms to reduce agency problems. These mechanisms include board and ownership structures (Yermack, 1996; McConnell and Servaes, 1990). Family firms incorporate purposefully for long-term success and prefer to hand over the business to the next generation. Ownership could align the interest of management to the interest of owners (Jensen and Meckling, 1976). Therefore, the agency theory predicts that the alignment of interest should lead to lower directors' remuneration because excessive remuneration (and perks) leads to the value of the firm being lowered by the market. Remuneration packages (and perks) are considered as excessive if they are not linked to performance.

The other mechanism of corporate governance is the role of the CEO duality, which is also as Chairman of the board of a firm. The role of duality is expected to reduce the agency costs, enhance decision-making, which are much more closely focused on the objectives of the firm, and encourage more rapid adoption of operating results (Stewart, 1991). An individual who acts as the CEO and Chairman has the power to determine strategy, and is responsible for the firm and with minimal interference from the board, and could lead to improved performance of the firm (Davis et. al, 1997). Similarly, Felton & Watson (2002) argue that, splitting the role of the Chairman and CEO reduces the CEO's freedom of action.

Combining the top two roles, on the other hand, could result in a conflict of interest (Conyon and Peck, 1998) that adversely affects the board's monitoring roles, in favor of the CEO. According to (Jensen 1993), for the board to be effective, it is important to separate the Chairman's and CEO positions. Consequently, the various codes on corporate governance (i.e. Cadbury Report, 1992; Hampel Report, 1998; MCCG, 1999) suggest that there should be a clear division of responsibilities at the head of the firm, which will ensure a balance of power and authority for the Chairman and CEO. Further, there is also empirical evidence that concludes that the agency problem is higher if the CEO and the board are the same person (Yermack, 1996; Fama and Jensen, 1983). Thus, the separation of the two roles will ensure checks and balances on management performance. Next, it will be more likely to implement and achieve the objectives of the firm of personal interest (Jensen, 1986; Jensen and Meckling, 1976).

2.2. Stewardship Theory

Jensen and Meekling (1976) in their theoretical study on the relationship between ownership structure and performance have divided shareholders into two groups, internal shareholders with control power and voting rights and external shareholders without control. They also found a higher level of ownership by 'insiders' such as owner-managers in family-controlled firms that will reduce the agency conflict because the interests of the insiders will converge with those of the shareholder. In other words, the controlling family will have the incentive to improve their respective

firms' performance and share prices as they reap the benefits from doing so.

Stewardship theory views that managers behave as stewards and gain higher utility from pro-organisational, collectivistic behaviour than from individualistic and self-serving behaviour, as presumed by agency theory (Jaskiewicz & Klein 2006). Research also claimed that when ownership is high and concentrated, the higher benefits and costs are borne by the same owner (Demsetz & Lehn 1985), and indicate that more and more family wealth is tied into the business and thus why families are more concerned with the firm's survival because the risks are not fully diversified, and they have strong incentives to monitor management closely. The monitoring cost tends to be lower in firms controlled by family than by non-family (Fleming *et al.*, 2005; Fama & Jensen, 1983). The controlling shareholders will serve the interests of minority shareholders as well as their own interests (Schulze et. al, 2001). This will evade the exploitative behaviour of agents towards the principals, decrease the agency costs and increase the firm's performance (Jensen & Meckling 1976).

Family ownership is also motivated not only by short-term financial interest but also longer term non-financial goals such as creating sustainable competitive advantages and capabilities. As controlling shareholders, families exercise their ownership stakes as a means of pursuing the strategic interests of their organisations, such as securing new markets and protecting managerial autonomy so that the owner-managers are able to "make tough decisions" more effectively (Aguilera and Jackson, 2003). Overall, the firm's performance is expected to improve and the improvement is sustainable in the long-term.

In contrast, as the controlling shareholders, they have the 'ability and inclination' to carry out strategies, activities or practices that benefit them but may not benefit, or may even be detrimental to, the efficiency and performance of firms and minority shareholders (Young *et al.*, 2008; Dharwadkar *et al.*, 2000; Claessens *et al.,* 2000).

3. HYPOTHESIS DEVELOPMENT

Based on the justification from the arguments in the literature, six sets of hypotheses (H1 – H6) are developed to represent the six major themes of the study: the influence of board remuneration, ownership structure, board duality, firm's leverage, firm's growth and firm size on the firm's efficiency and performance. There is a lot of literature on the relative merits of different measures of performance. This study follows the extant literature and use both accounting based measures of performance, as well as market based ones. Accordingly, the key performance measures in our study are return on assets (ROA) and return on shareholder equity (ROE), Tobin's Q and Stock Returns.

3.1. Director Remuneration

Most empirical studies have correlated the relationship between the directors' remuneration and the firm's performance. There is a positive relationship between the compensation of directors

and company performance (Merhebi *et al.*, 2006; Kato and Kubo 2006; Jensen and Murphy, 1990). Performance-based compensation plays an important role in the relationship with shareholders, indirectly reducing agency costs. In Malaysia, Yatim (2012) examined a cross-section of 428 family firms listed on the Bursa Malaysia for the financial year ending 2008, and checked that the remuneration of directors has the significance of a strong positive relationship with the firm's performance. According to Yatim, the family firms include power and control for the remuneration awarded to the board in order to provide motivation to achieve objectives. Hassan *et al.* (2003) and Sim (2004) also found positive but weak relationship remuneration for the performance of the firm.

There are also decisions behind which is an inverse relationship between the compensation of the directors and the firm's performance (Bebchuk and Fried, 2003; Core *et al.*, 1999). According to them, excessive director compensation will increase spending that much and indirectly cause the firm's performance to decrease. The studies by Fernandes, (2008); Randoy and Nielsen, (2002); Firth *et al.*, (1995) also did not find an association between compensation and firms' performances. Abdullah (2006) concluded in his study of distressed firms in Malaysia and found an inverse and significant relationship between directors' remuneration and lagged profitability to the firm.

Regardless of many researches concerning agency costs, there are still some reservations about the role of the different incentives played in managers' performance and what the best structure of directors' remunerations is to increase the firm's performance. Based on the discussion above, the previous research does not identify consistent and significant relationships between executives' remuneration and company performance. Therefore, it becomes increasingly interesting to test the relationship between directors' remuneration and company performance. Thus, from the perspective of agency theory, the incentive schemes can notably increase efficiency of mangers and an optimal compensation contract is a cure for the principal - agent conflict. Therefore, this study proposes the following hypothesis:

H$_1$: There is a positive significant relationship between the remuneration of directors and the firm's performance.

3.2. Family Ownership

Family ownership is measured as the proportion of shares held by family directors over the total number of shares issued. Firm will be considered as family firm when family owned at least 20% of shares issued. This measurement has been used by previous researchers (Morck et al. 2000; Schulze et al. 2001; Yeh et al. 2001; Anderson et al. 2003; Ng 2005; Chen et al. 2005; Andres 2008; Achmad et al. 2009; Chu, 2009; Lin & Chang 2010).An empirical study by Anderson and Reeb (2003) based on family firms in the S&P 500, found that family firms perform better than non-family firms, attracting more investment from minority shareholders with better payout dividends. Similarly, Andres (2008) contends that family ownership in Germany "*can be regarded as an efficient ownership structure*" as they

perform better than firms with dispersed and other types of ownership. Ownership concentration is also positively related to company performance in Thailand, a country with a number of similarities to Malaysia in terms of economic development and a corporate landscape that is dominated by the family-controlled firms of Chinese descendants (Wiwattanakantang, 2001).

Maury (2006) examined the individual relationships between ownership rights and excess control rights and firm performance in large, listed Asian and European family firms and found a positive relationship between ownership rights and a firm's performance and a negative relationship between excess control rights and company performance. The results of these studies indicate that family ownership helps to align the interests of the family with other shareholders, but only up to a certain point. Beyond this point, further ownership or excess control rights help to entrench the position of the family, which is associated with deteriorating company performance.

A study in Malaysia, Ibrahim and Samad (2011) found that on average, family ownership experienced a higher value than non-family ownership based on ROE. On the other hand, based on Tobin's Q and ROA, the study finds that a firm's value is lower in family than non- family ownership. While, Haniffa and Hudaib (2006) found that the higher the concentration of ownership, the better the accounting performance of the listed firms but they do not report any significant findings in the relationship between managerial ownership and market-based performance.

On the other hand, Chen *et al.* (2004) did not find any relationship between family ownership and the operating performance of family PLCs in Hong Kong. Similarly, Filatotchev *et al.* (2005) also did not find any association between family control and company performance among family-controlled listed firms in Taiwan. Meanwhile, Sciascia and Mazzola (2008), Westhead and Howorth (2006), and Castillo and Wakefield (2006) examined relationships between family ownership and the firm's performance using samples of small and unlisted family firms from the UK, US and Italy, respectively. They found no significant relationships between family ownership and company performance. This suggests that the significant relationships between ownership variables and a firm's performance may be limited to large, listed family firms.

The above discussion shows that empirical examination based on different countries on the relationship between family ownership and a firm's performance may yield different findings. A likely reason for the different findings is that firms in different countries operate with a distinctive culture and in different legal, enforcement and institutional environments. These country-specific differences may thus have a significant impact on ownership performance relationships (Filatotchev *et al.*, 2005; Joh, 2003). Given inconsistent findings in previous studies, it becomes interesting to test the relationship between family ownership and company performance in Malaysia. Thus, the second hypothesis is stated as follows:

H$_2$: There is a positive significant relationship between family ownership and a firm's performance.

3.3. Role Duality

Different countries have different rule on role duality. For example, in UK (The UK Code of Corporate Governance 2012) and Germany (German Corporate Governance Code 2013) indicate that the roles of chairman and chief executive should be exercised by the same individual. The division of responsibilities between the chairman and chief executive should be clearly established. But is different in US, according to National Association of Corporate Directors (NACD) report that, in average 75% of the CEO of the S&P in the US are also the Chairman of the board (Mid Cap 64%, Small Cap 59% (Chhaochharia, Grinstein, 2007).

Role duality is not common in Malaysian corporations (PwC, 1998), family firms in Malaysia prefer to practice duality leadership as it gives greater power to the same person, who is the owner and the manager of the family firm, to make fast and prompt decisions. With less bureaucracy, a shorter time period is needed and lower costs are involved in managing family firms. Accordingly, Malaysian Institute of Corporate Governance (MICG) revised in 2007 suggest that firms separated the two roles to ensure proper checks and balances on the leadership of the corporation. Firm in which the roles of chairman and CEO are combined have to publicly announce the fact and explain the need for it in their annual report.

Empirical research on the effect of role duality on corporate performance has resulted in numerous inconsistencies. Some studies found role duality does not play an important role in improving a firm's performance (Weir *et al.*, 2002, Dahya *et al.*, 1996 and Peel and O'Donnell, 1995). However, Rhoades *et al.* (2001) in his study found that firms with a separation of the two roles of accounting consistently have higher returns than those who have combined. McKnight and Mira (2003) studied role duality that has had a moderately strong and negative impact on quality values. In other words, where there is a firm with role duality of their CEO underperformed, compared to firms in which the CEO did not occupy both positions. Haniffa and Hudaib (2006) obtained different results on the performance of the firm. There is no relationship between role duality with company value, Tobin's Q, but a negative relationship between role duality with return on assets (ROA). It summarized that it is important if the person holding the position of Chief Executive Officer (CEO) and Chairman is a different person as recommended by the MICG to limit excessive force by individual firms.

In contrast, Ibrahim and Samad, (2011) found that the firm's value with family ownership is weaker but non-family ownership gains more profitability when duality exists on the board. This research is consistent with previous studies by Florackis and Ozkan (2004), McKnight and Mira (2003). Family owners are found to have a preference for CEO duality and such practice is found to have an impact on the firm's performance Tam and Tan (2007).

However, the combined role can be beneficial, as the 'top man' will work for a better performance, especially if there are high financial stakes. Hence, next hypothesis is:

H$_3$: There is a positive significant relationship between the duality of the role and performance of the firm.

3.4. Firm Leverage

Based on Modigliani and Miller (1958), they assume that there is a particular set of anticipated cash flow required by the firms. At the same time, they presume that there is a perfect capital market, which means no arising of transactions or bankruptcy costs and perfect information. In other words, the firm and individuals can finance debts at same interest rate and no tax. Besides, investment is not influenced by financing decisions. There is no impact of leverage on firms' market value. Furthermore, Stulz, (1990) and Jensen (1986) argued that debt financing may play an important role in reducing management's discretionary control over free cash flow as the commitment to make periodic repayments of interest and principal. It will restrain them from using the firm's free cash flow to engage in non-optimal activities such as unnecessary diversification. As said by Grossman and Hart (1982), debt also forces managers to consume fewer perks and become more efficient to avoid bankruptcy, the loss of control as well as loss of reputation. Debt contracting may also result in improved managerial performance and reduced cost of external capital (John and Senbet, 1998). In short, debt could result in creditors monitoring management more closely and may help yield a positive disciplinary effect on performance. However, too much gearing may incur a burden of excessive interest and affect a firm's performance. The stock beta of firms with greater debt may also be higher, reflecting higher financial risk. Debt can increase conflicts of interest over risk and return between creditors and equity holders; this may affect the market value of the stock and consequently the market-based performance of the firm such as the Q measure.

Hurdle (1974) found gearing to affect profitability positively. Margaritis and Psillaki (2008) investigates the relationship between efficiency, leverage and ownership structure using a sample of French firms from low- and high-growth industries. This study finds the effect of efficiency on leverage is positive but significant only at low to mid-leverage levels. Nour (2012) concludes in his study that there is positive impact of capital structures on firms' performances, accounting and market measurement.

By way of contrast, early studies such as Stulz (1988) and Myers (1977) suggest that there is a negative association between gearing and a firm's value. Weir *et al.* (2002), Short and Keasey (1999) and Dowen (1995), found a significant negative relationship between gearing and corporate performance. In the case of Malaysia, Ibrahim and Samad (2011) found that family ownership uses less debt, however, family firms do not appear to use debt differently than non-family. Meanwhile, Zeitun and Tian (2007) in their study, investigated the effect of capital structure on corporate performance

by using 167 Jordanian firms from 1989 to 2003, and concluded that a firm's capital structure had a significant negative impact on both firm's performance measurements. Since debt can increase conflicts of interest over risk and return between creditors and equity holders, so our next hypothesis:

H_4: There is a significant negative relationship between a firm's leverage and a firm's performance.

3.5. Firm Growth

Some studies used pecking order theory to examine the relationship of company growth and performance. The pecking order theory mentions that firms prefer using internal finance[23] for raising capital. And, this theory assumes that there is no existence of optimal capital structure in the real world (Krishnan and Moyer, 2007). External finance[24] is a last resort used by firms to expand their business. By that, this theory points out that firms use the internal finance method to minimize the asymmetric information cost. Furthermore, Barclay & Holderness (1989) claimed that ownership concentration reduces the probability of bidding by other agents, thereby depressing the value of the firm. These factors suggest that family control imposes a capital constraint that inhibits the firm's growth. Additionally, Serrasqueiro (2009), did a study on Portuguese firms and found a positive relationship between profitability and growth, and claimed small firms usually rely on internal finance for the expansion of their business and avoid external financing. This creates a positive relationship between growth and profitability.

Another measurement for company growth was sales or revenue. The revenue figure is important because a business must bring in money to turn a profit. Jang and Park (2011) examined the relationship between a firm's profitability and growth and argued that not only will higher profits boost growth, but profits are deterred by an increase in growth. Other researchers also agree that the profit has a positive effect on growth (Goddard *et al.*, 2004, Cowling, 2004 and Mendelson, 2000). However, the study done by Markman and Gartner (2002) found no relationship between growth and profitability.

Agency theory argues that sales growth does not always lead to increased return to stockholders. Empirical studies have claimed that growth sometimes benefits managers rather than stockholders. (Marris and Wood, 1971; Baumol, 1967; Berle and Means, 1932). Managers pursue growth because growth benefits them personally, where growth guarantees employment and salary increases for managers due to the greater responsibilities of managing a larger firm (Murphy, 1985). However, Thomas *et al.* (2000) claimed that depending on the industry structure, sales growth may also provide additional market power, which firms can use to increase performance. All these lead to the next hypothesis:

H_5: There is a significant positive relationship between a firm's growth and a firm's performance.

3.6. Firm Size

The important factor influencing directors' remuneration as well as company performance is company size. Prior studies have shown that firm size generally reflects organizational complexity. Larger firms are likely to have larger number of directors on their boards and may pay higher directors' remuneration (Herdan and Szczepańska, 2011). Furthermore, a study by Rosen (1982) indicates that a small difference in the quality of the CEO can make a big difference in larger firms, thus, larger firms try to attract the best directors for their firms. This results in higher remuneration packages in larger companies as to acquire the best CEO for the firm and to keep him or her interested in the firm. Jensen and Murphy (1990) also show that CEOs in larger firms receive greater levels of pay.

On average, larger firms are better performers because they are able to diversify their risk (Ghosh, 1998). Furthermore, they have more analysts following their performance, and as such will be under more pressure to perform well. Larger firms are also associated with larger market power and thus better performance. Yatim (2012), Haniffa and Hudaib (2006) and Joh (2003) in their studies found a positive significant value for the variable in regressions that shows a positive relationship between a firm's size and performance, indicating that large firms may benefit from economies of scale and scope.

However, some researchers believe that a larger firm may not be as efficient as a smaller firm due to decreasing control by senior management over strategic and operating activities as a firm's size increases. Others, such as Nenova (2003), believed that larger firms may be subject to greater scrutiny and it is therefore more costly for the controlling families to extract private benefits. On the other hand, smaller firms are more creative, innovative and change more readily to enhance corporate value (Hannan and Freeman, 1989).

Overall, the literature recognizes the effect of firm size on performance but that it is ambiguous. Therefore, the next hypothesis is:

H_6: There is a significant positive relationship between a firm's size and a firm's performance.

4. DATA

This study used the quantitative research method, which involved secondary data. The data were collected from the annual report in Bursa Malaysia's database; the sole stock exchange in Malaysia, as in May 2014. In order to guarantee the validity of sample data and to minimize the impact of abnormal factors on the results, the exclusion criteria of sample are designed as follows:

1. The banking and finance and insurance sectors are excluded from the study because firms in this sector are governed by a different set of rules and regulations and thus make them incomparable to firms in other sectors.

2. The companies which fail to comply with any obligations under Practice Note such as Practice Note 4 (PN4) and Practice Note 17 (PN17), because the financial situation of these two kinds of listed companies is abnormal, and most of them have made losses for more than

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23 The internal finance is such as retained earnings and excess liquid assets.
24 The external finance is such as issues the new share like ordinary share and prefer share, bank loan, and so on.

two years, may even have gone bankrupt. This company cannot provide continuous data and adding these companies into the sample will brings serious influences on the reliability of results.

3. The firms had failed to maintain their report (annual accounts) without any substantial gaps for the period of 2005 to 2013.

4. The companies with listing time that is less than three years should be removed from the sample to reduce the impact of companies' listing time on their performance.

These exclusions (one and two) were also consistent with previous studies in this area (Amran & Che-Ahmad 2009; Ibrahim *et al.* 2008; Claessens *et al.*, 2006; Haniffa & Hudaib (2006) and Anderson and Reeb, 2003). As a result, this study used the sample of 140 Malaysian firms listed on Bursa Malaysia, which consists of 70 family firms and 70 non-family firms over a period of nine years, 2005 to 2013 with 1260 panel data or observations. The 2005-2013 periods has been chosen because disclosure detailing the activities of the remuneration committee, executive pay structure, level of remuneration, and whether the firm is a family firm, as required under the Malaysia Code of Corporate Governance (MCCG), became effective for annual reports after June 2001.

