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An Empirical Investigation of the Determinants of Firm Financial Performance

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Abstract

In this paper, we examine potential determinants of firm financial performance using data from 177 USA listed companies for three distinct periods; prior to GFC, during the GFC, and post GFC. Based on the literature we have selected a number of possible determinants and have categorized them into four different groups to facilitate the analysis. They are; (i) executive director and CEO remuneration and incentivisation factors, (ii) institutional ownership factors, (iii) board practice and diversity factors, (iv) remuneration committees and remuneration consultants' factors. The market capitalisation (MCAP) is used as the dependent variable because actual profits and profit forecasts through continuous market disclosure have an immediate influence on share price, which in turn alters the MCAP of the respective company. Based on the results, the study concludes that for all three periods covered executive director and CEO remuneration variables are the most important determinants of financial performance of listed companies.

Keywords: Financial Performance, MCAP, Remuneration

1. Introduction

This study examines the determinants of financial performance of 177 publicly listed companies in the USA. Based on the theoretical and empirical literature we have selected 17 different factors as possible explanatory variables but have categorized them into four different groups to facilitate the analysis. They are; (i) executive director and CEO remuneration and incentivisation factors, (ii) institutional ownership factors, (iii) board practice and diversity factors, (iv) remuneration committees and remuneration consultants' factors. The study uses their different financial performance variables as the dependent variable. The levels of market capitalisation (MCAP) is used as the dominant dependent variable because actual profits and profit forecasts through continuous market disclosure have an immediate influence on share price, which in turn alters the MCAP of the respective company. The net profit after tax (NPAT) and earnings before interest and tax (EBIT) are the other two financial performance variables that we have used in this study. Below we have provided a brief description of four groups of independent variables that are included in the study. There are ten distinct, but related variables in the executive remuneration and incentivisation group. Five of them are related to the CEO remuneration component while the other five belong to the executive component. Despite substantial differences in remuneration packages across firms in in the USA, most executive compensation packages contained five basic components: fixed salary, short-term incentive plans, long-term incentive plans, share option grants and share grants. We will include all these five components to evaluate the impact of executive payments on the financial performance of listed companies. Details of these five components of the fixed salary, short term incentives, long term incentives, shareholdings, and share options are provided in the data and the methodology section. The rationale of incorporating executive remuneration factors in the financial performance function can be understood from the agency issue concept. Company executives act as agents for shareholders and expected to act in the best interest of shareholders. An efficient employment contract is supposed to incentivise executives to act in the best interest of shareholders and to strive to enhance the financial performance of the firm. It is expected that possible conflict between the motives of managers and the owners or the agency issue can be mitigated using a properly structured executive remuneration package. The second group measures the importance of institutional shareholding on financial performance of a company. Substantial shareholders can increase the efficiency of the management and in turn could result in enhancement of financial performance of listed companies. The role of institutional investors is to engage in and provide active monitoring when it is difficult for smaller investors to do so, as well as to enforce corporate governance ideals on the board toward greater disclosure, transparency and accountability. The incentive for institutional shareholders to do so is a greater level of engagement and control over their respective investments, and to move the firm toward alignment of managerial and shareholder interests and firm financial performance. Major shareholders can pressure the board and managers to structure firm decision-making around strategy and goals in the interests of shareholders. The third group of variables attempts to measure the impact of board practice and diversity factors

on the financial performance of a firm. This group altogether contains four explanatory variables. The board diversity is represented by a single variable that the percentage of overall board members those are male while the board practice subgroup consists of three other variables. Despite decades of anti-discriminatory policies, it appears that gender remuneration gap is still universal. Whilst the gender gap is pervasive, the magnitude of the problem varies across the industries, occupations, and levels of seniority. In industrial countries this gap ranges from 15% in the EU (Commission of the European Communities, 2007), 17% in the UK Equal Opportunities Commission, 2005), and 23% in the USA DeNavas-Walt et al. (2006) We include a broad diversity variable in the model to see if it has any significant effect on the financial performance of publicly listed companies. In relation to the board practice variables, two dummy variables are used to examine whether the financial performance is also linked to having a board independent chair and CEO/chair duality. The last variable in the subgroup is the percentage of board members that are executive board members. In the last group, we examine the impacts of remuneration committees and remuneration consultant factors on the financial performance of a company. Based on the literature, there is inadequate evidence that financial performance is positively related to remuneration committees. The requirement of understanding the impact upon remuneration committees' decision-making around such factors as shareholder activism can be seen phenomena identified in extant corporate governance literature (Spira & Bender, 2004). The embryonic nature of this situation means that the onus is on researchers to better understand how remuneration committees themselves are responding to these changes and affecting company performance. Similarly, there seems to be no substantive evidence that the use of a remuneration consultant in concurrence with the remuneration committee in setting the executive board members and CEO remuneration packages has a relationship with financial performance. More empirical evidence is needed to test the hypotheses that there is no relationship between firms' financial performance and remuneration consultants.