4.1. Dependent Variables

The study used accounting measures such as Return on Assets (ROA), which is the ratio of net income divided by the total assets and Return on Equity (ROE), the ratio of the net income divided by the shareholder's equity as a performance measurement. In catering to shareholder wealth, we use two market measurements, Tobin's Q and Stock Returns. Tobin's Q is computed as the ratio of the market capitalization plus total debt divided by total assets of the firm. These performance measures have been widely used as proxies for company performance (Ibrahim and Samad, 2011), Sraer and Thesmar, 2006; Haniffa and Hudaib, 2006; Anderson and Reeb, 2003). Meanwhile stock returns are derived from the difference between current and previous stock price plus current dividend per share and divided by current stock price. Antunovich *et al.* (2000); O'Hara *et al.* (2000), Madura *et al.* (1996) and Kerr and Bettis (1987), have used stock returns as an indicator of company performance.

4.2. Independent Variables

Remuneration was measured using proxies representing cash remuneration consisting of salaries, bonuses, benefits of kin, and fees bands in the range of RM50000 (less or more). In order to reduce heteroscedasticity (Tabachnick, 2007), the natural log of total directors' remuneration is used as the dependent variable.

In Malaysia, information on lists of family ownership is unavailable and not recorded. Information pertaining to the family ties or relationship is determined by using the name of board members. The family ties, which are considered to be family members, include anyone who has a blood relationship and also family-in-laws. In addition, this study uses the fraction of

equity stake held by all family members as being at least 20 percent or more. The fraction of equity ownership and control is hand-collected from the company annual reports under the section 'Analysis of Shareholdings' as per the substantial shareholder disclosure requirement of Section 69D(1), Companies Act 1965. The Act requires the mandatory disclosure of substantial shareholders who are defined as holding more than a 5% equity stake of any firm, irrespective of their direct or indirect interest in the shares. The information available in the annual reports includes disclosure of the names of all substantial shareholders and the percentage of their direct and indirect shareholding which allows for categorisation of family and non-family ownership. This data collection is considered to be appropriate since it has also been adopted by previous studies (Ibrahim and Samad, 2011; Sraer and Thesmar, 2006; Anderson and Reeb, 2003; La Porta *et al.*, 1999).

The data related to the board of directors and duality is obtained from the 'Corporate Information' and 'Profiles of Directors' sections of annual reports. The information available in the annual reports includes the names of all executives and non-executives directors, which allow the categorisation of duality.

4.3. Control variables

Firm size is measured by the book value of total assets, which is consistent with how firm size has been measured in prior studies (Jaafar and James 2013; Amran & Che-Ahmad 2009; Ibrahim *et al.* 2008 and Anderson & Reeb 2003). Log transformation was applied to firm size variables to correct the positive skewness in the data distribution of the variable. A firm's leverage is measured by total debts over total assets (Jaafar and James 2013; Anderson & Reeb 2003). While the firm's growth is measured by total revenue over the total assets, which is consistent with how the firm's growth has been measured in prior studies by Nazrul *et al.* (2008) and Ang and Ding (2005).

4.4. Estimation Models

Testing of the hypothesis presented in this study will be conducted using multiple regression analysis that gathers all cross-sectional data and time series data to analyze the impact of board mechanisms on corporate performance of Malaysian listed companies. Our regression models are similar to those used by Abdullah (2006) and Hassan *et al.* (2003). A multiple regression analysis is carried out to test the hypothesis. Regression is the main tool of analysis used in this study as it is one of the widely used methods in relational research. Multiple regression analysis is chosen as the main tool of analysis in this study as it is "the appropriate method of analysis when the research problem involves a single metric variable presumed to be related to two or more independent variables" (Hair *et al.*, 2010). In addition, it is also an appropriate method as the data are cross-sectional; hence we do not have to address autocorrelation issues. It is one of the most common methods of analysis used in previous research exploring the relationship between corporate governance mechanisms,

organisational structures and company performance and is used, for instance, in Claessens *et al.* (2006); Anderson and Reeb (2003) and Khanna and Palepu (2000). The multiple regression model is as follows:

Performance = f {Family ownership, Director's remuneration, Corporate governance mechanisms, Control Variables} (1)

To begin the analysis, both dependent and independent data are tested for stationary normality by observing the data skewness. Sample data that is normally distributed should be an efficient estimator, unbiased and consistent. In detecting multicollinearity in a regression model, this study used one of two ways to identify whether the problem of multicollinearity exists suggested by economist Gujarati (2004). This study used the pair-wise or zero-order correlation co-efficient between regressors and multicollinearity, which exists when it in excess of 0.8. The problem of multicollinearity can be reduced by dropping one of the collinear variables.

4.5. Operation Model

4.5.1. Simple Parametric Test

This study employs firstly a simple parametric test of mean difference for comparing between 70 family firms and non-family in Malaysia. Family is identified as sample firms, meanwhile control firms for non-family.

$$\text{t-test} = [\mu_{family} - \mu_{nonfamily}] / [(\sigma_{family} / n_{family}) + (\sigma_{nonfamily} / n_{nonfamily})] \quad (2)$$

where:

μ_{family} = mean value of the characteristics of family;

$\mu_{nonfamily}$ = mean value of the characteristics of control firms or non-family;

σ_{family} = the standard deviation of family;

$\sigma_{nonfamily}$ = the standard deviation of non-family;

n_{family} = number of family;

$n_{nonfamily}$ = number of non-family.

4.6. Regression Analysis

Panel based multivariate regression will be used to analyze the impact of family control mechanism on a firm's performance by using two measurements, accounting and market. For accounting, this study uses ROA and ROE as proxies, meanwhile Tobin's Q and Stock Returns as market based proxies.

$$\text{Value} = \beta_0 + \beta_1 FAM + \beta_2 DR + \beta_3 Duality + \beta_4 AC + \beta_5 Size + \beta_6 Lev + \beta_7 Growth + \varepsilon_{it} \quad (3)$$

where:

Value = Tobin's Q (Market value of ordinary shares plus book value of preferred shares and debt divided by book value of total assets), Stock Returns (current stock price minus previous price plus current dividend per share divided by current price). Return on Assets (ROA), which is the ratio of net income divided by the total assets and Return on Equity (ROE), the ratio of the net income divided by

the shareholder's equity as a performance measurement;

β_0 = intercept;

FAM = A dummy variable of "1" if a firm's shares are owned by a family by more than 20% and "0" otherwise;

DR = Ln (Total Director Remuneration);

Duality = A dummy variable of "1" if CEO and director are the same person and "0" if otherwise;

AC = Agency cost proxy: Total Expenses/Sales;

Size = Ln (Total Assets);

Lev = Total Debt/Total Assets;

Growth = Total Revenue/Total Assets;

ε_{it} = Error term.

5. RESEARCH FINDINGS

5.1. Descriptive Analysis

Table 1 provides descriptive statistics for the variables used in the study. It shows the range, minimum, maximum, sum, mean, standard deviation, variance and skewness of the total 140 firms that will be observed in this section for the sample interval of 9 years period from 2005 to 2013. Hence, the total observations for this section are 1,260 firms' years. Table 1 shows the maximum value of ROA (ROE) is 0.7236 (1.3629) whereas the lowest value is -0.5487 (-1.3436). The distribution of the statistics is centred at the value of 0.4466 (0.6607) with the standard deviation of 0.0776 (0.1903). The skewness for ROA variable is 0.106 meanwhile the skewness for ROE is -1.925.

Tobin's Q (TobinQ) variable has the range value of 7.7160. The minimum and maximum value for TobinQ variable is 0.0488 and 7.7648 respectively. Meanwhile, the mean score for TobinQ variable is 0.8396. Tobin's Q is affected by the general stock market movement. Overall, the stock market performance was encouraging and exhibited an upward trend from 2005 to 2007. However, the performance deteriorated in 2008 as a result of the US credit crisis that occurred during the year and the stock market recovered in 2009. Tobin's Q in this study, on average, would have been higher if the trough period of the economy cycle (i.e. 2008) is avoided. The mean value of less than 1.00 for Tobin's Q in this study, is explainable by the deteriorating market conditions in 2008.

The subsequent, descriptive statistics is the Stock Returns with the maximum value is 5.2576, whereas the lowest value is -7.1648. The distribution of the statistics is centred at the value of -0.0159 with the standard deviation of 0.6689. Meanwhile the director's remuneration (DR) has a range variable value of 40.2113. The statistics show that the average DR is about 3.284 while the standard deviation and variance for DR variable is 3.9013 and 15.220 respectively. Besides that, DR variable has skewness value of 3.824.

The next descriptive statistic is the family ownership (Fam) variable. The Fam variable has the range, minimum, and maximum value of 1, 0, and 1 respectively. The mean score for Fam variable is 0.5000. Meanwhile, the standard deviation and variance for Fam variable is 0.5002 and 0.250 respectively. In terms of leadership structure, 77% of the firms in the sample practice had dual leadership with the standard deviation and variance for Duality

variable is 0.4201 and 0.176 respectively. Additionally, the skewness value for Duality variable is -1.294.

Meanwhile, in terms of leverage, the range value of Lev is 0.7894. The usage of debt was low with an average debt ratio of 20%. Meanwhile, the skewness for Lev variable is 0.664. Moreover, from Table 1, the range value for the firm growth (Growth) variable is 1.3075. The statistics show that the average Growth is about 0.1114 (with maximum value = 0.7925 and minimum value = -0.5150). The standard deviation and variance for Growth variable is 0.1031 and 0.011 respectively. Besides that, Growth variable has skewness value of 1.307. Finally, the range value for firm size (Size) variable is 6.9374. The mean score for Size variable is 6.4993. The table also clearly illustrates that Size variable has a standard deviation of 1.2409 and variance of 1.540. By the way, the skewness value for Size variable is 0.364.

Based on the understanding in the earlier discussion, the acceptable range for the skewness value is dropped in between -2.0 to +2.0 (Stuart and Ord, 1994). Variable with skewness value falling within this acceptable range is considered to be normally distributed. Otherwise, if the skewness value of the variable falls outside the acceptable range, then the variable is said to be not normally distributed. From a descriptive analysis, we can obviously capture that most variables are normally distributed.

Table 1. Descriptive Statistics Analysis

Variables	N	Minimum	Maximum	Mean	Std. Deviation	Variance	Skewness
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic
ROA	1260	-0.5487	0.7236	0.0447	0.0776	0.006	0.1060
ROE	1260	-1.3436	1.3629	0.0661	0.1903	0.036	-1.9253
TobinQ	1260	0.0488	7.7648	0.8396	0.7602	0.578	4.3652
Fam	1260	0.0000	1.0000	0.5000	0.5002	0.25	0.0000
Duality	1260	0.0000	1.0000	0.7714	0.4201	0.176	-1.2943
DR	1260	0.0000	40.2113	3.2838	3.9013	15.22	3.8236
Lev	1260	0.0000	0.7894	0.2046	0.1642	0.027	0.6636
Growth	1260	-0.5150	0.7925	0.1114	0.1031	0.011	1.3069
Size T	1260	3.6854	10.6228	6.4993	1.2409	1.54	0.3644
Return	1260	-7.1649	5.2577	-0.0160	0.6689	0.448	-3.3201
Valid N (listwise)	1260						

5.2. Correlation Matrix

The results of Pearson correlation matrix for Malaysian public listed firms are reported in Table 2. The correlation matrix is used to explore the strength of relationship between two variables. The findings in Table 2 suggest that there is strong positive relationship between ROA and Growth and Size. For Growth with r-value of 0.253 and Size of 0.112 are positive and significant at 1% level indicate that firms with large assets and good handling revenue will lead better ROA. Additionally, there is a positive relationship between ROA and DR (r=0.242) at 1% level. Meanwhile, there is a negative relationship between ROA and Lev which r-value of -0.271 explains that firms with lower debt will lead to better ROA.

ROE has positive correlation with DR (r= 0.239) at 0.01 level of significance, which explains that firms with higher direct remuneration will improve company performance, ROE. Also there is positive correlation between ROE with Growth and Size. With r=0.161 for Growth and Size of r=0.151 with significance at 1% level describes that firms with greater revenue and at the same time increase their total assets will increase the firm's ROE. Meanwhile, there is a weak negative correlation between ROE and family owned firms. This describes that firms with family member's involvement will reduce the firm's performance, ROE. Finally, there is no significant relationship with Duality.

Furthermore, TobinQ has a strong positive relationship with DR, Growth and Size. For DR, the r-value of 0.183 with 1% level of significance explains that firms which pay high director's remuneration will increase market performance. Additionally, r-value of 0.244 for Growth and Size of 0.140 are significantly positively correlated with TobinQ at 1% level of significance. These results show that, firms with high growth, which with high revenue and at same time, large size will lead to better performance.

Stock returns have positive correlation with Growth (0.073) at 0.05 level of significance, which explains that, firms with greater revenue over their total assets will increase the firm's Stock returns. Nevertheless, there is a negative relationship between Stock returns and Lev which r-value of (-0.094) explains that firms with lower debt will lead to increasing the shareholders' wealth. Meanwhile base results reported, there are no significant relationships with Fam, Duality, DR and Size.

The findings also suggest that there are negative significant relationships between Tobin Q and ROE with Fam. Results show that r-value of TobinQ and Fam is -0.81 is significant at 1% level and for ROE, r-value of -0.064 is significant at 5% level. This implies that family firms under perform more than non-family firms. Meanwhile, ROA shows there is no significant relationship with family ownership. For two components of Corporate Governance, which are DR and Duality, both results show positive and significance with Fam. These

indicate that firms with family involvement have role duality and at same time will lead to higher pay and directors' remuneration. The r-value for both components of 0.135 and 0.306 are significant at 1% level. Meanwhile for Size, the r-value of 0.164, which is positive and significant at 1% level, explains that family firms have large assets compared to non-family firms.

For directors' remuneration, besides a positive and significant relationship with both firm's performance measurements, accounting and market, the results show a moderate positive relationship with Fam (r= 0.1.35) and duality (r=0.093) at 0.01 level of significance. This relationship can be explained that firms with family member will increase their remuneration, meanwhile role duality

in firms will lead to higher directors' remuneration.

For role duality (Duality), besides a positive relationship Fam (r=0.306) and DR (r=0.93), the results in Table 2 explore that this corporate Size (r=0.231) have a strong relationship (with positive) at 1% level of significance. This describes that firms who have role duality are mostly from large firms.

Finally, Table 2 identifies that firms with high leverage or debt have a negative relationship with firm's growth. This result explains that with higher debt, firms will not have large revenue and at same time, it will not lead to company growth. But debt doesn't effect on firm size due to result of r=0.237 which shows a positive relationship at 1% level of significance. This may be due to firms that have more fixed assets increasing their business activities.

Table 2. Pearson Correlation Matrix

	ROA	ROE	TobinQ	Fam	Duality	DR	Lev	Growth	SizeT	Return
ROA	1	**.827 0.000	**.537 .000	-.035 .210	-.021 .451	**.242 .000	**-.271 .000	**.253 .000	**.112 .000	**.170 .000
ROE		1	**.419 .000	*-.064 .023	-.030 .282	**.239 .000	**-.118 .000	**.161 .000	**.151 .000	**.133 .000
TobinQ			1	**-.081 .004	-.008 .766	**.183 .000	-.031 .268	**.244 .000	**.140 .000	**.135 .000
Fam				1	**.306 .000	**.135 .000	-.048 .091	.052 .063	**.164 .000	.013 .642
Duality					1	**.093 .001	.049 .085	-.019 .508	**.231 .000	.005 .847
DR						1	.045 .109	.053 .058	**.420 .000	.027 .330
Lev							1	**-.324 .000	**.237 .000	**-.094 .001
Growth								1	.030 .291	**.073 .009
SizeT									1	-.033 .242
Return										1

*Note: ** Correlation is significant at the 0.01 level (2-tailed); * Correlation is significant at the 0.05 level (2-tailed)*

5.3. T-Test for two means

The t-test for dependent means is used to compare the means of two sets of scores that are directly related to each other. The findings in Table 3 were summarized that family ownership will reduce a firm's performance compared to non-family. The results found that non-family have advantages in terms of performance compared to the family firms. For example, the average ROE for non-family is 7.83% higher than the family firm, with only 5.39% significant difference at 5% level. Similarly, Tobin's Q for non-family firms with an average rate at 0.9020, is higher than the average of the family firm and the significance level of 1%. Meanwhile, the average ROA do not have significance for differences between family and non-family firms and has a high margin of 4.19% for the family firm, and 4.75% for non-family. Similarly, with ROA, Stock Returns also have insignificant differences between these two types of ownership.

It is most likely the above findings are due compensation, for the family firm is too high even though the director and the CEO are the same person, namely his own family. This can be explained from the findings in Table 3 where the family firm pays an average of 3.8127 compared to 2.7573 for the non-family firm. It is supported by the results of its role duality, where there is a strong difference in the level of 1% between family and non-family firm. With power as CEO and director, family members can decide for their own interests and benefits. These findings were supported from a previous study (Ibrahim et al. 2011)

The findings also show that the average value of Lev (the proportion of total debt to total assets) was 19.67% for the family, is less than non-family, 21.27%. The results show that family ownership uses less debt, as is most likely not funded by the family firm financing them through borrowing but using their own cash. The study also finds strong significant differences of firm Size while the weak links, at 10% for the Growth of the firm.

Table 3. T-Test for Two Means

Variable	70 Family	70 nonFamily	t-stat	p-value
ROA	0.0419	0.0475	-1.2588	0.2083
ROE	0.0539	0.0783	-2.2780	0.0229**
Tobin's Q	0.7785	0.9020	-2.8873	0.0040***
Return	-0.0072	-0.0248	0.4657	0.6415
DR	3.8127	2.7573	4.8365	0.0000***
Duality	0.8998	0.6439	11.3493	0.0000***
Lev	0.1967	0.2127	-1.7306	0.0838*
Growth	0.1170	0.1061	1.8663	0.0622*
Size	6.7032	6.2956	5.8985	0.0000***

*Note: *** p-value <0.01 (Strongly significant) ** p-value <0.05 (Significant); * p-value <0.1 (Partially significant)*

6. REGRESSION ANALYSIS

6.1. Directors' Remuneration

From Table 4 and Table 5, directors' remuneration has a strong positive relationship to ROA (p=0.044) and ROE (p=0.0102). Additionally, in table 4.6, directors' remuneration also has a strong positive relationship to TOBIN'S Q (p=0.0292) with t-stat of 5.0706 significant at 1% level. As suggested by Hypothesis 1, the study finds that firms which pay high directors' remuneration will improve both their accounting performances and market performance (Tobin's Q) compared to firms with lower remuneration. Besides due to their expertise and knowledge, higher salaries and bonuses will motivate directors to work more efficiently and effectively, which will lead to the firm performing better. Yatim (2012) also found similar results with the study which indicates directors' remuneration has a close relationship to profitability. However, this finding is contradicted with the studies by Abdullah (2006) and Oviantari, (2011), that directors' remuneration is not associated with a firm's profitability, as measured by ROA and ROE. Furthermore, the remuneration component of CEO pay in this study is not responsive to anticipated future market valuations in stock returns.

6.2. Family Owned

In contrast to the prediction of Hypothesis 2, the study finds that dummy variable of family owned (t = - 3.5048) has a negative significant relationship with ROA at 1% level and the coefficient of family owned was -0.148. Furthermore, ROE also has a reverse correlation with family ownership with p = -0.0428. This indicates that family members involvement in the firm will not improve the firm's performance. Our finding is supported by Bennedsen et al., 2007; Maury, 2006 and Anderson and Reeb, 2003. Unfortunately, the findings contradict the study of Atmaja and Tanewski (2009) which shows that family firms are more profitable than non-family firms. Table 6 shows that dummy variable of family owned (p = - 0.194) also has a negative significant relationship with TOBIN'S Q at 1% level. The finding of t-stat of -4.502 strongly explains that family members involvement in firm will not improve a firm's value. This study's finding supports research done by Ibrahim et al. (2011). They explained that family interference in firms could increase doubt for investor's, especially potential investors to invest in a family firm. They might think that family members will concentrate

more on their personal/family benefits rather than maximising the firm's value. Again, there is no significance between Fam and Stock Return.

6.3. Duality

With regard to CEO duality, when it was defined as chairman-cum-CEO, the findings of the role duality are not responsive either to past performance or anticipated future market valuations in stock returns, hence Hypothesis 3 is not supported.

6.4. Leverage

In line with Hypothesis 4, the result shows that leverage (Lev) has a strong negative relationship with ROA (p= -0.1208 with t-stat of -9.0766) and ROE with (p=-0.1414 with t-stat of -4.1604). Results on Stock Return (p= -0.291with t-stat of -2.315) also indicate a negative correlation with Lev. These indicate that firms with lower debt will be better in terms of performance, compared to firms with high debt. High debt possibly leads to a firm's bankruptcy. This study's results are consistent with the findings of McConnell and Servaes (1990) and Weir et al. (2002). However, the result shows that leverage has no significant relationship to TOBIN'S Q in this model.

6.5. Firm Growth

The result of p=0.12108 with t-stat of 5.8777 for ROA in Table 4 and for ROE in Table 5 p = 0.2082 with t-stat of 3.9664 has a strong positive significance that tells that growth opportunities provide a substantial and positive impact on a firm's performance across the sub-periods. The firm Growth in table 4.6 also shows a strong positive relationship with Tobin's Q with p= 1.804 and significance at 1% level implying that firms with better revenues in their business will have improved firm performance by engaging in growth activities. Consistent with the prediction of Hypothesis 5, firms improving their revenue and showing a good performance, normally are able to meet due obligations and avoid potential downfalls. At the same time, it will lead to investors' confidence to invest in these firms. However, there is no correlation in the findings between firm's growth in returns to shareholders' investments.

6.6. Firm Size

Finally, in line with Hypothesis 6, the firm Size in table 4 shows a significant relationship to ROA

(p=0.006) with t-stat of 3.1840 and for ROE, a result of p=0.0177 with t-stat of 3.6889. Firm size is strongly significant at p<0.01level in this model. The coefficient of firm Size shows that every time growth increases by 1 unit, ROA will increase by 0.006 units. Firm Size in table 6 also shows a positive significant relationship to TOBIN'S Q (p=0.0532). This explains that large firms with huge assets will perform better than smaller firms. Large firms can increase their business activities and as such improve their production, which will lead to better profits and the firm's value and also lead to increasing their performance. This will be contribute to increasing confidence in investors whether, existing or potential investors. This result is supported from previous studies done by Nazrul et al. (2008) and Ang and Ding et al. (2005). Meanwhile, studies done by Ramasamy et al. (2005) are inconsistent with the findings. They found that firm size is negatively related to performance, while privately owned plantation companies are more profitably managed.

Table 4. Regression for relationship between ROA and company specific characteristics for 140 Malaysian listed companies for period of 2005 until 2013

Variables	ROA		
	Coefficients	t-statistic	Significant
(constant)	0.0129	1.1453	0.2523
Fam	-0.148	-3.5048	0.0005***
Duality	-0.0035	-0.6948	0.4873
DR	0.0044	7.7361	0.0000***
Lev	-0.1208	-9.0766	0.0000***
Growth	0.12108	5.8777	0.0000***
Size	0.006	3.184	0.0015***
R Square	0.1775		
Adjusted R Square	0.1736		
F-statistic	45.0697		
Prob (F-statistic)	0.0000***		

*Note: *** p-value <0.01 (Strongly significant); ** p-value <0.05 (Significant); * p-value <0.1 (Partially significant)*

Table 5. Regression for relationship between ROE and company specific characteristics for 140 Malaysian listed companies for period of 2005 until 2013

Variables	ROE		
	Coefficients	t-statistic	Significant
(constant)	-0.0431	-1.4964	0.1348
Fam	-0.0428	-3.9652	0.0001***
Duality	-0.0153	-1.1828	0.2371
DR	0.0102	7.0522	0.0000***
Lev	-0.1414	-4.1604	0.0000***
Growth	0.2082	3.9664	0.0001***
Size	0.0177	3.6889	0.0002***
R Square	0.108		
Adjusted R Square	0.1037		
F-statistic	25.2835		
Prob (F-statistic)	0.0000***		

*Note: *** p-value <0.01 (Strongly significant); ** p-value <0.05 (Significant); * p-value <0.1 (Partially significant)*

Table 6. Regression for relationship between TOBIN'S Q and company specific characteristics for 140 Malaysian listed companies for period of 2005 until 2013

Variables	TOBIN'S Q		
	Coefficients	t-statistic	Significant
(constant)	0.2793	2.4283	0.0153
Fam	-0.194	-4.5002	0.0000***
Duality	0.001	0.0191	0.9847
DR	0.0292	5.0706	0.0000***
Lev	0.0672	0.4953	0.6205
Growth	1.804	8.6124	0.0000***
Size	0.0532	2.7862	0.0054***
R Square	0.109		
Adjusted R Square	0.1047		
F-statistic	25.5484		
Prob (F-statistic)	0.0000***		

*Note: *** p-value <0.01 (Strongly significant); ** p-value <0.05 (Significant); * p-value <0.1 (Partially significant)*

Table 7. Regression for relationship between Stock Returns and company specific characteristics for 140 Malaysian listed companies for period of 2005 until 2013

Variables	Stock Returns		
	Coefficients	t-statistic	Significant
(constant)	0.1020	0.9610	0.3370
Fam	0.0050	0.1200	0.9050
Duality	0.0220	0.4590	0.6460
DR	0.0070	1.3780	0.1690
Lev	-0.2910	-2.3150	0.021*
Growth	0.3180	1.6400	0.1010
Size	-0.0210	-1.1980	0.2310
R Square	0.1300		
Adjusted R Square	0.0800		
F-statistic	2.7310		
Prob (F-statistic)	0.012**		

*Note: *** p-value <0.01 (Strongly significant); ** p-value <0.05 (Significant); * p-value <0.1 (Partially significant)*

7. DISCUSSION

This study discusses whether there is any impact of family ownership, director remuneration, role duality and three control variables on 140 Malaysian listed firms for period 2005-2013, after controlling corporate governance mechanisms (i.e director's remuneration and role duality) and firm specific characteristics (firm leverage, growth and size).

For first analysis on 140 Malaysian listed firms, results are as per Table 8 indicating that there is significance between director's remuneration on accounting performance (ROA, ROE) and Tobin's Q for market performance. With positive correlation, it explains that high pay-performance for directors will improve company performances. Shareholders are willing to pay high rates based on their expertise and knowledge for excellent performance with an assurance from the directors that their funds will be managed effectively and efficiently. With high salaries and bonuses it will motivate managers to work more efficiently and effectively to make sure firms will perform better. However, the remuneration component of CEO pay in this study is

not responsive to anticipated future market valuations in Stock return hence Hypothesis 1 is partially supported.

Next, results show that family ownership leads to lower performance than non-family owned firms on accounting measurement (ROA and ROE) and market measurement (Tobin's Q) after controlling company specific characteristics. These findings can be explained that when in the family, members' involvement may be carried out to their personal/family interest or benefit rather than to maximize firm's profits and also firm's market value (Bennedsen et al., 2007; Perez Gonzalez, 2006). Additionally, concentrated ownership may lead to ineffective monitoring and it is also not ideal for an emerging market like Malaysia, which is attempting to attract more investors. Thus, a higher valuation may be given by the market to firms with more diffused, and not concentrated, ownership. This finding rejects our hypothesis, which anticipated with family involvement, it is expected has a competitive advantage because they must be concerned with performance of the firm since it belongs to them or the family and is expected to bring a positive impact on company performance. The findings also reveal that role duality has no significant effect on accounting and market performance; hence, Hypothesis 3 is not supported. Meanwhile, firms with high debt or leverage will reduce performance and potential, leading to the firm's bankruptcy. Therefore, with a negative correlation between leverage and firm performance (ROA, ROE and Stock returns), this finding is partially supported by hypothesis 4. However, when measured using Tobin's Q, leverage has no significant effect on performance.

Table 8. Summary of Regression Analysis for 140 Malaysian listed companies for period of 2005 until 2013

140 MSIAN LISTED COMPANIES								
Hypothesis	**EXPECTED**	**ROA**		**ROE**		**TOBIN'S Q**		**STOCK RETURS**
		+/-	Sig.(V)	+/-	Sig.	+/-	Sig.	+/-	Sig.
DR	+	+	V	+	V	+	V	+	X
Fam	+	-	V	-	V	-	V	+	X
Duality	+	-	X	-	X	+	X	+	X
Lev	-	-	V	-	V	+	X	-	V
Growth	+	+	V	+	V	+	V	+	X
Size	+	+	V	+	V	+	V	-	X

7.1. Implications and Policies

This study is particularly important due to heightened attention given by numerous stakeholders, such as regulators, shareholders, and employees on excessive director remuneration in recent years. Given the attention on remuneration practices and their relations to corporate governance, this study makes a timely contribution to the debate. It is hoped that the findings from Chapters 4 and their implications can be a significant contribution to the ongoing body of work related to corporate governance and family firms in Malaysia and to policy makers when revising their policies. This study documents empirical evidence on the positive association between corporate governance mechanisms and boardroom pay and monitoring of Malaysian firms. It also provides

Malaysian evidence on the effects of corporate governance reforms in influencing boardroom pay, which suggests the effectiveness of compensation linking to performance and solving the agency problem as suggested by Jensen and Meckling (1976). The analysis also allows international comparison and evaluation of the robustness of other existing research.

The findings in this study indicate compensation for the family firm is too high even though the director and the CEO is the same person, namely his own family. With power as CEO and director, family members can decide for their own interest and benefits. Thus policy-makers should have a clear direction in addressing the ownership-performance issue in family-controlled firms including the limitations of board compensation. The study also indicates that giving more control to already powerful controlling families (majority ownership) may further enhance their ability to expropriate and cause a firm's performance to deteriorate. Therefore, using increasing ownership to solve the agency problem as suggested in the Jensen and Meckling (1976) may not work. Therefore, it is proposed that regulators formulate policies that are able to encourage controlling families to keep their ownership level below majority that helps to curb the potential power-abusing of controlling families but nonetheless preserves the uniqueness/traits of familiness and the positive characteristics of the family form of governance that give advantages to family controlled firms.

Furthermore, the policy-makers should formulate strategies to attract more foreign institutional investors to invest in publicly listed firms in Malaysia. The strategies that policy-makers can consider such as improving the tax treatment to foreign institutional investors in respect of income from stocks and capital gains. The other strategy that can be considered is to increase the free float level. As far as family-controlled firms are concerned, due to the nature of concentrated ownership structure, the free float level of stocks in Malaysia is rather low under the current setting. A low level of free float tends to create liquidity problems that may discourage foreign investors from investing in the market. Policies should be directed to encourage those controlling families with majority ownership to dispose of some of their shareholdings to free up more shares for foreign investors. Controlling families may realize that reducing their expropriation activities and improving their corporate governance is worthwhile, as this will attract more foreign institutional investment into their stocks.

Corporate governance concerns in Malaysia surround issues inherent in concentrated ownership structures. All textbooks and references are written by authors from the US and UK and do not reflect corporate reality in Malaysia, though they still serve well in equipping students with rigorous finance theories and applications from a Western perspective. Thus the knowledge acquired from this study will help to close the gap in corporate governance and finance teaching at university level in Malaysia.

This study also makes a contribution to consulting firms providing a corporate governance

consultancy service to corporate clients in Malaysia. The information provided in this study highlights how governance issues are useful and can be incorporated into consultancy work. The solutions to corporate governance issues in Malaysia are potentially much more challenging compared to the US and UK, due to the dominance of controlling families who may be reluctant to co-operate. However, not all the families are closed-minded on governance-related issues. It is not impossible to convince some controlling families in finding solutions to governance issues their firms face when they realize that they will be disadvantaged in the longer term by resisting the global movement of corporate governance.

Finally, this study also may help investment professionals such as analysts and fund managers to understand how different company structures determine corporate governance and the effects of those firm-level governance choices on firm performance. Thus the knowledge from this study may help enhance the process of investment decision-makings, particularly the corporate governance risk assessment or analysis for investments such as corporate governance screening process, before a particular stock or firm is considered for investment.

The results drawn from this study should be interpreted with the limitations in mind. Some limitations represent potential opportunities for further investigation in future studies. One of them is the sampling method for the comparison between family and non-family. Though there are an equal balanced number of firms between family and non-family, the matching mechanism should be implemented. The matching may be based on size and industry for this study. Although the effect on performance is probably minimal, an inaccurate match-pair could jeopardise the mechanism of the sample selection itself and may lead to inaccurate results.

Furthermore, this study used ROA, ROE, Tobin's Q and Stock Returns to measure the firms' performance. As far as we are concerned there are many methods which can be used to measure firms' performance such as value added approach such as Free Cash Flow, Return on Capital Employed (ROCE) ratios and Economic Value Added. Based on these facts, we recommend that another method of measuring performance may be used in future research to determine the consistency and validity of such methods.

Though the study has attempted to include relevant variables, including the control variables in the regression analysis (as guided by the literature), the third limitation is the possibility of other variables that should be reconsidered to add or replace existing variables especially on corporate governance mechanisms (i.e. board size in company, non-executive directors and age of firm). Other variables can also be considered for agency cost proxies such as total expenses to total assets, instead of total expenses over total sales.

Finally, the study examined the performance of families in Malaysia after controlling some corporate governance mechanisms and firm specific characteristics for 9 periods of study (2005 to 2013). Also this study is doing the comparison between family and non-family firms in Malaysia.

Since there is a crisis period of 2008 and 2009, it may lead to a downturn in many firms especially family firms. By that, it could provide inaccurate and inconsistent results without separating this type of period.

This study can be expanded in some of the following areas:

1. A continuing study, which concentrates on the performance of family firms in Malaysia after taking into consideration corporate governance mechanisms to get better and significant results and to obtain new findings and knowledge, that can be added on to available literature especially on corporate governance theories like the agency theory.

2. Besides comparing between family and non-family firms in Malaysia, it can be suggested that the research is extended to other ASEAN countries, such as Indonesia and Thailand. These two countries have known majority firms which are listed in the stock exchange as family firms. Why ASEAN countries, is because policies and regulations among these countries are mostly similar. Beside ASEAN, China is also one of top family business countries. Then, Malaysian family firms can learn from them how to manage the firm.

3. Future research may investigate the finding differentials under different economic conditions i.e. the pre-economic crisis (2005-2007), during (2008 and 2009), and post crisis (2010-2013). Thus by conducting further study for a different time period; comparisons with the findings in this study can be drawn in order to verify whether they have changed or remain unaffected.

4. Last but not least on methodology, due to long periods of study and involved panel and pooled data, it can be suggested to use other econometric regression with common and period co-efficient with three models. These models are Fixed Effects, Random Effects and Ordinary Least Square (OLS). Further, these models can reduce or overcome econometric issues such multicollinearity and heteroskedascity.

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THE EFFECT OF FINANCIAL INSTITUTION OWNERSHIP ON FIRM VALUE

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Abstract

This research aims to examine the effect of financial institution ownership (bank institution and non-bank institution) on firm value and also whether there is a difference of the effect between financial institution ownership in form of bank institution and non-bank institution on firm value. Total observations are 270 listed firms on Indonesia Stock Exchange in 2012-2014, resulting to 809 observations. The result of this research shows that financial institution ownership in the form of bank institution has no influence on firm value while financial institution ownership in the form of non-bank institution has a positive influence on firm value. This research shows that the influence of financial institution ownership in form of non-bank institution is greater than influence of financial institution ownership in form of bank institution on firm value. Regulator of financial institution could create new rules to encourage investment by non-bank institutions in public companies for effective monitoring and increase firm value. This research reveals the effect on financial institution ownership in form of bank and non-bank institution rather than institutional ownership on firm value in Indonesia that has not been discussed by other researches.

1. INTRODUCTION

The company was established with the aim to generate profit which could enhance firm value over the long term period. One of the factors that affect the firm value is ownership structure. A company that is owned by shareholders who are not from management but rather by shareholders from outside the company either comes from individuals and institutions can lead to differences in interests between shareholders from outside the company with the company's management. The difference of interests between shareholders (principal) and management (agent) can arise because management wanted to have the incentives to meet personal's goal and not because of the presence of shareholders (Vintila and Gherghina, 2014) and that management's actions can reduce the firm value because the management will improve his welfare whereas management is an extension of the principal to be able to improve the welfare of the principal through an increase in the firm value. Vintila and Gherghina (2014) also mention that one of the ways to improve controlling of management processes and performance with the company's corporate governance mechanisms, one of them is the ownership of financial institutions.

Organisation for Economic Co-Operation and Development (OECD) (2004) explains that as the shareholder of the company, institutional shareholders or institutional ownership, especially institutional collective investment and pension funds have a role to ensure that good corporate governance practices has been run by a company because institutional shareholders have a fiduciary responsibility to the capital invested in the company to the beneficial owner (other shareholders). Al-Najjar (2014) also states that the external factors that significantly influence corporate governance is the institutional shareholders. Reinhanzadeh et al. (2014) also noted that institutional shareholder is a professional shareholder and has a strong analytical capability in analyzing accounting data and also has the ability to use the information.

Ownership by institutional investors is an interesting issue to examine due to they are more sophisticated (Chan and Lakonishok, 1995), more informed traders (Utama and Cready, 1997) and also more important price-setters in capital markets (Walther, 1997). This characteristics differentiate them from non-institutional investors, and hence we expect that institutional investor will have larger impact on firm value compared to other investors. Among those institutional investors, institutional characteristics such as concentration of shareholdings is expected to induce higher monitoring incentives among some institutions relative to others (Ramalingegowda and Yu, 2012). Therefore it is important as well to examine the different type of institutional investors.

This research was conducted with reference to previous research that conducted by Vintila and Gherghina (2014) with a research period of 2007-2011 for public companies listed on the Bucharest Stock Exchange (BSE). That research concluded that ownership of financial institutions have a positive effect on firm value. Financial institutions are expected to provide benefits for the company and can increase the firm value with their active

controlling by financial institutions (Vintila and Gherghina, 2014). Some other studies conducted by McConnell and Servaes (1990), Ullah et al. (2012), and Lins (2003) on the effect of the ownership of financial institutions or financial intermediaries on firm value is a positive relationship, i.e. financial institutions can perform its role as an active controller to resolve their interest differences between management and shareholders. While the study that conducted by Jennings (2002) got the result that pension funds and endowment is an effective controller, while banks, mutual funds, insurance companies and investment advisors is not effective controller so institutional ownership has a negative impact on the firm value.

This study distinguishes between ownership by financial institutions in the form of bank institutions and non-bank institution because of the difference between the regulatory body of financial institution. Previously, bank is supervised by Bank Indonesia prior to 2014 and financial institutions other than banks are supervised by the Badan Pengawas Pasar Modal dan Laporan Keuangan (Bapepam-LK) before 2013. Now, the monitoring is centrally done by the Otoritas Jada Keuangan (OJK) per 2014 together with supervision by Bank Indonesia for banking industry, hopefully it can make a difference to the actions that taken by financial institutions in form of bank and non-bank in managing their investments in order to enhance firm value. The reason that underlying this research period from 2012 to 2014 is to give an influence of the financial institution ownership to increase the firm value that have implemented corporate governance mechanisms and after their unified supervision by the OJK since 2011.

Based on the background that is described above, the research's problems were (1) is the financial institution ownership in the form of bank institution have an influence on the firm value?; (2) is the financial institution ownership in the form of non-bank institution have an influence on the firm value?; and (3) is there a difference between the effects of financial institution ownership in the form of bank institution and non-bank financial institution on the firm value?