2. Literature Review

A comprehensive review on the literature on all these factors of financial performance is beyond the scope of this paper. In this brief review, we have highlighted only a handful of existing studies on selected determinants with a major focus on the executive director and CEO remuneration and incentivisation factors on the company performance. As far as the USA companies are concerned, (Wells, 2009) disclosed that historically, before the 20th century, there was no debate over executive compensation, for there were no executives, at least as the term is understood in contemporary discourse. The great majority of business enterprises were comparatively small, run by managers who had significant ownership stakes and whose economic rewards came chiefly through that ownership rather than a fixed salary or similar compensation. (Wells, 2009) declared that if a firm needed to recruit new managers from outside its circle of ownership then managers were typically promised or given ownership interests when they were recruited or when they were ascending the ranks. Numerous studies have examined the relationship of executive remuneration and corporate performance. Most of these studies have focused on the CEO remuneration by largely ignoring the category of executive director compensation. In the literature examined, Nelson

et al. (2011), first, asserted that the levels of CEO remuneration have indeed been a controversial issue, spanning at least the last 30 years, with an increasing level of high-profile corporate collapses occurring worldwide. Further documented were the concerns of shareholders and shareholder groups that, during periods of corporate collapses, CEO remuneration packages were excessive and inappropriate considering the circumstances surrounding the company. Second, further concerns of the shareholders were that excessive CEO remuneration packages were viewed as opportunistic and short term, and that there was a gross misalignment of remuneration incentives and shareholder returns. (Fels, 2010) claimed the GFC has again brought much attention and scrutiny to CEO remuneration packages and that CEO remuneration was one of the causes of the GFC. In the ongoing debate about executive remuneration, as argued by Lazarides et al. (2008) citing (Ruiz-Verdú & Singh, 2014) that critics of current remuneration practices argued that remuneration packages are designed to facilitate rent extraction by managers rather than to provide those managers incentives to maximize shareholder wealth. In this debate attention has been directed to the use of hidden or camouflaged forms of remuneration, which appear to be inconsistent with the maximization of shareholder value (Bebchuk & Jackson, 2005) and (Hermalin & Weisbach, 2007). Since boards of directors contribute to setting executive remuneration and monitor management, the debate about executive remuneration has brought to the fore the unresolved question of board incentives: What determines the incentives for executive board directors? And how do those incentives affect director's choice of executive remuneration packages? Despite the key role played by the board of directors, the theoretical analysis of director incentives has been limited. In particular, whilst executive remuneration is not set by shareholders but by the board of directors in conjunction with the remuneration committee and remuneration consultants, the agency problem between shareholders and the board in the determination of executive remuneration can often be ignored, at least as a first approximation, with the argument (Fama,1980) and (Fama & Jensen, 1983a) that reputation concerns by board directors align their incentives with those of shareholders and the excess CEO remunerations leads to negative press coverage of firms' remuneration practices Core et al. (2008). Core et al. (2008) found that firm's reduced stock option remuneration the form of remuneration receiving the greatest attention by the press in the period 1997-2004 following generally negative press coverage of executive remuneration. The predictions of the model shed new light on empirical results relating corporate governance and pay-performance sensitivity. For example, (Bertrand & Mullainathan, 2001) and (Hartzell & Starks 2003), found that remuneration performance sensitivity is greater in firms with a large shareholder or high institutional ownership concentration. (Bertrand & Mullainathan, 2001) and (Hartzell & Starks, 2003) theory suggested that the higher remuneration performance sensitivity in firm's with higher institutional ownership may not be optimal and thus, may not be considered as a standard of good practice, but rather a way for the boards of these firms to signal their independence to investors. (Jensen, 1993) further commented that, in line with common protocol, the general purpose of the firm's board of directors is to provide guidance and review and to evaluate management performance to establish executive remuneration as well as to otherwise protect the interests of shareholders. The existing literature, as cited below, examined firm governance problems which inhibit effectiveness of directors. Prior to 2000,

there were numerous studies examining the relationship of executive remuneration to corporate governance practices, for example, (Murphy, 1985; Main, 1993; Carmichael, 1983; Greenbury, 1995; Conyon, 1998). Post the year 2000, there was more scrutiny on managerial remuneration by researchers such as (Renneboog & Zhao, 2011; Penin, 2005). All these studies examined executive remuneration from, as discussed above, an ex-ante perspective; few studies are found that examine executive remuneration and financial performance from an ex post perspective. (Murphy, 1999) argued that it is for this reason that there is a limitation of existing literature, as evidenced above, which provides the motivation of this study, to investigate the association between executive director and CEO remuneration and other prior influences and corporate financial performance in a multi-country setting. Other studies in this area include Armstrong et al. (2013) on the efficacy of shareholder voting and evidence from equity compensation plans; (Fried 2011), share repurchases, equity issuances and the optimal design of executive remuneration; (Peng & Röell, 2008), manipulation and equity-based compensation; and (Cheng & Warfield, 2005), equity incentives and earnings management. In relation to other determinants, (Lorsch & Zelleke, 2005) asserted that, because of corporate scandals, regulators and reformers are progressively demanding that the role of the CEO be separated from that of the chair so CEO duality can be an important factor. Advocates asserted that having an independent chair results in superior monitoring by the board. CEOs become more effective leaders when the two positions are separated, because it allows them to concentrate on the firm's operations whilst authorising the board. (Lorsch & Zelleke, 2005) further examined several interrelated issues with the purpose of providing input to the debate on the dual role of CEOs. (Pozen, 2006) claimed that whilst the benefits of the separation of the CEO-chair positions were publicised, firms can profit from one individual holding a dual position in several ways. First, a CEO who is also the leader of the board is in a commanding position to oversee the directions of a firm relatively unopposed. (Ogbechie, 2012) asserted conflict situations are more likely to arise when a CEO is at odds with an independent chair about the future of the company. A CEO-Chair faces less opposition from the board when initiating major changes within the company than when the two top leadership positions are separated. Second, one of the fundamental duties of a board as outside experts is to advise and monitor the top management team, according to Linck et al. (2008) and (Raheja, 2005). (Jensen, 1993) and (Finkelstein & D'Aveni, 1994) contended that whilst there are potential benefits from having a dual leadership structure, such arrangements also impose costs. As the chair, the CEO is more powerful because they have a strong say in matters of governance in deciding the agenda, setting board meetings, making re-appointment decisions, and selecting various subcommittees such as audit, remuneration and nominating committees. A common perception is that CEO-chairs exploit their power to extract private benefits, including increasing remuneration or other forms of perquisite consumption. This posits that CEO-chairs are less likely to use their power for personal reasons when firms have strong corporate governance mechanisms. Whilst powerful CEOs are given a free hand in the firm's operating decisions for firms with dual leadership structures, having robust governance ensures that CEOs do not misuse the power to enhance their personal welfare. Also discussed was whether remuneration incentivisation of a duality position improved corporate financial performance. A key initiative of executive directors and the CEO are corporate strategies and