The objective of this research is to provide empirical evidence about the influence of financial institution ownership in the form of bank institution on firm value, the effect of financial institution ownership in the form of non-bank institution on firm value, and the difference effect between financial institution ownership in the form of bank institution and financial institution ownership in the form of non-bank institution.

2. THEORITICAL REVIEW

2.1. Agency Theory

Jensen and Meckling (1976) introduced the term of agency relationship as a contract between one or more persons (principal) to another person (agent) who will perform services as part of the principal's interest and the principal also give the agent an authority to make a decision. If the two parties, principals and agents, have expectations to maximize their own interests then this will be the reason agents do not work for the best interests of the principal (Ullah et al., 2012). Agents are supposed to act in the principals' interest but sometimes they want to maximize their own utility or interest so that the principal must pay the controlling cost to border the agent's activities for acting in accordance with the principal's interest. It is called agency conflicts (Jensen and Meckling, 1976). Agency conflicts can arise in a number of conditions, one of them is when the manager (agent) does not have the overall ownership of the company, the company's ownership from outside parties as a result of the sale of shares by the manager, the manager and the outside owner of the company may have different interests and outside owners are going to control the activities that carried by managers (Jensen and Meckling, 1976). Nuraina (2012) also said the same thing about agency problems associated with the ownership of which there are two agency problems. The first agency problem arises if the ownership spread to individuals so that shareholders that cannot supervise and control the management individually so the management can take action in accordance with their own interests. The second agency problem is the majority shareholder who has control over the management and the company, and even become part of the management itself so that the majority shareholders may take action to maximize their interests but harm the minority interests.

Jensen and Meckling (1976) said that the principal will pay incentives or agency costs to any action that taken for the interests of principals and agents to maximize the welfare of the principal. The existence of this agency costs resulting in a reduction of shareholder's wealth and have side effects on company's performance (Karathanassis and Drakos, 2004). Principal has to pay controlling cost included in the agency cost to resolve the agency problem that occurred with the agent, but if the agency cost is minimal, its means optimal relationship between the principal and the agent will be achieved. Agency theory also predicts that when agency costs are lower, firm value will be higher (Manurung, Suhadak, and Nuzula, 2014). In addition to monitoring costs, bonding costs incurred by the agency to ensure agents do not commit acts which may be harm to the principal's interest and residual loss is a reduction of the benefit that received by the principal for the agent's deviation, all of these are the agency costs that result of the agency problem (Jensen and Meckling, 1976).

2.2. Information Asymmetry

Asymetric information occurs when buyers and sellers do not have access to the same information, the seller will have more information than the buyer (Kidwell et al., 2013). New information in the company will be reflected in stock market prices and it's available to all parties. This allows investors to take decisions according to the information available in public and one of the information is through the stock market price. Kidwell et al. (2013) also mentions that the asymmetry of information also occur within the company, the manager (agent) has more information about the company's operations than the owners or shareholders (principals) so that financial institutions are expected to give a major contributor to the production of information.

Gillan and Starks (2003) states that one of the causes of agency conflict because participants have imperfect information about actions, knowledge and preferences of the other participants. There are three problems that occur when principals have imperfect information, the first problem is the principal cannot control and observe all activities performed by the agent (Palazzo and Rethel, 2007). The second problem is the lack of information regarding the contractual environment known by the agent but are not known by the principal. The last problem is principals has lack of knowledge of the things that exist in the company for example the incentive structures that exist within the company, the agent did not fully disclose to the principal.

2.3. Firm Value

The firm value is as appreciation or award given by investors against a company which is reflected in the stock prices of companies in the capital market (Silveira and Barros, 2007). Appreciation means that stock price is above the book value per share, while depreciation occurs when stock price below book value per share (Nuraina, 2012). High stock market prices makes the firm value is also getting higher and ultimately increase confidence in the company's performance not only in the present but also the future prospects of the company (Hermuningsih, 2013).

2.4. Corporate Governance

Corporate governance is an important element in improving the efficiency and economic growth also improve investors' confidence. OECD (2004) defines corporate governance as a set of relationships between the company's management, the board of the company, shareholders and stakeholders. Corporate governance is also intended to provide the right incentives to the management and board that exist within the company to perform the actions and decision-making and have the same objectives with shareholders' interests. Corporate governance is also supposed to provide effective oversight of the company.

Mallin (2012) said that institutional ownership in this research are financial institutions as one of the tools of governance through the voting rights. It can be concluded that the existence of financial institutions have a role in creating good corporate governance in a company.

One of the principles in the OECD (2004) is the second principle that provides guidance on the rights owned by shareholders as well as the function of ownership in a company, one of which is ownership by institutional investors. Institutional investor's acting in a fiduciary capacity are expected to carry out effective oversight on the purchased investment company because institutional investors has responsibility for investments made to beneficial owners of funds used. This is why institutional investors will perform its functions and exercise its rights as a shareholder to exercise effective oversight of the company's management.

Research that conducted by Siagian, Siregar, and Rahadian (2013) explains that companies whose implement corporate governance so the manager will be required to disclose important information so that the asymmetric information between shareholders and managers can be minimized. In addition, implementing corporate governance can also reduce potential conflicts of interest between managers and shareholders, thereby increasing the firm value. Research that conducted by Mizuno (2014) also explained that institutional ownership in this study is in the form of bank and non-bank actively strengthen corporate governance for increasing firm value by providing voting rights at the general meeting of shareholders and some among the institutional investors are conducting a dialogue with companies invested (investee).

2.5. Financial Institution

The agency problem which occurs within a company can be significant, resulting in internal control became ineffective. When this condition occurs, it required a control from external parties (Schneider, 2000). Gillan and Straks (2003) mentions that in some countries, institutional investors become a dominant player in the financial markets because of the importance of external control mechanism that is increasing and affecting governance around the world that led to institutional investors as equity owners (shareholders).

Corporate governance is expected to create a healthy financial system in order to improve the company's performance and the performance of the economy as well as sustainable economic growth. Weak corporate governance practices are identified as one of the causes of the global financial crisis (Roadmap of Corporate Governance, 2014). Corporate governance is a system of laws, regulations and the factors that control the operations of a company (Gillan and Starks, 1998). One of the mechanisms of corporate governance is the role of financial institutions in a company (Gillan and Starks, 2003). Financial institutions who became the owner of a firm is the ownership type and governance that is unique as it has been mentioned by Gillan and Starks (2003) and Schneider (2000). Institutional ownership by financial institutions is expected to improve the regulatory process and company's performance (Vintila and Gherghina, 2014). Karathanassis and Drakos (2004) specifically mentions that the potential effects of share ownership interests not only related to the number of shares owned, but also related to the possibility of influencing the decision making process. Karathanassis and Drakos (2004) also mentioned that the ownership that can influence the decision-making process if the ownership are within company or come from internal such as directors or other top management while the ownership from outside the company cannot influence directly the decisions taken by the management. OECD (2004) also mentioned that the institutional ownership in this study is the financial institution, will use its right as a shareholder and effectively carry out the functions stake in the company which is invested by the financial institution.

Financial institutions meant by Vintila and Gherghina (2014) is a large organization, such as banks, insurance companies, retirement funds, hedge funds, investment advisors, and mutual funds that have large cash reserves that need to be invested. Meanwhile, according to Kidwell et al.

(2013), types of financial institutions are deposit-type institutions, such as banks; contractual savings institutions, such as insurance companies and pension funds; investment funds, such as mutual funds; and other financial institutions, such as finance companies. In addition, Jennings (2002) divides into several types of financial institutions, such as banks, insurance companies, mutual funds, investment advisors, pension funds and endowment. However, in Indonesia, based on the website of the Otoritas Jasa Keuangan (www.ojk.go.id) and Undang-Undang No. 21 Year 2011 about OJK, an institution or a financial services institution divided into two, banks and non-banks, such as insurance companies, pension funds, financial institutions and other financial institutions.

2.6. Hypothesis Development

Financial institutions in Indonesia is composed of two types of bank and non-bank based on Undang-Undang No. 21 Year 2011 about OJK. Financial institution in form of non-bank such as insurance companies, pension funds, financial institutions, and other financial institutions. Based on research conducted by Jennings (2002), ownership by financial institutions such as banks are ineffective controlling so it reduce the firm value. The conclusion reached by Jennings (2002) supported by the opinion expressed by Brickley, Lease, and Smith (1988) that the bank is a pressure-sensitive institutional investors who have or potentially have a business relationship to the company. This can lead to supervision carried out by banks are not effectively and efficiently as expected. The hypothesis expressed by Pound (1998) in McConnell and Servaes (1990) states that institutional ownership is a professional institutions including banks that have the ability to oversee management at a lower cost because of the symmetric information. However, when the institutional ownership including bank make collaboration with management because there is a mutually beneficial relationship, oversight that should be done by the bank no longer practiced. This is why the management will keep taking action and making decisions that benefit their personal interests rather than the welfare of the principal resulting decline in the firm value.

However in Indonesia, a bank institution closely monitored by Bank Indonesia and OJK as has been mentioned before that the monitoring for a bank institution are routine and if there are potential difficulties and its going concern is threatened so it will do intensive supervision and specific to the bank (www.ojk.go.id). This makes the bank institutions would take business decisions with more careful, especially for investment decisions. When a bank institutions invests in a company so the bank institutions will conduct strict supervision to the company in order to enhance firm value. Based on explanation above, the research hypotheses are constructed are as follows:

Ha1: Financial institution ownership in form of bank has positive effect on firm value.

Earlier it was mentioned that under the agency theory, institutional ownership is expected to reduce the conflict between shareholders and management to provide effective oversight and reduce agency costs so it can improve the performance of the company and increase shareholder wealth through increased firm value (Gillan and Starks, 2003). Research conducted by Jennings (2002) came to the conclusion that ownership by financial institutions in the form of non-bank institutions is an effective monitoring on the company and to enhance firm value. Research conducted by Brickley, Lease, and Smith (1988) explained that the non-bank financial institutions is pressure resistant institutions that are less susceptible to pressure from management and are less affected by potential conflicts of interest than any other institution that has a business relationship with the company.

In addition, non-bank institutions will monitor the decisions taken by the management actively and shareholders of non-bank institutions will also be more likely to use their right to vote on a proposal submitted by the management to increase the firm value but will reject a proposal that could potentially reduce the firm value. This makes pressure resistant institution will monitor effectively for the benefit of shareholders. Based on the explanation above, the research hypotheses are constructed are as follows:
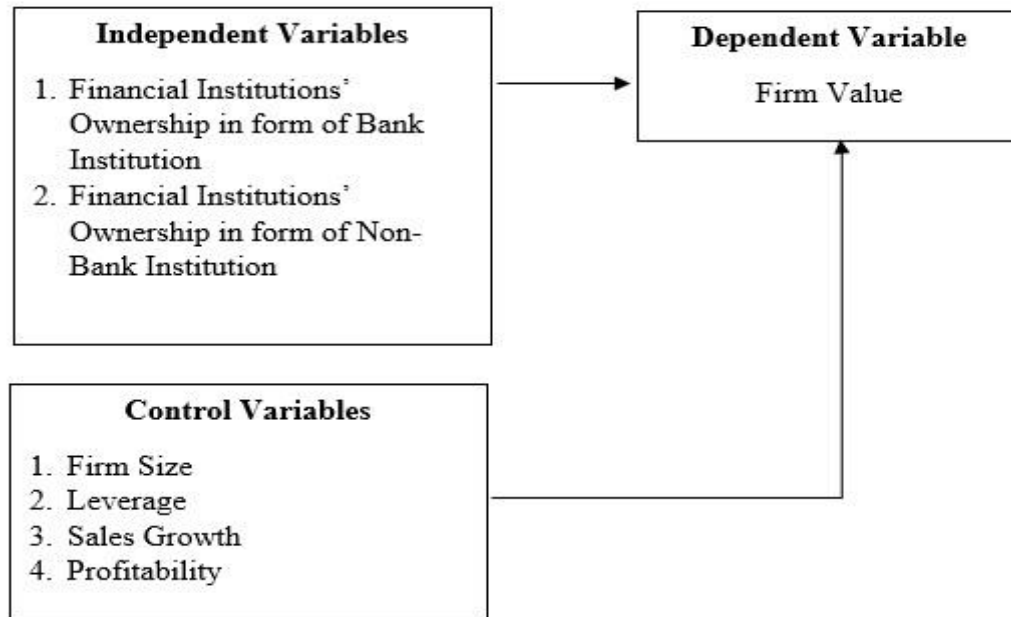
Ha2: Financial institution ownership in form of non-bank has positive effect on firm value.

Based on agency theory presented by Jensen and Meckling (1976) and previous studies conducted by Vintila and Gherghina (2014), McConnell and Servaes (1990), Lins (2003), Ullah et al. (2012), Gillan and Starks (2003), Nuraina (2012), Navisi and Naiker (2006), Reihanzadeh et al. (2014), and Thanatawee (2014) that financial institution ownership have a positive influence on the firm value, this is background of construction alternative hypothesis 1 and 2 above. But if you look at the Undang-Undang No. 21 Year 2011 about OJK and the OJK's website regarding bank monitoring system in Indonesia, it can be concluded that the monitoring that conducted by bank institutions more stringent than the monitoring that conducted by non-bank institutions. This is because bank institution is monitored by Bank Indonesia and OJK to ensure that the bank will not take incorrect strategic decisions that can harm the business continuity and consumers so that banks will be more careful in making investment decisions and that suspected bank will conduct more effective oversight of the company whose shares are purchased by the bank and increase the firm value so that the bank does not experience the strategic risk that could make the bank threatened to be suspend or will be stop the operation if the conditions of the banks did not improve. Based on the explanation above, the research hypothesis is constructed are:

Ha3: Financial institution ownership in form of bank have greater positive influence than financial institution ownership in form of non-bank on firm value.

The framework of this research can be described as follows:

Figure 1. Research Framework

3. RESEARCH METHOD

Financial institution ownership is divided into two types, bank institutions and non-bank institutions. The analysis of this research uses multiple regression analysis of panel data. The research model to test hypotheses 1, 2, and 3, that are the influence of financial institution ownership in form of bank institutions and non-bank institutions on firm value and to examine differences in the effect of financial institution ownership in form of bank institutions and non-bank institutions on firm value:

$$PBV\_it = \beta\_0 + \beta\_1\ Bank\_it + \beta\_2\ NonBank\_it + \beta\_3\ SIZE\_it + \beta\_4\ LEV\_it + \beta\_5\ GROWTH\_it + \beta\_6 \quad (1)$$
$$PROFIT\_it + \varepsilon\_it$$

where:
PBV = Firm Value (price to book value ratio)
Bank = Percentage of financial institution ownership in form of Bank Institution
NonBank = Percentage of financial institution ownership in form of Non-Bank Institution
SIZE = Firm Size (logaritm natural of total assets)
LEV = Leverage (debts to total assets ratio)
GROWTH = Sales Growth (percentage of sales growth)
PROFIT = Profitability (return on equity ratio)

Firm value in this research is using a proxy that used by Nuraina (2012), Hermuningsih (2013), and Manurung, Suhadak, and Nuzula (2014), that's price to book value.

$$Price\ to\ Book\ Value = \frac{Market\ Price\ per\ Share}{Book\ Value\ per\ Share} \quad (2)$$

Based on research conducted by Vintila and Gherghina (2014), financial institution ownership both bank institutions and non-bank institutions is measured by the percentage of shares owned by financial institutions in the form of bank institutions and non-bank institutions to the overall company's outstanding shares.

This research has four control variables, they are firm size, leverage, sales growth and profitability. Based on research conducted by Hansen and Juniarti (2014), Chen and Chen (2011) and Nuraina (2012), firm size has a positive effect on firm value. Firm size is measured by the natural logarithm of the total assets owned by the company.

Leverage has a negative effect on the firm value according to research conducted by Chen and Chen (2011) and Manurung, Suhadak, and Nuzula (2012). Leverage is measured by comparing the total debt and total assets owned by the company.

Research conducted by Brush, Bromiley, and Hendrickx (2000) and Hansen and Junniarti (2014) that sales growth had a positive effect on firm value. The sales growth is measured by the number of sales for the year reduced by the amount of the previous year's sales and then divided by the number of previous year's sales.

Another factor that affects the firm value is profitability. Manurung, Suhadak, Nuzula (2014) and Chen and Chen (2011) got the results that profitability positively effect the firm value. This study uses the measurement of return on equity by comparing the net income by total equity held by the company.

4. RESULTS AND DISCUSSION

The number of samples in accordance with the criteria of sampling is 270 companies with as many as 809 observations. Table 1 shows the sample selection procedures are carried out.

Table 1. Sample Selection Procedure

Sample Criteria	Number of samples
Non-Finance and Non-Investment Companies that listed in Indonesia Stock Exchange in 2012-2014	1.038
Companies that do not publish financial report in Rupiah	(207)
Companies that do not have accounting period end on December 31	(12)
Companies that have no sales in a year	(9)
Total Data	810
Financial report is not listed on 2014	(1)
Total Sample	809

Descriptive statistics results shown in Table 2 below. It shows that the observation is owned by a financial institution such as a bank institution only at 10.07% or a total of 74 observations with an average ownership of 0.28% while the observations are owned by financial institutions in the form of non-bank institutions amounted to 48.58% or as much as 393 observations with the average ownership of 5.02%. This illustrates that monitoring by financial institutions in form of non-bank institutions are more effective than bank institutions because of greater ownership and the number of observations that are owned by non-bank institutions rather than bank institutions so that ownership by financial institutions in the form of non-bank institutions can increase the firm value rather than ownership by financial institutions in the form of bank institutions.

The results of descriptive statistics also showed that the average company has a stock market value per share amounted to 2.66 times the book value per share. This means that investors have a positive response to the company performance so that the stock market value is higher than the book value. The sample company is large company with a fairly low level of leverage. Company sampled almost the whole experience positive growth with profitability levels low enough so can decrease the firm value.

Table 2. Descriptive Statistics

Variables	Mean	Standard Deviation	Minimum Value	Maximum Value
PBV	2.663827	4.395877	-26.62774	32.56393
BANK	0.002752	0.017014	0.000000	0.132029
NON_BANK	0.050194	0.080931	0.000000	0.313980
SIZE (ln)	28.17585	1.736192	23.02692	33.35220
SIZE (Jutaan Rp)	6,462,559	17,322,447	4,011.59	233,138,000
LEV	0.252138	0.239303	0.000000	1.398753
GROWTH	0.159737	0.373045	-0.959300	1.895606
PROFIT	0.078590	0.339822	-2.495328	2.641464

4.1. Hypothesis Testing Results

Ownership by financial institutions such as banks, as measured by the percentage of ownership by financial institutions in the form of a bank have a positive effect on firm value (Ha1). The regression results are shown in Table 3 indicate that Ha1 rejected, so it can be concluded that there is no influence between ownership by financial institutions such as banks to the firm value. The results of this research are supported by research conducted by Mokhtari and Makerani (2013) who get the result that institutional ownership has no effect on firm value.