whether these strategies are linked with incentives; agency theory; transactions cost theory; authority and delegation; decentralisation; and property rights theory and whether they are efficient and effective. Market performance measures maintained that managerial accounting which is relevant because management accounting determines firm financial performance, where financial accounting reports it was evolving to encompass a more strategic approach that emphasised the identification, measurement and management of the key financial and non-financial drivers of strategic success and shareholder value. Executive remuneration and risk were discussed, including structuring CEO incentives to maximise shareholder value in a levered firm, which tends to encourage excessive risk-taking. Financial performance and risk were discussed, including views on whether there was a genuine correlation between the two elements, and whether differing levels of risk should result in differing levels of financial performance in core and competing firms. The chapter discussed combining executive remuneration, financial performance and risk, looking at whether there was correlation between the three elements, whether the corporate risk taken justified the executive remuneration and performance, and whether the remuneration and financial performance justified the corporate risk taken. Lastly, the chapter discussed firm financial performance measures and how these measures encapsulated all the related elements. There is discussion in the literature on the relationship between institutional ownership, executive remuneration and firm financial performance (Hartzell & Starks, 2003; Brick et al., 2006; Chhaochharia & Grinstein, 2009; Fahlenbrach, 2009), although they have shown inconclusive evidence so far. (Hartzell & Starks, 2003) revealed one important factor in firms' corporate governance: institutional investors can actively monitor the process of evaluating and rewarding managerial performance. (Gillan & Starks, 2000) stated institutions, however, have traditionally paid more attention to improving general corporate governance than executive remuneration itself. Impacts of intuitional ownership on financial performance has also been examined heavily. Although many theoretical studies argued that the involvement of large shareholders can play a considerable role in limiting firms' agency problems, (Shleifer & Vishny, 1986) and (Grossman & Hart, 1980) highlighted that it is not cost-effective for small and atomistic shareholders to monitor firms' management. Correspondingly, prior research that scrutinised the effect of institutional investors on executive remuneration (Hartzell & Starks, 2003); Almazan et al. (2005) measured institutional investor influence through the strength of large institutional ownership (e.g., holdings by top 5 institutional investors in the firm). Further, (Shin, 2005) proclaimed that prior research on whether institutional investors influence executive remuneration practice in accordance with shareholder preferences had mixed results. Prior studies mainly addressed two issues: (1) whether institutional ownership concentration was positively related to pay-for-performance sensitivities, and (2) whether institutional ownership concentration was negatively associated with the level of executive remuneration. Hartzell and Starks (2003) documented increased pay-for-performance sensitivities and decreased levels of executive remuneration with high institutional ownership concentration David et al. (1998). Almazan et al. (2004) found that (Hartzell & Starks, 2003) findings were determined by ownership concentration of pressure-resistant institutional investors. Institutions, however, have conventionally paid more attention to improving general corporate governance than executive remuneration itself (Gillan & Starks, 2000).

Based on the literature, there seems to be no substantial evidence that institutional ownership and executive remuneration has a relationship with financial performance. Numerous studies also exist on the impacts of remuneration committee and remuneration consultants on financial performance of a company. Based on the literature (Chhaochharia & Grinstein, 2009; Getmanenko, 2010; Laksmana, 2008), there is inadequate evidence that financial performance is positively related to remuneration committees. The requirement of understanding the impact upon remuneration committees' decision-making around such factors as shareholder activism can be seen phenomena identified in extant corporate governance literature (Spira & Bender, 2004). Pleas for more transparency and accountability in corporate governance reflect how remuneration committees are under ever-increasing scrutiny, yet research reveals how puzzling results emerge in the responses by remuneration decision-makers to their changing context. Similarly, (Goh & Gupta, 2010) argued that there is unconvincing evidence that financial performance is positively related to remuneration consultants. Nevertheless, there are instances where companies choose to use different consultants for different parts of the package. Alternatively, companies may employ two firms of consultants because one is being used to review existing schemes, to provide an opinion on whether they are still appropriate (Murphy & Sandino, 2010). Based on the literature, there seems to be no substantive evidence that the use of a remuneration consultant in concurrence with the remuneration committee in setting the executive board members and CEO remuneration packages has a relationship with financial performance. (Suchman, 1995) argued that, in addition to the stated objective of advice on structuring packages, an important reason for using consultants is to create legitimacy for the committee's decisions on executive remuneration. This potential bias means that regulators also see the need for independent advice to the committee. This paper raises some important research questions, which are linked to prior literature that we have discussed so far. As explain earlier, we expect to see whether the factors such as executive incentivisation, institutional ownership, board practice, remuneration committees and remuneration consultants do affect the financial performance of publicly listed companies in the USA.

3. Data and the Methodology

The data in the study covers a period from FYE 2001 to FYE 2012 of 177 of publicly listed companies in the USA. The companies selected for the study comprise a random selection from six different sectors: resources, manufacturing, technology, energy, retail, and services. The data is extracted from company annual reports and the financial databases Fin Analysis and Factiva. The aim of this study is to empirically identify statistically significant factors of financial performance of publicly listed companies. One of the critical components of this study is the selection of a performance variable or the dependent variable of the panel regression model. As far as existing studies are concerned, there is no consensus on what a proper measure of financial performance variable is. We have used three different measures as proxies for the firms' financial performance. They are; (i) market capitalization (MCAP), (ii) earnings before interest and tax (EBIT), and net profit after tax (NPAT). In addition to several remuneration variables as independent variables, we have also included the Tobin's Q as a control variable in the estimation. It is a statistic that might serve as a proxy for the firm's

value from an investor's perspective. By definition, it is the ratio between the market value of the firm's assets and the replacement value of those assets. The Tobin's Q has been employed particularly to explain several diverse corporate phenomena. Other independent variables are not discussed at length here, but a summary of them is given in Table 1.