Table 3. Multiple Regression Results

Variable	Expected Sign	Coefficient	t-Statistic	Prob.
Constant		10.59424	1.618823	0.1061
BANK	+	5.047990	0.185563	0.4265
NON_BANK	+	8.048723	1.886472	0.0299*
SIZE	+	-0.304915	-1.303811	0.1929
LEV	-	1.218883	0.923951	0.3559
GROWTH	+	0.037336	0.110851	0.9118
PROFIT	+	-0.895385	-2.216915	0.0271*
R				0.867535
Adjusted R-Squared				0.624275
Prob(F-statistic)				0.000000

*Note: 809, with using winsorizing for outlier (3 times standard deviation from mean); PBV = price to book value ratio; BANK = percentage of financial institution ownership in form of Bank Institution; NON_BANK = percentage of financial institution ownership in form of Non-Bank Institution; SIZE = logarithm natural of total assets; LEV = debt to total assets ratio; GROWTH = percentage of sales; PROFIT = Return on Equity ratio; *significant value 5%*

The result of this research shows that institutional ownership in the form of bank does not has significant effect on firm value. This may be due to ownership by financial institutions such as banks do not have a significant ownership in company as shown in the descriptive statistics analysis. The average ownership by banks as financial institutions is only 0.28% in the company. This led financial institutions such as banks cannot conduct effective monitoring because it owned not significantly affect to the activities and decisions that made by managers to increase firm value.

Jennings (2002) reveals that financial institutions such as banks is not an effective supervisor in a company. This is because bank which is a pressure sensitive institution, owning shares of

a company that have or the potential to have a business relationship and sometimes supporting the actions taken by management because of the pressure obtained from the management. In addition, the company is a key customer for the bank when the bank monitor the management, the management will not like it and pressing the bank so that the bank cannot conduct monitoring and cannot reduce conflicts of interest between management and the principal to be able to increase the firm value.

Ownership by non-bank financial institutions that is measured by the percentage of ownership by non-bank financial institutions is expected to have positive influence on the firm value (Ha2). Based on result test, Ha2 can not be rejected. The results of this research are supported by research conducted by Vintila and Gherghina (2014), McConnell and Servaes (1990), Lins (2003), Ullah et al. (2012), Gillan and Starks (2003) and Nuraina (2012) which states that institutional ownership has a positive effect on firm value.

This study provides evidence that institutional ownership in the form of non-bank institutions is an effective supervisor on the activities and decisions made by the management in order to enhance firm value. Percentage of ownership by financial institutions in the form of non-bank institutions increased, supervision is also more effective to reduce conflicts of interest between management and principals and it can make the firm value increases. Jennings (2002) also revealed that ownership by financial institutions other than banks is pressure insensitive institution which will not be affected by the pressure provided by management. Non-bank financial institutions, for example, is an investment company which is the beneficial owner of investment institution with the company. The investment company will conduct effective monitoring of the company because of the investment company has a responsibility to the beneficial owner on its investments. Effective monitoring can increase the firm value. Ownership by financial institutions in the form of non-bank average of 5.02% in a company, that ownership is greater than the ownership by financial institutions such as banks that's only 0.28% so it is likely non-bank institution have a greater influence on a company to be able to monitor the actions of management in order to align the interests management and shareholders and ensure actions taken by management are not harm to the company.

We conducted Wald test to examine whether there are differences in the effect of ownership by financial institutions in the form of bank institutions to non-bank institutions on firm value. Based on the coefficients in Table 3 the coefficient of ownership variables owned by financial institutions in the form of bank institution for 5.05 while coefficients owned by financial institutions in the form of non-bank institutions at 8.05, and the Wald Test shows that these 2 coefficients are statistically different. This suggests that the effect of ownership by financial institutions in the form of non-bank institutions is greater than the effect of ownership by financial institutions in the form of bank institutions so that the third hypothesis (Ha3) was rejected. This is because ownership by financial institutions in the form of bank institutions is smaller than the

ownership by non-bank institutions so that banks are not focus on monitoring since ownership has not significant in the company and voting rights held by banks were not able to influence decisions made by management company. Meanwhile, non-bank financial institutions perform better supervision because of its voting rights can affect the decision to be taken by the management through the General Meeting of Shareholders so that it will increase the firm value.

Firm size has no effect on firm value. This result is not supported by Hansen and Junniarti (2014) and Nuraina (2012) but this result was supported by Chen and Chen (2011) which states that the company whether large or small does not give effect to the firm value if it has the same financial performance. This means investors will be viewed on the company's performance, not as large or small companies. Leverage has no influence on the firm value. The results of this research are not supported by research conducted by Hansen and Junniarti (2014), Vintila and Gherghina (2014), and Manurung, Suhadak, and Nuzula (2014). These results are based on a sample study with an average level of leverage that is owned by the company amounted to only 25.21%, so it can be said that the risk of bankruptcy which is owned by the company is not too big so it does not impact the firm value.

Sales growth has no effect on firm value. The results of this research was supported by the results of research Hansen and Junniarti (2014) which states that an increase or decrease the sales growth will not affect the firm value because the manager in a company will try to increase sales growth to get certain incentives such as bonuses or promotions, but not to enhance firm value. Profitability has negative effect on firm value. These results are supported by research conducted by Manurung, Suhadak, and Nuzula (2014) and Chen and Chen (2011). Profitability became one of the investors' assessment in considering the firm value, but investors do not just believe in the profitability achieved by the company because it could be improved profitability to obtain funds from outside the company or used to make a profitable investment managers but harm the interests of the principal.

5. CONCLUSION

Based on test results, we find that ownership by financial institutions in the form of a bank institution has no effect on firm value. This is because the condition of financial institutions in the form of bank institutions that invest in public company in Indonesia is still very small percentage of ownership with an average of only 0.28% and make the monitoring by the financial institution does not affect the firm value. Low ownership percentage also limit the control that can be carried out by financial institutions such as banks on the company and voting rights that are not significant to be able to increase the firm value. The results of this study are supported by Mokhtari and Makerani (2013) who find that institutional ownership has no effect on firm value. Research conducted by Jennings (2002) reveals that financial institutions such as banks is not an effective supervision in a company. This is because the bank which is a

pressure sensitive institution, owning shares of a company with the potential to have a business relationship or a business relationship and sometimes supporting the actions taken by management because of the pressure obtained from the management.

Ownership by financial institutions in the form of non-bank institutions have a positive effect on firm value. This means greater ownership by financial institutions in the form of non-bank institutions will further enhance firm value. This proves that the ownership by financial institutions in the form of non-bank institutions are more effective monitoring than ownership by financial institutions in the form of a bank institution on the observations in this study, that's effective supervision on the activities and decisions made by the management in order to act in accordance with the interest of the principal and reduce agency costs incurred by the principal in order to enhance firm value. This study was supported by research conducted by Vintila and Gherghina (2014), McConnell and Servaes (1990), Lins (2003), Ullah et al. (2012), Gillan and Starks (2003) and Nuraina (2012) which states that institutional ownership has a positive effect on firm value. This is supported by Jennings (2002), which shows that ownership by financial institutions other than banks is pressure insensitive institution which will not be affected by the pressure provided by management. Non-bank financial institutions, for example, an investment company which is the beneficial owner of investment institution with the company. The investment company will conduct effective oversight of the company for the investment company has a responsibility to the beneficial owner on its investments.

Financial institution ownership in the form of non-bank institutions effects greater than the ownership by financial institutions in the form of bank institutions on firm value. This is because the sample used in this study that describes the conditions in Indonesia more owned by financial institutions in the form of non-bank than bank institutions so that monitoring by financial institutions in the form of non-bank more effective to reduce potential conflicts of interest between management and shareholders so as to further enhance the firm value.

There are several limitations of our study. First, we do not consider whether there are any different effect of foreign institutional investors and domestic institutional investors on firm value. Foreign institutional may have advantages over domestic investors in the form of more credibility and a stronger reputation than domestic investors (Huang and Shiu, 2009). We do not examine those investors separately because other studies suggest that foreign institutional investor commit to herding because they are unfamiliar with the target country (Chen et al., 2008) and also domestic investors may be have more knowledge than foreign investors about the local environment or domestic firms. However, this issue may be explored further in the future studies.

We also do not examine the representation in the board of directors or board of commissioners of institutional investors or financial institutions that have a low percentage of ownership in the company.

Financial institutions that have representatives on the board may have a stronger incentive to monitor management and enhance shareholders value.

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CORPORATE GOVERNANCE IN GERMANY

SECTION 3

SELF-CONTROL THROUGH BOARD CONTROL: FORMALIZED GOVERNANCE IN CONTROLLING OWNER FAMILY BUSINESSES

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Abstract

Our study examines the role of board control tasks in mitigating self-control problems in controlling owner family businesses. We challenge the common perception that controlling owners do not require and use board control because of the concentration of ownership and management in a single individual. We argue that self-control problems, that is agency problems with oneself, have often been overlooked by existing studies on the relevance of control tasks. By using a multiple case study design, we demonstrate that controlling owners frequently use board control as a self-governing mechanism and develop several propositions on favorable board processes and compositions. Rather than independence, we propose that controlling owners should select their board members based on trust and expertise. Moreover, we propose that probing and challenging behavior by board members in combination with the controlling owner's willingness to prepare in a formalized manner support the reduction of self-control problems.

1. INTRODUCTION

Traditionally, family firm researchers have highlighted the importance of board control tasks in mitigating agency problems arising from conflicts between owners and managers (Jensen and Meckling, 1976), between family and non-family owners (Anderson and Reeb, 2004), and among the group of family owners (Bammens *et al.*, 2008). However, small and medium-sized family enterprises (family SMEs hereafter) are often characterized by a large overlap between ownership and management, up to the point where both roles are concentrated in a single individual (Van den Heuvel *et al.*, 2006; Gersick *et al.*, 1997). Such controlling owners are typically not confronted with the highlighted agency problems (Ang *et al.*, 2000) and board control has thus frequently been argued to be neither beneficial nor necessary for controlling owner family businesses (Nordqvist *et al.*, 2014). We show with our study that board control can nevertheless be beneficial in such situations because of the mitigating effect on the self-control problems of the controlling owner.

Self-control problems emerge from the tendency of individuals to favor instant gratification despite the potential negative consequences for their overall long-term welfare (Thaler and Shefrin, 1981). For instance, a controlling owner may, consciously or unconsciously, refrain from conducting an inevitable strategic change to avoid compromising on his familiar customer base (Ward, 1988) or from critically assessing the performance and competence of family employees, thereby threatening the long-run prospects of the firm (Kets de Vries, 1996). Lubatkin *et al.* (2005) highlighted that controlling owners may be particularly exposed to these problems, as their powerful position reduces the regulating effect of external capital and labor markets. Multiple authors have provided indirect evidence of the self-control problems of controlling owners and the associated increase in agency costs (Steijvers and Voordeckers, 2009; Xiang *et al.*, 2014). With the exception of Schulze *et al.* (2001), however, agency costs resulting from self-control problems have mostly been omitted from empirical studies on board control in family firms. Consequently, multiple researchers pointed out that more research is needed to verify the board's role in mitigating

self-control problems (Bammens *et al.*, 2011; Chrisman *et al.*, 2004).

Building on this gap in the understanding of family firm boards, we utilized a qualitative case study approach, involving 13 German family SMEs, to provide more insights into the value add of board control for controlling owners. We find that controlling owners frequently use board control as a self-governing mechanism with the aim to reduce self-control problems. Moreover, we identified several contingencies, such as a probing and challenging behavior of the board members as well as the owner's willingness to prepare for board meetings in a formalized manner, that support this mechanism. Finally, based on our empirical observations, we propose that trust and expertise, rather than independence, may be favorable attributes of board members in this setting.

With our study we contribute to family firm and board research in three ways. First, we contribute to the literature by providing empirical insights into a topic that has with one exception only been covered from a theoretical perspective. In particular, the suggestion that board control may serve as a remedy to self-control problems (Schulze *et al.*, 2001) lacks empirical support despite the prominence of self-control problems in family firms (Bammens *et al.*, 2011). Second, our empirical results further blur the theoretical distinction between board control and board advice. Roberts *et al.* (2005) demonstrated that the provision of board advice allows board members to become more familiar with the firm, thereby enhancing the effectiveness of board control. Conversely, our study highlights the beneficial effects of control tasks as a form of managerial support. Typically, studies associate managerial support with advice-related tasks (Zattoni *et al.*, 2015). Similarly, we highlight that trust and expertise, which have previously been associated with the provision of board advice (Jones *et al.*, 2008), are also relevant for board control in the specific setting of controlling owners. Third, our study focuses on the processes associated with board control in controlling owner family businesses. Previous studies of family firm boards have been criticized for an overreliance on input/output models that aim to link structural board variables directly to firm performance in large quantitative datasets. Due to partly inconsistent findings, numerous calls to explore the effects of board processes have been made (Bammens *et al.*, 2011; Chrisman *et al.*, 2010). By employing a case study method, we demonstrate, for instance, that probing and challenging by board members fosters board control as a self-governing mechanism. A similar result has been found for publicly-traded non-family corporations, in which probing and challenging behaviors were argued to increase control effectiveness and accountability of management (Roberts *et al.*, 2005). Despite their powerful position, controlling owners thus seem to create an environment for themselves that resembles many aspects of board control in the case of external management.

The remainder of the paper is organized as follows. Section 2 presents an overview of the theoretical foundations of the study and examines the role of agency costs, self-control problems, and board control in controlling owner family businesses. Section 3 describes the research method and design. Section 4 presents our key findings and develops propositions on the self-governing role of board control. Section 5 discusses these results, and we conclude with some limitations and possible future research avenues in Section 6.

2. THEORETICAL FOUNDATIONS

Early supporters of agency theory predicted zero or almost zero agency costs in family firms because of the overlap between ownership and management (Ang *et al.*, 2000; Jensen and Meckling, 1976; Fama and Jensen, 1983). In particular, family managers were argued to factor in the interests of their kin when making firm decisions. Board control would thus only be relevant in the case of non-family management to monitor management actions (Karra *et al.*, 2006; Jensen and Meckling, 1976) and even be detrimental to the performance of family managers, as control may be interpreted as a sign of distrust (Falk and Kosfeld, 2006).

However, in the recent literature, family firms have been argued to be subject to a unique set of additional agency problems (Bammens *et al.*, 2011). The presence of (non-family) minority shareholders, for instance, can lead to agency problems, as the owning family's dominant position may allow the extraction of resources from the company at the expense of other shareholders (Anderson and Reeb, 2004) Similarly, the family's pursuit of non-financial objectives may conflict with the often purely financial objectives of minority owners (Chrisman *et al.*, 2004). Minority owners may thus demand appropriate control mechanisms as a prerequisite for the provision of capital (Almeida and Wolfenzon, 2006; Anderson and Reeb, 2004).

Also, the family itself can be a source of agency problems as ownership dispersion increases. In particular, family firms that have evolved into a sibling partnership or cousin consortium may be confronted with a divergence of interests among different family members (Le Breton-Miller and Miller, 2013; Schulze *et al.*, 2003a). In particular, non-employed owners may call for board control to ensure that their interests are taken into account by management (Bammens *et al.*, 2008).

The three agency situations mentioned above should typically not be applicable for controlling owners. Lubatkin *et al.* (2005) proposed that controlling owners may, however, be subject to agency problems with themselves, also referred to as self-control problems. Following Thaler and Shefrin (1981), the understanding of self-control problems requires a multi-self-model of man. Inside an individual, the conflict between a farsighted planner and a myopic doer is argued to lead to decisions that are detrimental to long-term welfare. The problems arise as individuals partly lack foresight and are not fully disciplined in their behavior. As a result, individuals may choose instant gratification despite the negative impact on their overall welfare.

Self-control problems may be particularly pronounced in family firms with a controlling owner for three reasons. First, private ownership allows the controlling owner to act mostly independent of other shareholders. Compared with publicly traded firms, privately held firms are not subject to pressure from capital markets, which are supposed

to provide continuous feedback on firm performance and may act as a regulating force (Fama and Jensen, 1983). Second, direct representation in management grants owners the right to almost freely decide over the use of the firm's assets without having to justify their decisions to other governance institutions or individuals (Carney, 2005). Third, parental altruism may drive self-control problems. Parental altruism describes the tendency of controlling owners to provide employment or other privileges to their offspring that they would otherwise not be granted. Such altruism may change the incentive structure in the firm, as remuneration is no longer primarily based on merit but also on kinship ties (Schulze *et al.*, 2003b).

As outlined by Lubatkin *et al.* (2005), self-control problems may expose the firm to the agency costs of moral hazard, hold-up and adverse selection (Alchian and Woodward, 1988). By giving space to the myopic doer, the controlling owner may omit necessary actions or make decisions that lead to a misappropriation of the company's resources, while not foreseeing the long-term consequences of his

behavior. This lack of self-control may lead to decisions that hamper the controlling owner's welfare as well as the welfare of those who depend on him or her (O'Donoghue and Rabin, 2000). Put differently, the controlling owner consciously or unconsciously free-rides on his or her own company (moral hazard). Further, the lack of self-control may also lead to agency costs related to other stakeholders of the firm. For instance, the high degree of power allows the controlling owner to force other agents (for example, minority owners or employees) to accept ex post changes to agreements that are not in the best interests of the agents (hold-up). In turn, the exposure of other agents to the powerful position of the controlling owner may drive them to seek additional compensation through free-riding or shirking (moral hazard). Finally, the preferential treatment of family members as well as capricious behavior of the controlling owner may hamper the firm's reputation in the labor market, thereby leading to an unfavorable effect on the pool of applicants (adverse selection). Figure 1 summarizes the addressed relationships.

Figure 1. Self-control problems of controlling owners
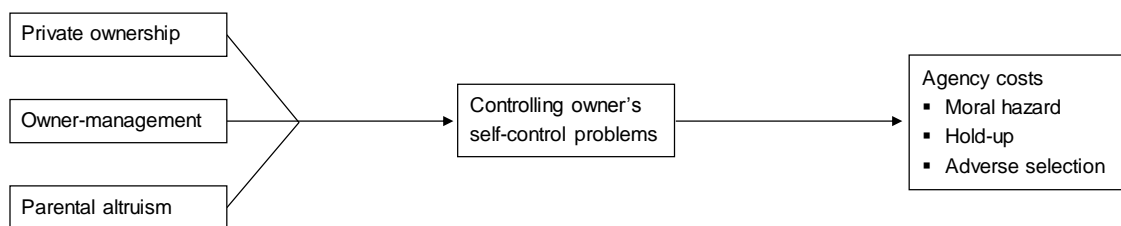
Source: Lubatkin et al. (2005)

These negative consequences may, however, not necessarily materialize for all controlling owners. According to behavioral economics literature, individuals are often aware of self-control problems and therefore establish appropriate self-governing mechanisms such as the voluntary establishment of rules and guidelines and the introduction of incentive and monitoring schemes (O'Donoghue and Rabin, 2000; Thaler and Shefrin, 1981). In this respect, the board of directors has been suggested as a potential self-governing mechanism (Schulze *et al.*, 2001). By governing their own behavior, controlling owners may thus mitigate or eliminate the emergence of self-control problems (Lubatkin *et al.*, 2007). Although controlling owners typically have the power to limit the actual influence of the board, board control can prevent self-control problems, as controlling owners may be assumed to want the approval of their friends and peers and thus also of the board members (Chrisman *et al.*, 2004). In particular in small businesses, board control may increase the owner's awareness of important managerial aspects such as formal planning (Johannisson and Huse, 2000). Similarly, the board can overcome the potential negative effects of intuitive decision-making by forcing the owner to reflect on the biases and heuristics with which he or she may be confronted (Van den Heuvel *et al.*, 2006). Finally, board control may also promote behavior considered to be just and fair by both family and non-family members (Lubatkin *et al.*, 2007).

The empirical verification of the board's role in mitigating the self-control problems of controlling owners is, however, still in its infancy (Bammens *et al.*, 2011). Schulze *et al.* (2001) aimed to validate their assumptions on self-control problems by investigating the effect of outside board member representation and average board tenure on sales growth. Contrary to their expectations, they found a negative relationship for the former and a positive relationship for the latter, indicating no contribution by the board to mitigate self-control problems. However, the authors did show that independent board structures can have a positive effect when coupled with other governance practices. Similarly, other practices associated with board control such as the necessity to draft strategic plans were found to positively influence firm performance. Xiang *et al.* (2014) and Steijvers and Voordeckers (2009) also provided evidence that controlling owners in family firms may indeed be confronted with self-control problems and agency costs, but did not investigate the role of the board in mitigating such problems.

3. RESEARCH METHOD

The majority of studies of boards in family firms adopt large samples in publicly traded family firms (Bammens *et al.*, 2011), which complicates the allocation of board control to specific sources of agency problems. Moreover, in quantitative studies of privately held family firms, the development of

scales for the different sources of agency problems is difficult to operationalize (Chrisman *et al.*, 2004). To add to our understanding on board control, this study thus used a qualitative case study approach (Eisenhardt, 1989). Qualitative approaches represent an underutilized research methodology in family firms (Fletcher *et al.*, 2016). The multiple case study design applied in this study enabled us to go beyond the mere studying of board variables and instead target the processes and relationships inside the boardroom, thereby staying close to the empirical phenomenon in its specific context (Yin, 2009, p. 18). The difficulty of obtaining data on boards in family firms because of the tendency to remain private further supported the application of a multiple case study design, as it allowed the collection of private information (Steier and Miller, 2010).

3.1. Context and Sampling

As the context for our study, we chose German family SMEs in the legal form of stock corporations. In Germany, stock corporations require a two-tier governance system with a mandatory supervisory board. Compared with the Anglo-American one-tier system, the German system demands the clear separation of members and tasks between management and the supervisory board. The legal form of stock corporations is still a rather scarce phenomenon among German SMEs (that is firms with usually less than 500 employees), although the dispersion is rising (Helm, 2004).

This context is particularly valuable for answering our research question for two reasons. First, the legal obligation of a board in stock corporations forces the controlling owner to actively consider whether and to what extent he or she aims to permit board control. Even the decision to opt out of board control by establishing a mere "rubber-stamp board," namely a board that provides the legally necessary approval without any scrutiny (Lansberg, 1999, p. 31), may be assumed to follow a deliberate process of evaluation. Consequently, we expect the perceptions of the interviewees to be well-grounded, as they are legally forced to look into board control. Second, we expect self-control problems to be more relevant in smaller firms because of the higher level of discretion of the controlling owner (Chrisman *et al.*, 2004). The extensive influence of the controlling owner on organizational outcomes as well as on the structure of the firm's governance system in smaller firms should make the specific governance challenges more readily observable (Fiegener *et al.*, 2000).

To select our cases, we followed a theoretical rather than a statistical sampling logic by choosing cases that provided the potential to enhance our theoretical understanding (Eisenhardt, 1989). First, a list of all stock corporations in the federal state of Bavaria with concentrated ownership was extracted from the ORBIS database. The purpose of this regional restriction was to enhance the approachability of informants. Following the recommendation of Leblanc and Schwartz (2007), we approached firms formally by direct mailing and informally by targeting gatekeepers. In sum, 23 firms were interviewed to better understand their ownership and governance structures. The purpose

of this first explorative step was to gain insights into the context, refine the methodology, and access private information on the firms. In the second step, the sample was reduced to 13 firms to exclude firms that did not meet our selection criteria. We excluded firms that were managed solely by non-family managers (three firms), did not meet our definition of family businesses (three), or had left the controlling owner stage (four). For the purpose of this study, we defined a family business as "a business governed and/or managed with the intention to shape and pursue the vision of the business held by a dominant coalition controlled by members of the same family or a small number of families in a manner that is potentially sustainable across generations of the family or families" (Chua *et al.*, 1999, p. 25). Allocation to the controlling owner stage required the majority of ownership and control rights to be concentrated in one individual. We interpreted the definition rather broadly and included cases in which the controlling owner has factual majority as the other shareholders do not exercise significant ownership authority (Gersick *et al.*, 1997, p. 32).[25] In sum, we regard the 13 cases as adequate to generate theory while not suffering from a data overload (Eisenhardt, 1989).

3.2. Data Collection and Data Analysis

For each case, we collected data from multiple sources and by using multiple data collection tools (Eisenhardt, 1989) in the period from September 2015 to April 2016. Predominantly, we obtained data through semi-structured interviews with each controlling owner. Before each interview, all available information about the firm and interviewee was collected from secondary data sources such as company publications, newspaper articles, and ORBIS database records. At the beginning of each interview, the purpose of the study was explained and the confidentiality of the given information was ensured. The interview questionnaire covered the ownership, management, and governance-related aspects of the firm, while the majority of questions focused on the tasks, processes, composition, and importance of the board. The majority of the interviews were conducted in person at the respective companies and combined with a plant or office visit. To maintain consistency, all interviews were conducted by the same author. They were all taped and transcribed, expect for two cases in which recording was denied and the protocol was created based on notes directly after the interview.

As shown in Table 1, in six cases, a second interview with a board member was arranged to triangulate our data collection process and verify the statements of the first interview (Yin, 2011, p. 153). The fact that both interviewees usually did not contradict each other and provided similar judgements of the respective situations supported our aim of providing a reliable data basis for our analysis. Besides the interviews, each controlling owner completed a quantitative questionnaire on the extent to which different tasks are executed by the board (task performance). The questionnaire followed the suggestion of Zattoni et al. (2015) and required the rating of five control and six advice

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25 Extended definition applies to Cases E, K, and L.

tasks on a Likert-type scale ranging from 1 to 5 (see Table 2). This scale has already undergone empirical verification and it corresponds to the theoretical arguments for both tasks (Forbes and Milliken, 1999).

Table 1. Sample characteristics and data collection

Case	Sector	Legal form[a]	Size[b] Employees	Revenue	Ownership Family	Manager	Generation	Interviews #	Organizational roles	Other data sources Field visits	Documents
A	Service	AG	140	15 m€	100%	100%	1st/2nd	1	Controlling owner	1	15
B	Manufacturing	SE	560	120 m€	100%	50%	5th/6th	2	Controlling owner, Board member	1	15
C	Service	AG	240	15 m€	95%	95%	1st	2	Controlling owner, Chairman	1	9
D	Service	AG	250	85 m€	67%	63%	1st/2nd	2	Controlling owner, Chairman	1	8
E	Manufacturing	AG	370	145 m€	61%	30%	1st	2	Controlling owner, Chairman	1	19
F	Manufacturing	AG	40	5 m€	100%	100%	1st	2	Controlling owner, Board member	1	6
G	Manufacturing	AG	560	90 m€	100%	100%	1st	1	Controlling owner	-	8
H	Manufacturing	AG	120	30 m€	100%	100%	1st/2nd	2	Controlling owner, Board member	1	11
I	Service	AG	110	25 m€	90%	73%	1st	1	Controlling owner	1	5
J	Manufacturing	AG	130	10 m€	60%	50%	3rd/4th	1	Controlling owner	1	13
K	Manufacturing	AG	70	25 m€	100%	37%	1st/2nd	1	Controlling owner	1	4
L	Manufacturing	AG	20	5 m€	89%	35%	1st	1	Controlling owner	1	5
M	Manufacturing	AG	300	110 m€	100%	100%	3rd	1	Controlling owner	-	8
								19		11	126

[a] AG= Aktiengesellschaft (stock corporation); SE = Societas Europaea
[b] m€ = million Euro

Subsequently, the data were analyzed in a two-stage process. First, in-depth case write-ups were drawn and analyzed to increase our familiarity with each case and discern emerging themes in the data (within-case analysis). These write-ups also ensured a structured analysis of the data as well as consolidated the different data sources used (De Massis and Kotlar, 2014). In the second step, the cases were analyzed on a cross-case basis (Eisenhardt, 1989). For this purpose, recurring aspects in the cases that could be related to board control and self-control were grouped into multiple themes, which were then examined by reflecting the findings against the existing literature. In doing so, we moved back and forth between the empirical data and theory several times in an iterative process (Kuckartz, 2014, p. 50).

For both analysis steps, we used MAXQDA qualitative data analysis software and spreadsheets to organize the data and link them with emerging themes. For several aspects, we provide a rating to offer a synoptic view of the characteristics of each firm to allow for a more straightforward comparison and analysis, while further empirical evidence is given in the adjacent quotes. To increase reliability, we recruited a research assistant to read all interview transcripts and provide an additional blind evaluation of the ratings and themes. The results were then compared, showing an inter-rater agreement of 93.2 percent and a Cohen's kappa of 0.859, which is considered to be "almost perfect agreement" (Cohen, 1960; Landis and Koch, 1977). All discrepancies were discussed until a common view was reached.

4. FINDINGS

Our findings are reported in three parts. The first part illustrates that controlling owners do indeed use control tasks as a self-governing mechanism. The second part focuses on the board processes identified as being particularly valuable for enhancing the effect of board control on self-control problems. Finally, we describe our findings on the composition of boards in the controlling owner set-up.

4.1. Board Tasks

We first analyzed the extent to which different tasks are performed by the boards in our sample. In the majority of cases, controlling owners reported a strong board focus on tasks that are generally classified as control-related (see Table 2). In addition to providing advice, the boards thus also seem to control. For instance, in Case D, all five questioned control tasks are relevant or very relevant, which reinforced the controlling owner's conclusion that he "was certainly controlled, no question" (CO, Case D). The variation among the cases demonstrates that the legal framework grants a certain amount of discretion to the firms on how intense board control is realized. In Cases A and M, the owners opted to only fulfill the legal requirement and established a "condensed and reduced version of the board that mainly exists for formal reasons" (CO, Case M). By contrast, the other 11 cases, to varying degrees, showed a stronger execution of control tasks, leading to the following observation:

> Observation 1a: The boards in controlling owner family businesses often perform control tasks that exceed formal legal obligations.

The fact that board members can be elected and deselected at any time by the shareholder assembly creates a special situation for controlling owners.

Table 2. Board task performance

Board task	Case												
	A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**
Control tasks													
The extent to which the board:													
▪ Is involved in following up and reassessing investments	1	3	4	5	5	4	3	5	4	n	4	5	3
▪ Sets the CEO remuneration	3	4	5	5	5	3	5	5	1	4	5	5	5
▪ Is active in controlling and evaluating strategic decisions	3	4	4	5	5	5	5	5	4	4	5	3	1
▪ Establishes plans and budgets for the firm's activities	1	2	1	4	2	3	5	2	1	1	2	4	1
▪ Keeps itself informed about the financial position of the firm	3	4	4	4	4	5	5	5	5	3	4	4	4
	2,2	**3,4**	**3,6**	**4,6**	**4,2**	**4,0**	**4,6**	**4,4**	**3,0**	**3,0**	**4,0**	**4,2**	**2,8**
Advice tasks													
The extent to which the board													
▪ Provides advice on management issues	3	3	3	5	4	5	5	5	5	2	4	3	2
▪ Provides advice on financial issues	3	3	1	4	3	5	5	5	4	2	4	3	2
▪ Provides advice on technical issues	1	2	1	4	2	1	4	2	1	3	3	2	1
▪ Provides advice on market issues	2	2	3	4	3	3	4	2	1	2	3	2	1
▪ Initiates strategic proposals	3	4	3	5	3	4	5	5	1	3	4	3	3
▪ Makes decisions on long-term strategy	3	3	3	4	3	3	5	5	1	4	3	3	3
	2,5	**2,8**	**2,3**	**4,3**	**3,0**	**3,5**	**4,7**	**4,0**	**2,2**	**2,7**	**3,5**	**2,7**	**2,0**

Items rated on a Likert-scale ranging from 5 = fully applies to 1 = does not apply; n = no answer provided

While the board is supposed to supervise the manager, the enforcement of the control may be hindered by the manager's simultaneous role as a shareholder. The awareness of the limited enforceability is a theme that emerged with great regularity in most of the cases studied (see Table 3). As one controlling owner stated, "I am the owner of the shares, which means I can basically do what I want" (CO, Case H). Typically, board members can only be "demanding" and provide "recommendations" (CO, Case D), but not enforce a decision on the controlling owner. The powerful position of the controlling owner towards the board is thus not merely a legal circumstance; it is recognized by the controlling owner and board members alike. Three cases provided an exception (Cases E, K, L), as the controlling owners perceived the presence of other shareholders as sufficient to grant the board a certain level of enforcement. Hence,

> Observation 1b: Controlling owners as well as board members are typically aware of the limited enforceability of board control in controlling owner family businesses.

This observation might lead one to assume that board control is not beneficial and mainly perceived as a formal burden by controlling owners, as in Cases A and M. However, the remaining 11 cases showed a more positive evaluation of control tasks (see Table 3). Board control was perceived as valuable as it (i) acts as a mirror for the manager in front of which he or she needs to justify him- or herself (Cases E, F, G, K, L), (ii) prevents managers from becoming blind to organizational processes and issues outside of daily business (Cases B, D, F, G, J, K), and (iii) forces the manager to have a four-eye principle on important decisions (Cases C, D, E, F, G, H, I, J). These reasons suggest that the benefits of board control stem less from the actual contribution of board members and more from the obligation of the controlling owner to scrutinize and review his or her own behavior. Given this limited enforceability, control constitutes de facto a "voluntary self-obligation" (CO, Case I) of the controlling owner. Therefore,

Observation 1c: Controlling owners in family firms typically perceive board control as valuable as it forces them to reflect on their own actions and decisions.

Observations 1a–1c imply that board control can indeed serve as a self-governing mechanism for controlling owners. Contrary to the common perception (Gómez-Mejía *et al.*, 2007), most of the controlling owners in our sample are willing to share part of the firm's control with outsiders by accepting board control despite the awareness that their powerful position grants the possibility to limit board control.

When comparing the reported benefits of board control in our cases to the argumentation on the emergence of self-control problems (see Section 0), a large overlap can thus be observed. In public non-family firms, capital markets may mirror the activities of managers by providing instant performance feedback (Fama and Jensen, 1983), more frequent changes in the executive suite may prevent organizational blindness (Tsai *et al.*, 2006), and the clear separation of ownership, management, and governance institutions may ensure the four-eye principal on important decisions (Lubatkin *et al.*, 2005).

Board control in our cases often aimed to fulfill similar targets. Controlling owners thus seem to employ board control to "simulate" the benefits of public non-family ownership and thereby overcome potential self-control problems in their firms. This requires that boards do not act as mere "rubber-stamp boards" (Lansberg, 1999, p. 31), but engage in controlling activities. Our observations correspond to the previous suggestion that boards can be used to mitigate self-control problems (Schulze *et al.*, 2001). Summarizing the above, we propose the following:

> Proposition 1 : By acting as a self-governing mechanism that forces the controlling owner to reflect on his or her own actions and decisions, board control can reduce the self-control problems of controlling owners.

Table 3. Enforceability and evaluation of board control tasks

Case	Rating	Enforceability of board control Sample quotes/ evidence[a]	Rating	Evaluation of board control Sample quotes/ evidence[a]
A	Low	Decisions are made by the controlling owner alone. [CO]	Negative	"The board is mainly seen as a burden to fulfill the legal requirements." [CO]
B	Low	"I can only raise a warning finger. But still. Somehow the owner has to want it" [BM] "I actually do not feel controlled. Whether this is good or bad remains to be seen, of course." [CO]	Positive	"But he also only has his experience from here. Blindness to organizational processes is thus inevitable. Same for me. […] I will try to work in this direction. Of course, I do not want to be controlled by the board. On the other hand, it is the job of the board. I would wish the board to have more expertise and play a more active role." [CO]
C	Low	"You do not have a choice. We once intended to dismiss the controlling owner. There was another board member and asked whether we have gone completely crazy. You cannot dismiss the sole shareholder." [BM]	Positive	"Because the structure of a stock corporation and the seriousness in board composition, which includes the selection of knowledgeable board members, relieves an enormous amount of pressure from the CEO or management in their decision making. […] And the whole legal form of stock corporation is very supportive as it includes the establishment of this governance body." [CO]
D	Low	"But it can only be relatively demanding. It can only provide recommendations. Indeed, it cannot do more in my situation. […] If you always have the possibility to exchange the board - I like that as the main shareholder. That is very pleasant." [CO]	Positive	"I knew every single number and took all chances to look behind the scenes." [BM] "And it is very interesting to step back for a couple of hours and to discuss two or three of the topics. […] But it is not that I had a negative feeling due to this control." [CO]
E	High	"But none of us would act against his own conviction and support something that we believe is not correct. We just do not do it." [BM] "Select and withdraw board members as we like – with the expectations that we have and that the financial community has, this would be absolute hara-kiri. And the board members know this." [CO]	Positive	"I think it is very important to have someone who holds a mirror up to you and accompanies everything critically. Life experience and management experience are crucial for that. And they all have seen businesses rise and decline. In this respect, it is good to have sparring partners." [CO]
F	Low	"There were also cases, of course, where I said I do not care. I just do it the way I want." [CO] "If he owns 100 percent of the shares, the board cannot do anything." [BM]	Positive	"On the one hand, there is some healthy pressure for me, which is not bad […] in principle, it is like a mirror for me and a possibility to discuss important questions […] when there are important decisions, I can get reassurance […] It was better for the company from an economic viewpoint. I have not seen it on my own, because I was too close" [CO]
G	Low	"Of course, it would be possible, under these circumstances, to establish a board that only exists on paper and rubber stamps decisions." [CO]	Positive	"A critical questioning from the outside, a monitoring from the outside – I would call it a benevolent mirror of a third party – is not bad in my opinion because you typically tend to become blind to organizational processes over time […] you do not question yourself critically to the same extent anymore, you maybe do not necessarily create the same regulations for yourself. […] It was essential for us to have a functioning board in front of which we can reflect our decisions." [CO]
H	Low	"I am the owner of the shares, which means I can basically do what I want." [CO] "As he owns all the shares, he certainly has the power to say, if you only establish silly regulations, then I will kick you out." [BM]	Positive	The board "feels responsible that the questions will be answered or have been answered. […] I was the sole decision-maker and the sole person responsible for many years. I now feel more comfortable and trust the board members. I am totally happy with the board." [CO]
I	Low	"Actually not. Actually, I decide that together with my brother." [CO]	Positive	"We have now set ourselves clear rules in the employment contracts, regarding acquisitions and investments in other companies as well as budgets for example […] you can call it a self-obligation […] The board only has advantages. In the background you need someone, besides the banks, to review everything, to have a four-eye principle." [CO]
J	Low	The control of the firm is in the hands of the controlling owner because of his majority shareholding. The actual influence of the board is limited. [CO]	Positive	The controlling owner perceives the board as a good way to get some distance to daily business and take on a strategic perspective. The board is perceived as useful to discuss and review important issues in front of a group of people. The control is also argued to be important from a psychological perspective as it is necessary to work in consent and reflect on their own decisions. [CO]
K	High	"My brother, who is on the board as a shareholder and wants to be there, […] he exercises control towards me […] and then we vote on the board." [CO]	Positive	"Certain aspects, which you forgot during daily business, come back on the agenda […] And if you have to present in front of some experts, then it is also a good challenge for yourself." [CO]
L	High	"Control in the sense of control takes place and has to take place. […] if the control would not take place, the board would neglect his duties and the board members would be personally liable." [CO]	Positive	"And what I personally consider as very useful is that the board meetings, which take place regularly, force me to conduct kind of an internal audit, which I probably would not do if the meetings would not exist." [CO]
M	Low	"As the majority shareholder, I should be able to do it anyway. But I will still try to speak to the others and select the new board member in mutual agreement." [CO]	Negative	"It is simply a governance body that you are required to have as a stock corporation. We fulfilled the formal requirements and used it as platform for what we would need to do anyway. […] In the situation of a sole shareholder, I think it would de facto not be necessary." [CO]

Note: [a] [CO] = Quote of the controlling owner [BM] = Quote of the board member

4.2. Board Processes

Our case studies also revealed further insights into how self-governance is actually achieved. Two themes appeared as potential contributing behaviors, one relating to the controlling owner and one relating to board members. We assume that the behaviors from both sides are not independent, but rather reinforce each other.