Table 1. Independent Variables

Independent Variable	Operationalisation
Board Diversity (BRDDIV) Expected Relationship Plus	Board Diversity (BRDDIV) is the total Percentage of overall board members those are male and female.
Board Independent Chair (BRDCHAIR) Expected Relationship Plus	Through the use of a dummy variable 0 will indicate there is no Board Independent Chair (BRDCHAIR) and one will indicate there is a Board Independent Chair.
CEO Fixed Salary (CEOFIXSAL) Expected Relationship Minus	CEO Fixed Salary (CEOFIXSAL) is the proportion of executive director that is paid as a fixed sum not tied to or dependent on financial performance related criteria.
CEO Long Term Incentive (CEOLTI) Expected Relationship Minus	CEO Long Term Incentive (CEOLTI) is the proportion of salary that is tied to the long term financial performance of the firm, usually greater than 12 months.
CEO Short Term Incentive (CEOSTI) Expected Relationship Minus	CEO Short Term Incentive (CEOSTI) is the proportion of salary that is tied to the short term financial performance of the firm, usually less than 12 months.
CEO Share Holdings (CEOSH) Expected Relationship Minus	CEO Share Holdings (CEOSH) is the level of shareholdings that are currently held.
CEO Share Options (CEOSO) Expected Relationship Minus	CEO Share Options (CEOSO) is the level of share options that are currently held.
CEO/Chair DUALITY (DUALITY) Expected Relationship Plus	Through the use of a dummy variable 0 will indicate there is no CEO/Chair DUALITY (DUALITY) and one will indicate there is CEO/Director DUALITY.
Executive Director Fixed Salary (EDFIXSAL) Expected Relationship Minus	Executive Director Fixed Salary (EDFIXSAL) is the proportion of executive director that is paid as a fixed sum not tied to or dependent on financial performance related criteria.
Executive Director Long Term Incentive (EDLTI) Expected Relationship Minus	Executive Director Long Term Incentive (EDLTI) is the proportion of salary that is tied to the long term financial performance of the firm, usually greater than 12 months.
Executive Directors Share Holdings (EDSH) Expected Relationship Minus	Executive Director Share Holdings (EDSH) is the level of shareholdings that are currently held.
Executive Directors Share Options (EDSO) Expected Relationship Minus	Executive Director Share Options (EDSO) is the level of share options that are currently held.
Executive Director Short Term	Executive Director Short Term Incentive (EDSTI) is the

Incentive (EDSTI) Expected Relationship Plus	proportion of salary that is tied to the short term financial performance of the firm, usually 12 months.
Executive Director (EXECDIR) Expected Relationship Plus	Executive Director Board Members (EXECDIR) is the total percentage of overall board members that are executive board members.
Institutional Shareholders (ISHARE) Expected Relationship Plus	Institutional Shareholders Per cent (ISHARE) is the total percentage of overall ordinary share ownership held by institutions. Non-Institutions are defined as natural persons.
Remuneration Committee (REMCOM) Expected Relationship Plus	Through the use of a dummy variable 0 will indicate there is no Remuneration Committee (REMCOM) and one will indicate there is a Remuneration Committee.
Remuneration Consultant (REMCON) Expected Relationship Plus	Through the use of a dummy variable 0 will indicate there is no Remuneration Consultant (REMCON) and one will indicate there is a Remuneration Consultant.

As noted earlier, there are three performance variables (MCAP, NPAT, and EBIT), so that we have three different dependent variables to estimate the performance equation. However, as the explanatory variables are the same for all three equations, we only specify the equation for one of the three performance variables, MCAP. The other two equations can be obtained by replacing MACP with EBIT or NPAT in equation (1). We also estimate the relationship for three distinct time frames: which respectively denote 2001–07 (which is referred to as pre-GFC), 2008–09 (GFC) and 2010–12 (post-GFC). The purpose is additional step is to examine whether the relationship between executive remuneration and financial performance has changed during and after the GFC.