Starting with the controlling owner, we observed that the willingness to prepare for board meetings and to do so in a formalized manner plays a crucial role (see Table 4). Many of the controlling owners perceived it as valuable to "consciously compile and prepare the respective information" (CO, Case G) for these meetings. This includes, for instance, the written analysis of investment projects in the process of seeking board approval, the preparation of multi-year planning to define the company's strategy, and the updating and presentation of performance figures. Such formal preparation ensures that the controlling owner is forced to invest time and effort before the meeting to "intensively deal with the numbers" (CO, Case K). Owners must also go through past developments and future plans once more for themselves, thereby opening the possibility to gain new insights even before meeting with board members. As one controlling owner stated, "The most valuable aspect for us as management is actually the obligation to regularly prepare for the meetings, for the questioning" (Case L).

These observations concur with current research findings on the performance contribution of formalization, such as drafting strategic plans (Schulze *et al.*, 2001; Mazzola *et al.*, 2008). The underlying rationale is that self-control problems are reduced because of the disciplining function of the plans as well as the preceding process of data gathering (Schulze *et al.*, 2001). Based on our observations, we propose a similarly beneficial effect of board control when the controlling owner prepares for the meetings seriously and applies a sufficient degree of formalization. Hence,

Proposition 2: The controlling owner's commitment to preparation and formalization strengthens the positive effect of board control on the reduction of self-control problems.

Moreover, we observed that probing and challenging behavior by board members was typically viewed as highly beneficial (see Table 4). As one controlling owner summarized, the "board fulfills its control function by asking questions as well as by demanding answers" (CO, Case H). For the controlling owners we interviewed, scrutinization by the board was perceived as enhancing the reflection of their own actions. The board not only demanded a justification of past and current development reflected in the firm's reporting but also targeted the substantiation of decisions on investment projects, for example, by demanding "sample calculations" (CO, Case F) as well as challenged the firm's strategic orientation and focus. In contrast to board advice, such probing and challenging behavior by board members did not appear to contribute mainly by bringing in new knowledge and expertise from the outside (Johannisson and Huse, 2000), but rather forced the controlling owner to reflect on his or her own decisions. The probing of the board was viewed to induce a "reflection" and "reconsideration" (CO, Case C) of important issues by the management. Board members also demanded aspects to be worked out in more detail and "presented at the next board meeting" (BM, Case E). Similar to the benefits of preparation for board meetings, new insights mainly appeared to stem from the controlling owner's self-reflection rather than the overt intervention of board members. The limited enforceability of board control because of the overlap between ownership and management (see Section 0) thus does not seem to hamper the positive effects of this probing and challenging behavior. Moreover, the questioning of the controlling owner often laid the platform for input by board members, thereby establishing a linkage to board advice.

The relevance of this probing and challenging behavior corresponds to the findings on board effectiveness in publicly traded firms. For instance, Roberts *et al.* (2005, p. 19) demonstrated that "challenge and questioning – getting the executive to account for their conduct – is the most effective means of intervention and influence." Moreover, the expectation of board scrutiny was found to increase the quality of CEOs' preparation (McNulty and Pettigrew, 1999), which, according to our findings, enhances the self-control of the controlling owner. Similarly, multiple studies have highlighted that the effort of the board members, which includes critical questioning, supports the fulfillment of board tasks (Zattoni *et al.*, 2015; Zona and Zattoni, 2007). Our study thus builds on these findings by demonstrating that similar behavior is relevant for the self-governance of the controlling owner, leading to the following proposition:

Proposition 3: Probing and challenging behavior by board members towards the controlling owner strengthens the positive effect of board control on the reduction of self-control problems.

Table 4. Board processes supporting the self-governing effect

Case	Sample quotes/ evidence[a]
Preparation & formalization (controlling owner)	
B	"And you have to say that the CEO is very transparent in his presentations. He doesn't deliver just a shortened version of the profit and loss account." [BM]
E	"It is definitely a useful contribution that the board demands the CEO to simply explain, prepare, and present strategic topics and review them critically against the background of his own experiences." [BM]
G	"Preparation for board meetings helps you consciously compile and prepare the respective information [...] Starting from the respective reporting structures, onto the respective corporate meetings and regulations regarding investment planning, approval processes, and similar issues; none of these issues would typically be questioned critically [without the board]. This also includes the development of multi-year planning, strategic discussions, and the reflection of the management team, which would typically not occur to the same extent." [CO].
I	"For us, it is mainly relevant that we have to update the financial figures, meaning the forecasts from our consulting work, and that we discuss the business trends based on the profit and loss account, cash flow statement, and other ratios." [CO]
J	"The controlling owner regards the meetings as very important as they provide the possibility to review the pros and cons of decisions once again and thereby reflect on the decisions." [CO]
K	"And of course the preparation for board meetings, the obligation to intensively deal with the numbers yourself, to check everything in detail at least once a quarter [...] It is very useful to prepare yourself accordingly. That's good. That's definitely something that delivers value." [CO]
L	"The most valuable aspect for us as management is actually the obligation to regularly prepare for meetings, for the questioning and for getting challenged." [CO]
Probing & challenging (board members)	
B	"We receive quarterly reports. I work through them. And after I have received them – one or two weeks later – I call management and ask my questions." [BM] "He addresses the topics that attract his attention and which he maybe does not like." [CO]
C	"He asks critical questions. Questions that make you think and reflect. The board, from a business perspective, really often asks critical questions [...] And when the board says sentences like this, then an active manager reconsiders the topic." [CO]
D	"We took this very seriously [...] This includes the reporting and critical questioning of the numbers and trends on the supply as well as on the market side." [BM]
E	"That was a topic where we said we want to know more. How do you do it? How is it backed up? How can you ensure that it is feasible considering the liability of the organization? And then they immediately said okay, we will check. And then it was presented at the next board meeting." [BM]
F	"And when he realizes that there are bigger differences, then he asks questions and asks whether it has a special reason. Are we able to catch it up or what is happening there? [...] for instance, they want a sample calculation, based on a product. How does it work that the material cost ratio declines and value creation increases?" [CO]
G	The board "in a very, very streamlined manner critically challenges, from a leadership perspective, from a strategy perspective as well from an implementation perspective, whether the strategic goals are adequately fulfilled and correctly implemented." [CO]
H	"The board fulfills its control function by asking questions as well as by demanding answers. It can not only ask questions and not care, but it feels responsible that the questions will be answered or have been answered. [...] The board asks questions [...] You have to provide evidence." [CO]
I	"And we receive critical questions once we do not achieve our revenue targets mid-year or at the bottom line, the EBIT targets, for example, could not be achieved. This is than critically challenged." [CO]
J	"Through critical questioning, the board prevents you from getting on the wrong track." [CO]
K	"But they also ask critical questions. They provide questionnaires and other things that have to be filled out." [CO]
L	"As long as we stay within the target figures, there is less activity. Once we are out of the target figures, there is a lot of activity [...] once we send out the preliminary numbers, we already provide the explanations, saying you will probably ask this, that is why you already get those two documents attached." [CO]

Note: [a] [CO] = Quote of the controlling owner [BM] = Quote of the board member

4.3. Board Composition

In the final section, we report our findings on the composition of the studied boards. First, we categorized all board members in each case according to their affiliation with the controlling owner, separating board members with familial ties, friendship ties, and business ties (other than the board membership itself) and independent directors. Except for Case G, all cases were dominated by affiliated board members (see Table 5). In Case G, the focus was merely "to have a qualified composition" and the selection of board members aimed to follow an objective "balanced scorecard" (CO, Case G). In the remaining cases, the controlling owners tended to opt for board members from within their known circle of people rather than choosing independent outsiders. The majority of interviewees argued that such an affiliation ensures trust between both parties, which in turn was perceived as a prerequisite for the work of the board. The independence of board members was not evaluated as important, possibly because control is ultimately unenforceable. As one controlling owner stated about a board member: "He is demanding because we know each other very well. He cannot be demanding just because he is a board member in

that situation" (Case D). As outlined earlier, board control mostly represents a voluntary self-restriction of the controlling owner, thereby demanding a climate that induces the controlling owner to share information openly. Rather than undermining board control, the close relationship may thus benefit the self-governing role of board control. In sum, we observed that the "human factor is an essential aspect" (CO, Case I). In four of the cases (Cases E, G, K, L), the importance of trust and social ties was perceived to be less important and instead a more professional attitude towards board members was favored. The relevance of trust thus seems to vary according to the preferences of the controlling owner.

Existing studies of boards in family firms have highlighted the beneficial role of trust with regard to board advice (Bammens *et al.*, 2011). Trust is defined as the willingness "to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action [...], irrespective of the ability to monitor or control that other party" (Mayer *et al.*, 1995, p. 712). Jones *et al.* (2008) argued that social ties form the basis for interpersonal trust towards board members, which in turn makes family businesses more receptive to receiving board advice. Similarly, Lester and

Cannella, Jr (2006, p. 762) argued that "trust is central to family business relationships involving advice and counsel, because families tend to guard their privacy, and are very careful with whom they share confidential information."

Table 5. Board composition

	Board member background		Board member affiliation				Perceived importance of trust	
Case	Occupation^a	Resource^b	Family	Friend	Business	Indep.	Rating	Sample quotes/ evidence^c
A	Tax advisor	SS		X			High	Controlling owner aims for board members whom he can trust, so that decisions can be made and implemented on short notice. [CO]
	Consultant	SS	X					
	Student	O	X					
B	Business owner	I	X				High	"We see each other often. We talk about everything. They are informed about everything and trust is certainly there as well." [CO]
	Consultant	SS				X		
	Politician	CI		X				
C	Tax advisor	SS		X			High	"All our board members are in office for more than 5 years now and it definitely is a position that requires a lot of trust." [CO]
	Manager	BE		X				
	Professor	CI			X			
D	Business owner	BE		X			High	"He is demanding because we know each other very well. He cannot be demanding just because he is a board member in that situation." [CO]
	Lawyer	SS			X			
	Professor	CI			X			
E	Manager	BE		X			Low	"It is very useful to differentiate here. And we do that. I purposely do not play the friendship card. We differentiate that very clearly." [BM]
	Manager	BE				X		
	Professor	CI			X			
F	Engineer	O	X				High	"We know each other well enough. Everything is open. We also personally know each other very well." [BM]. "But I did not want to select out of necessity, as it is a very sensitive
	Accountant	O	X					
	Tax advisor	SS		X				
G	Professor	CI				X	Low	Selection of board members based on expertise rather than social ties. [CO] "Whom do we need to have a qualified composition?" [CO]
	Professor	CI				X		
	Manager	BE				X		
	Manager	BE				X		
	Clerk (E)	O			X			
	Mechanic (E)	O			X			
H	Tax advisor	SS			X		High	"We need a chairman whom we can trust." [CO] "We know each other good enough. He normally listens to our reasons." [BM]
	Banker	SS			X			
	Manager	BE		X				
I	Manager	BE		X			High	"The human factor is an essential aspect. Searching a board member through a headhunter, that would be an absolute no-go." [CO]
	Dentist	O		X				
	Consultant	SS				X		
J	Lawyer	SS				X	High	Trust towards board members is considered important. Controlling owner wants to ensure that the ultimate decision rests with him and is not blocked by the board. [CO]
	Factory manager	O			X			
	Ceramicist	O	X					
K	Business owner	I	X				Low	Controlling owner wishes for less family involvement on the board and aims for a more critical viewpoint provided by outsiders. [CO]
	Business owner	BE	X					
	Business owner	BE			X			
L	Banker	SS	X				Low	The relationship towards the board members is kept professional and board meetings take place in very formalized way. [CO]
	Banker	SS				X		
	Business owner	BE		X				
M	Business owner	I	X				High	"I think I have found someone, who I believe is loyal and correct in that situation. As I have said, I think that is more important than the qualification, which he also needs, of
	Business owner	I	X					
	Shop manager	O	X					
			29%	26%	24%	21%		

^a (E) = Employee representative

^b I = Insider, BE = Business Expert, SS = Support Specialist, CI = Community Influential, O = Other

^c [CO] = Quote of controlling owner [BM] = Quote of board member

We argue that trust also plays an important role for board control in the given setting, as it fosters the controlling owner's willingness to accept and support board control. In summary, we propose the following:

Proposition 4: The selection of affiliated board members supports the development of trust between the controlling owner and board members, thereby strengthening the positive effect of board control on the reduction of self-control problems.

Lastly, we report our findings on the expertise of board members. Following the popular classification of Hillman *et al.* (2000), we categorized board members based on their background into insiders, business experts, support specialists, community influential, and a group with a supposedly lower potential of resource provision that could not be allocated (other). The low occurrence of insiders is driven by the fact that executives are not permitted to be board members in the German legal system. In the majority of the cases, directors were allocated to the business

experts and support specialists categories. Although controlling owners seemed to generally favor highly affiliated boards, they also paid considerable attention to the background of board members in most cases, reflected by the fact that only around one-fifth of board members fell into the "other" category.

Previous studies have primarily linked the expertise of board members to the provision of board advice (Gabrielsson and Huse, 2005; Jones *et al.*, 2008). We propose that the expertise of board members is likewise necessary to reap the benefits of board control as a self-governing mechanism. First, a higher level of expertise may incline the controlling owner to take the board seriously and thus engage in the control process. As one controlling owner insisted, such expertise forces him to "- family business or not – regularly confront [himself] with such a critical mirror" (Case G). Second, a higher level of expertise should also improve the effectiveness of the performed control tasks. For instance, the probing and challenging behavior identified in Section 0 should be better founded and may direct the controlling owner towards additional aspects by asking the "right" questions. As highlighted by one controlling owner, "management as well as the board members should generally be very knowledgeable people. There should be no teacher–student relationship, but they know on a level playing field which explosive potential their questions carry and which expectation their questions raise" (Case C). Based on these observations, we propose the following:

> Proposition 5: The expertise of board members strengthens the positive effect of board control on the reduction of self-control problems.

5. DISCUSSION

The findings of our empirical study suggest that controlling owners do indeed employ board control as a self-governing mechanism. In combination with the theoretical considerations of Lubatkin *et al.*

(2005), the rationale for this behavior can be attributed to agency theory and the potential self-control problems of controlling owners.

Figure 2 provides an overview of the developed propositions of our study and integrates them into a post-analysis framework. In brief, we find that board control in the majority of cases is employed as a self-governing mechanism with the aim of reducing self-control problems and that this effect is strengthened by certain board processes and compositions. Therefore, we lend further credibility to the existing theoretical concept of self-control problems in family firms, while providing additional insights into the role of the board of directors. As indicated by the behavioral economics literature, controlling owners seem to be at least partly aware of the self-control problems they are facing (O'Donoghue and Rabin, 2000; Thaler and Shefrin, 1981). Therefore, the previous assumption that board control is not necessary and not used by controlling owners (Nordqvist *et al.*, 2014) can, at least for our sample, be questioned. On the one hand, the divergence of our results may be because agency problems with oneself have gained insufficient scholarly attention. On the other hand, the divergence may be because controlling owners vary substantially in their pursuit of non-financial goals, which includes the desire to remain in unrestricted control of their firm (Zellweger *et al.*, 2013).

In summary, we show that when the advantage of staying in full control is lower, controlling owners might more readily consider employing a functioning board.

The verification of our results against previous empirical studies is difficult because empirical evidence on the board's role in reducing the self-control problems of controlling owners is limited (Bammens *et al.*, 2011). As outlined before, Schulze *et al.* (2001) did not find an effect of outside board member representation and board tenure on sales growth, presumably indicating no role of the board in reducing self-control problems.

Figure 2. Board control as a self-governing mechanism for controlling owners
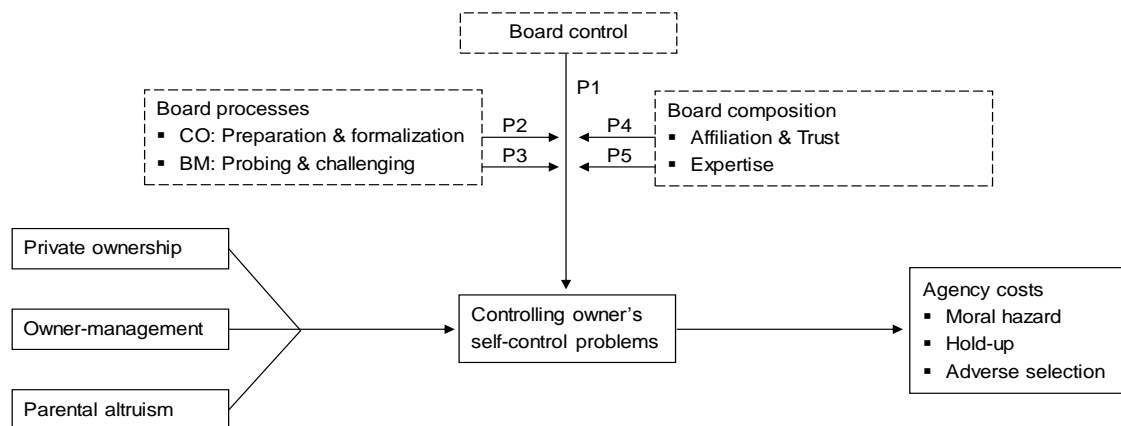
Source: Adapted from Lubatkin et al. (2005) based on case study results (dotted lines)
CO = Controlling owner, BM = Board members

Our study bears the potential to provide an explanation for this finding on board composition. We demonstrated that the independence of board

members may not be an important aspect of board member selection because of the limited enforceability of board control. Rather, affiliation

and trust may strengthen the intended effects of board control. Consequently, outsider status as well as tenure should not be significant predictors of firm performance. In broader terms, our findings correspond to the positive findings on the degree to which increased formalization measures such as strategic planning reduce agency costs (Chrisman *et al.*, 2004; Schulze *et al.*, 2001). Our findings also concur with those of a previous study of stock corporations among German SMEs, which found a high level of satisfaction with the choice of legal form as well as with the mandatory supervisory board, although no separation between board control and advice was made (Helm, 2004). In summary, our results can be integrated into previous work in this field.

6. CONCLUSION

This article clarified the role of board control in controlling owner family businesses. Based on agency theory, we outlined several sources of potential agency conflicts for family firms and identified the self-control problems of controlling owners as an important driver of agency costs, resulting from private ownership, owner–management overlap, and parental altruism. Based on a multiple case study design that examined 13 family SMEs in Germany, we demonstrated the relevance of board control as a self-governing mechanism that forces the controlling owner to reflect on his or her own actions and decisions and thereby supports the reduction of self-control problems. In addition, we developed further propositions on board processes and composition that are likely to strengthen the effect. We propose that trust and expertise, rather than independence, are favorable attributes of board members and that probing and challenging behavior by the board in combination with the owner's willingness to prepare in a formalized manner enhance the effect of board control in this setting.

Despite the advantages of our case study approach, our study has several limitations. First, the restriction to 13 cases and one national setting may bear the risk of idiosyncratic results that lack generalizability to other contexts. Where possible, this risk was minimized through the application of established principles on rigor case study research, such as theoretical sampling, data triangulation, and iteration with the literature (Eisenhardt, 1989). Second, we did not include the costs associated with board control, including the remuneration of board members, or the controlling owner's opportunity costs of the time invested in preparing and attending board meetings. Despite the perceived positive evaluation of the board by controlling owners, the costs associated with this governance mechanism may outweigh its benefits. Considering the legal obligation for a board in our setting, part of these costs may, however, be inevitable in any case. Third, our study was conducted in a German two-tier governance system that legally demands the formal fulfillment of control tasks. Hence, our observations may only represent the response to a legal requirement. However, the comparison of the extent of task performance across firms (see Table 2) showed a substantial amount of discretion for firms. Moreover, previous studies have argued that boards

mostly composed of family members may be suitable for minimizing control and establishing a "rubber-stamp board" (Fiegener *et al.*, 2000). As these compositions were rarely observed in our cases, we argue that the reasons for board control cannot merely be found in the legal system.

Future researchers could extend our work by deepening the gained insights and providing further evidence for our propositions. In particular, we suggest that an observation of actual board meetings or even a "one of the lads" study that includes the direct involvement of the researcher (Huse and Zattoni, 2008) could be appropriate research designs to better understand internal behaviors such as the self-reflection process of the controlling owner. Moreover, future research could examine the performance effects of board control for controlling owners. Previous quantitative studies have often made "great inferential leaps" (Pettigrew, 1992, p. 171) from structural board variables to firm performance, thereby possibly failing to account for the underlying drivers of the discovered effects (Zona, 2015). We thus recommend future works include board processes and sample a single family business type, such as controlling owner family businesses, to enable a better allocation of the findings to specific agency problems.

Finally, we note some practical implications of our findings. Given that German SMEs are rarely obliged to establish a board, our study indicates the advantages for controlling owners to (voluntarily) use formalized governance mechanisms. In practice, an advisory board equipped with the necessary rights and taken seriously by the controlling owner may be a suitable option for family firms in other legal forms than stock corporations. Because board control can help the controlling owner exploit his or her potential while limiting the occurrence of self-control problems, our findings add to the body of evidence addressing the scepticism of controlling owners towards increased professionalization.

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PRIVATE SHAREHOLDERS AND EFFICIENCY OF GERMAN MUNICIPAL UTILITIES

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Abstract

The aim of this paper is to investigate whether and to what extent ownership structure affects cost efficiency in a sample of mainly state-owned but partially privately controlled municipal utilities in Germany. Using an empirical approach which permits the joint measurement of efficiency and assessment of the effect of ownership structure we find significantly, sizeable and robustly larger efficiency of utilities when private control is present. The findings show that the mere presence of private shareholders is suitable to improve efficiency, irrespective of the number of the shareholders.

1. INTRODUCTION

The relationship between ownership structures of German public utilities and various political target variables is addressed by a number of recent empirical studies. Holstenkamp and Kahla (2016) and Bauwens (2016), e.g., focus on community energy companies as entities which can help to facilitate the acceptance of investments in renewable energy provision. Closely related is a second more indirect transformation towards community ownership of energy resources. Recent work by Wagner and Berlo (2015) documents an ongoing trend to remunicipalization of energy networks and supply in Germany where 72 municipal utilities were founded since 2005. Overall, there are currently about 950 municipal utilities (so-called Stadtwerke) in Germany, which assume an important role in supplying the population with water, energy and public transport. In the current transformation process towards a system based on renewable energy forms these utilities are key actors and the importance of decentralized local players is expected to increase substantially. While Feiock et al. (2012) emphasise the advantages of the Stadtwerke in involving citizens in energy-efficiency practices, the efficiency level of these companies in providing their services remains neglected and unaddressed.

In his survey on the determinants of productivity levels, Syverson (2011) outlines the importance of managerial practices to explain differences in firm productivity. In this regard it is asserted that ownership structure generally influences management behavior and firm performance consistently (Shleifer, 1998; Dewenter and Malatesta, 2001). However, there is little empirical evidence on how ownership structure and corporate governance contributes to productivity and efficiency. This lack of evidence is also given for the transformation of privately held local utilities into public entities known as remunicipalization. Consequently, Wagner and Berlo (2015) interpret the current trend as a promising approach for which the long-term economic benefits need further research.

In order to better understand how ownership structure is overall related to efficiency and productivity we analyze a broad sample of German municipal utilities with public and partially private ownership. The core activities of these companies are the generation and distribution of electric power, heat and water to households and firms in their local distribution area in addition to waste management and the provision of public transport.

The number of studies on the relationship between performance and ownership is vast and the fundamental pattern of results is rather stable. As a general finding, performance is better when a larger stake is held by private shareholders. The evidence on the relation between ownership structure and efficiency is less clear and has only recently been addressed for economies with post-communist ownership models. For example, Su and He (2012) show for a cross-industry sample of exchange-listed Chinese manufacturing firms that firm efficiency is negatively related to state ownership while it is positively related to public and employee share ownership. In a paper with a similar focus as our research, Fabricio et al. (2007) provide evidence that in contrast to plants owned by private shareholders publicly-owned plants in the US electricity generating sector hardly improved their efficiency during 1981-1999.

In a more differentiated consideration, Kwoka (2005) argues that both public and private firms have comparative advantages with respect to different aspects of the bundle of services within the US electric power industry. Von Hirschhausen et al. (2006) analyze a sample similar to ours for Germany and argue that in the electricity sector efficiency considerations have played a particularly important role during liberalization processes in electricity transmission and electricity distribution. As liberalization and remunicipalization are accompanied by changes in ownership structure it is notable that von Hirschhausen et al. do not control for this factor. Also the other studies cited above

account for ownership primarily as a binary variable, which either indicates public or private ownership. However, the German electricity sector is characterized by public and mixed ownership structures with private shareholders holding minority shares. This particular environment allows us to examine whether even small privately-owned shares in otherwise publicly managed companies suffice to improve efficiency and support a system of only partial remunicipalization.

In this paper we provide evidence of the influence of private shareholders on the efficiency of German municipal utilities using an empirical approach which is designed to measure efficiency jointly with assessing the effect of explanatory variables. We proceed to present our data and variables together with explaining the estimation method in section 2, discuss the results in section 3 and conclude in section 4.

2. DATA AND METHOD

Our sample is drawn from the Dafne database provided by Bureau van Dijk Electronic Publishing and covers the period 2003-2010. Out of the total population of German municipal utilities we arrive at 435 observations with complete data for the productivity analysis which reduces to 354 observations when further control variables are considered.

We use the total sales of these municipal utilities as the output variable for the efficiency measurement. The three inputs capital, labor and materials are represented by total fixed assets, total personnel expenditures and raw materials expenditures, respectively. Covariates used for explaining the efficiency measures are (a) indicators relating to the shareholder structure (the number of shareholders and a dummy variable to explain the participation of private shareholders), (b) the financial structure and performance (total assets, equity ratio, working capital per total output, EBITDA per total output, reinvestment rate, depreciation rate) and (c) regional variables matched via district codes (population growth, employment rate, industrial penetration, population density, a dummy variable for eastern German firms).

We use the means of the input and output variables over the second half of the sample period (2007-2010) for the efficiency analysis while the explanatory variables used in the regressions are computed as means over the first half of the sample period (2003-2006) in order to reduce endogeneity problems. Taking the averages of the inputs and outputs serves to reduce data errors.

We follow an empirical approach where efficiency is measured by data envelopment analysis (Charnes et al., 1978; Banker et al., 1984) and subsequently related to certain explanatory variables by means of regression on the second stage. Data envelopment analysis is a nonparametric approach for efficiency measurement which allows to determine the distance of input-output combinations of the municipal utilities to an endogenously determined piece-wise linear frontier function. The input-oriented version of this method under variable returns to scale amounts to solve the following linear programming problem for each observation $i \in \{1, ..., n\}$

$$\min_{\theta, \lambda} \left\{ \theta : \theta \mathbf{x}_i \geq \sum_{j=1}^{n} \lambda_j \mathbf{x}_j, \mathbf{y}_i \leq \sum_{j=1}^{n} \lambda_j \mathbf{y}_j, \sum_{j=1}^{n} \lambda_j = 1, \lambda = (\lambda_1, ..., \lambda_n)' \geq \mathbf{0} \right\} \quad (1)$$

With $\mathbf{x}_i$ denoting the vector of the three inputs, $\mathbf{y}_i$ the scalar output variable and λ a vector of weight factors. The efficiency measure obtained as the solution is denoted as $\hat{\theta}(x_i, y_i)$, and is bounded in the interval [0,1]. This method requires no specification of the functional form of a production or a cost function and also requires no price information which is particularly beneficial in the public sector where prices are not determined on markets.

Simar and Wilson (2007) identify several deficiencies of the two-stage approach. They claim that the inputs and outputs used in the efficiency analysis are determined jointly with the explanatory variables for the second-stage regression by a unified data generating process and thus should be analyzed simultaneously. Ignoring this relatedness lets the regression residuals be serially correlated of unknown structure. In addition, the efficiency measures tend to be biased estimates of the true efficiencies as already noticed by Simar and Wilson (1998) and an improvement in estimation efficiency can be realized using bias-corrected efficiency measures.

Our principal aim is to estimate the parameters in β of the regression equation:

$$\hat{\theta}(\mathbf{x}_i, y_i) = \boldsymbol{\beta}' \mathbf{z}_i + u_i \quad (2)$$

where the explanatory variables are collected in the vector $\mathbf{z}_i$ and the error term is denoted by u_i.

The empirical approach suggested by Simar and Wilson (2007) is a sequential double bootstrap procedure which takes account of all these problems and leads to improved inference in the second-stage regression.[26] This algorithm consists of a bootstrap of the first-stage efficiency measurement to gain bias-corrected efficiency estimates followed by a further bootstrap of a truncated regression model to generate valid confidence intervals for the regression parameters. For our application we execute 1000 replications for the bias correction and 10000 replications for the regression inference because the estimation of confidence intervals requires more replications.

All computations are implemented in R using the packages "FEAR" (see Wilson (2008) for the documentation) and "truncreg" for computing the efficiency measures and the truncated regressions, respectively.

3. RESULTS AND DISCUSSION

For data description Figure 1 depicts nonparametric kernel density estimates of the bias-corrected efficiency measures for the entire sample of municipal utilities.

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26 Actually, we refer to their Algorithm #2 which we apply in this paper. See Simar and Wilson (2007, pp. 42f.) for a detailed step-by-step exposition of the algorithm. The algorithm is stated for the output-oriented case in that paper but can been straightfordly adapted for the current input-oriented application. We use studentized bootstrap confidence intervals which provide an asymptotic refinement (see Davison and Hinckley (1997, p. 212)).

Figure 1. Density Plots of the Efficiency Measures
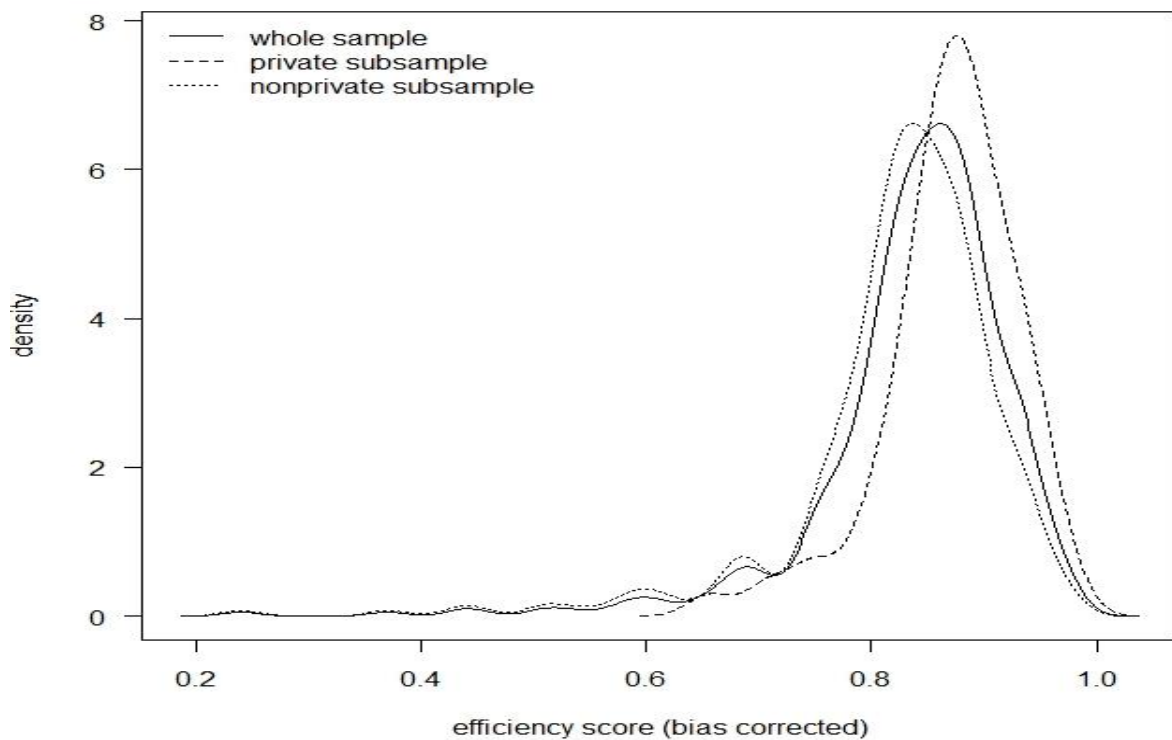
Bandwidth parameters are selected by the procedure suggested by Sheather and Jones (1991). Differences of the three densities for the whole sample ($n = 435$) and the subsamples with ($n = 142$) and without ($n = 293$) private shareholders are visible and also confirmed by a Wilcoxon rank sum test[27]. We clearly observe the density of the private subsample is positioned to the right of the density of the nonprivate subsample implying overall higher efficiency when private influence is present.

The regression results obtained with the Simar-Wilson procedure are summarized in Table 1. Shown are coefficient estimates, *t*-statistics and 95% studentized confidence intervals of the coefficients. Significance on the 5 percent level is indicated by an asterisk.

Panel A of the Table 1 reports the results with only the governance-related variables, i.e. the number of shareholders and a dummy variable for a strictly positive share of privates. The results show that private minority influence is associated with a 5.2 percentage point higher efficiency on average. The number of shareholders as an explanatory variable has no significant effect on efficiency and the coefficient estimate is positive but rather small.[28] As measured by a likelihood-ratio index *LRI*, the explanatory power of this specification is quite low which points to the possibility of omitted variables.

Therefore, we also estimate an extended specification with a larger set of further control variables added. The results are shown in Panel B of

the table. Concerning the controls, we find a significantly positive influence of size measured by the log of total assets revealing that larger municipal utilities are on average more efficient even when we measure efficiency under variable returns to scale. The significantly negative influence of the working-capital-to-performance ratio can be interpreted as an indicator of management quality. Managers able to keep the stock of current assets small are not only more efficient in procurement, receivables management and storage planning but also show overall superior results.

We also observe that the impact of the depreciation rate is significantly positive, whereas the investment rate is not significant. The depreciation rate is defined as depreciation divided by total assets employed. This depreciation rate is high if either depreciation is large or the current value of assets employed is small (or both). A large amount of depreciation may be taken as a sign of a capital stock composed of rather new and technologically advanced vintages of capital goods which, however, is not transformed into more efficient production. The efficiency gains by new technologies may be overcompensated by high levels of capital consumption expressed by depreciation. Recent investment, however, delivers no significant contribution to efficiency in the presence of the depreciation variable. This pattern of results continues to hold when either depreciation rate or the investment rate are exclusively included as explanatory variables.

Regarding the regional variables, population growth could be taken as significant at a level slightly above 5 percent. Thus, municipal utilities in regions with faster population growth tend to be more efficient. Likewise reasoning could be applied to the manufacturing share.

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27 This result is confirmed by a further test of Li (1996) for the differences of the densities of the efficiency measures which is valid for both dependent and independent samples.

28 Using the share held by private owners as a quantitative variable instead of the dummy variable does not lead to a significant finding. This implies that the size of private ownership is less important compared to the simple presence of private shareholders.

Table 1. Regression Estimates with the Simar-Wilson Procedure

	coefficient	*t*-statistic	confidence interval	
A: Regression with core variables without further conditioning variables				
Intercept	0.823	(78.193)	[0.802 , 0,843]	*
no. of shareholders	0.008	(1.041)	[-0.007 , 0.021]	
dummy share private > 0	0.052	(3.517)	[0.021 , 0.080]	*
Σ	0.095	(21.217)	[0.085 , 0.102]	*
In *L*	480.728			
LRI	0.022			
N	435			
B: Regression with core variables together with further conditioning variables				
intercept	0.289	(5.183)	[0.181 , 0.404]	*
no. of shareholders	-0.010	(-1.617)	[-0.022 , 0.002]	
dummy share private > 0	0.060	(4.949)	[0.035 , 0.083]	*
ln total assets	0.041	(8.862)	[0.032 , 0.050]	*
equity-to-assets ratio	0.004	(0.112)	[-0.060 , 0.067]	
working capital / performance	-0.159	(-7.481)	[0.202 , -0.115]	*
EBIDTDA / performance	0.003	(0.077)	[-0.079 , 0.085]	
investment rate	0.031	(0.847)	[0.045 , 0.103]	
depreciation rate	1.571	(9.754)	[1.229 , 1.880]	*
population growth	1.889	(1.916)	[-0.082 , 3.864]	
employment rate	-0.090	(-2.314)	[-0.167 , -0.011]	*
manufacturing share	0.100	(1.809)	[-0.011 , 0.210]	
population per square kilometer	0.019	(1.596)	[-0.006 , 0.042]	
dummy for East Germany	0.021	(1.502)	[-0.007 , 0.049]	
σ	0.068	(22.189)	[0.060 , 0.072]	*
In *L*	499.596			
LRI	0.290			
n	354			

Note: Dependent variable is the bias-corrected DEA efficiency measure as described above. Shown in parentheses are t-statistics of the second stage regression, whereas 95 % studentized bootstrap confidence limits for the coefficient estimates are in square brackets. An asterisk indicates significance on a 5 % level

Furthermore, municipal utilities in regions with a higher unemployment rate tend to be more efficient. One reason underlying this finding may be that there is more demand for peak-load capacity in regions with higher employment which is usually produced less efficiently.

Concerning again the governance-related variables, the effect of private influence remains significant even when the other variables are controlled for and appears even stronger with a coefficient estimate increasing to 0.06. The effect of the number of shareholders turns negative but remains not significant at conventional levels. Altogether, the explanatory power of these conditioning variables also leads to a substantial improvement of the *LRI*.

4. CONCLUSIONS AND POLICY IMPLICATIONS

Our results show that municipal utilities in Germany are rather heterogeneous with respect to their degree of efficiency in production. These differences in efficiency indicate substantial potential for improvement to the benefit of customers, owners and the utilization of resources. If the choice of an efficient combination of input factors is currently not realized, municipal utilities could pursue different ways to improve their productivity.

A first approach for doing so can probably be achieved without changes in the governance structure of the public entities. Because of their regional focus the competition between municipal utilities is rather limited which should facilitate the exchange of information for benchmarking purposes. Thus, a simple forum for information exchange on production processes between municipal utilities of high and low efficiency to

identify the internal drivers of efficiency should be straightforward to organize. However, the sole collection of data on an anonymous level by a data service center which then provides average business ratios is not sufficient. Our results clearly show that there are a number of external factors influencing the efficiency of municipal utilities. To benchmark a given municipal utility in our dataset fairly, managers can use our results to identify the appropriate peer group and to conduct a proper comparison within this group.

If the owners of a municipal utility are willing to scrutinize their governance structure, an even more attractive way to improve efficiency is implied by our results. It appears that ownership structure matters for the efficiency of the production of services by German municipal utilities. According to our results, the presence of a privately held stake in a municipal utility is related to a higher degree of technical efficiency regardless of the size of this stake. Thus, even small minority stakes appear to be as important for improving efficiency as is a majority ownership by private shareholders. Completely publicly owned utilities and their decision makers may rethink their ownership strategy in the light of this finding. While remunicipalization is typically initiated to create a full public ownership, our results offer a new argument to keep some minority stakes in these newly founded entities. Private shareholders can provide new ideas for public managers to restructure their business models and production processes. This generates improvements in efficiency which then can partly be used to compensate these private shareholders.

As a roadmap for future research it seems to be promising to exploit the additional information

about the efficient peers from the efficiency analysis to cluster the utilities into different groups. This additional information can also be a starting point for a more detailed investigation of single utilities in the form of case studies.

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