$$MCAP_{it} + \propto_i + \beta_1 BRDCHAIR_{it} + \beta_2 BRDDIV_{it} + \beta_3 CEOFIXED_{it} + \beta_4 CEOLIT_{it} + \beta_5 CEOSH_{it} + \beta_6 CEOSTI_{it} + \beta_7 EDFIXED_{it} + \beta_8 EDLTI_{it} + \beta_9 EDSH_{it} + \beta_{10} EDSO_{it} + \beta_{11} EDSI_{it} + \beta_{12} EXECDIR_{it} + \beta_{13} ISHARE_{it} + \beta_{14} TOBINSQ_{it} + \beta_{15} REMCOM_{it} + \beta_{16} REMCON_{it} + \beta_{17} DUALITY_{it} + \varepsilon_{it} \quad (1)$$

As the data sample contains the combination of both time-series data and cross-sectional data we have used panel regression approach to estimate the models. We have considered all three main panel estimation methods (pooled, fixed effects and random effects) in this study. The pooled ordinary least square model was not considered appropriate for this study as it assumes that the regression coefficients for all six categories of companies studied here are the same and that there are no differences between the sectors whether it is a retail company or a mining company. The sectors studied are all unique, and therefore the results would have been biased and inconsistent if they were estimated in a pooled setting. It is hard to expect that the performance of a retail company and a resource company to respond identically to a change in one of the determinants of financial performance function. As indicated above, a fixed effects model can also be used to estimate performance equation based on this panel data set. Compared to the pooled method, these two models allow for heterogeneity between the entities studied (Gujarati & Porter 2009). Following the literature, a Hausman (1978) test was conducted to choose between the fixed effects model and the random effects models.

Results confirm the suitability of the fixed effects method in estimating the models. Accordingly, the fixed effects model is used to estimate company performance equations. There are three different versions for each performance variable. For instance, for MACP, we estimate performance equations for three distinct periods; prior to GFC, during the GFC, and post GFC. Accordingly, we have nine different performance equations. However, results are shown only for three cases of MCAP. As results seem largely invariant to the choice of the performance variable, reporting the other six tables is considered unnecessary.

Table 2. MCAP Determinants USA 2001 – 2007

Variable	Coefficient	Std. Error	t-Statistic	Prob
BRDCHAIR	-6534.890	562.8248	-11.61088	0.0000
BRDDIV	2731.666	1713.098	1.594576	0.1108
CEOFIXED	874.2664	176.2534	4.960281	0.0000
CEOLTI	263.9187	82.26801	3.208036	0.0013
CEOSH	12.91385	0.039561	326.4266	0.0000
CEOSTI	690.7891	412.8238	1.673326	0.0943
DUALITY	2595.554	1617.967	1.604207	0.1087
EDFIXED	7.664855	94.62429	0.081003	0.9354
EDLTI	122.5515	58.16097	2.107109	0.0351
EDSTI	-187.9228	160.7447	-1.169076	0.2424
EXECDIR	-25094.52	1433.208	-17.50934	0.0000
ISHARES	-2364.965	741.9291	-3.187589	0.0014
REMCOM	2485.801	1109.457	2.240557	0.0251
REMCON	-1686.110	918.8738	-1.834975	0.0665
TOBINSQ	-1106.211	33.39014	-33.12988	0.0000
R-squared	0.753756	Mean dependent var		28964.39
Adjusted R-squared	0.753679	S.D. dependent var		55633.48
Durbin-Watson stat	2.147144			

Table 3. MCAP Determinants USA 2008 – 2009

Variable	Coefficient	Std. Error	t-Statistic	Prob
BRDCHAIR	-6534.890	1053.392	-6.203663	0.0000
BRDDIV	2731.666	3206.264	0.851978	0.3942
CEOFIXED	874.2664	329.8788	2.650266	0.0081
CEOLTI	263.9187	153.9742	1.714045	0.0865
CEOSH	12.91385	0.074044	174.4089	0.0000
CEOSTI	690.7891	772.6480	0.894054	0.3713
DUALITY	2595.554	3028.214	0.857124	0.3914
EDFIXED	7.664855	177.1004	0.043280	0.9655
EDLTI	122.5515	108.8550	1.125823	0.2603
EDSTI	-187.9228	300.8525	-0.624634	0.5322

EXECDIR	-25094.52	2682.415	-9.355195	0.0000
ISHARES	-2364.965	1388.607	-1.703120	0.0886
REMCOM	2485.801	2076.477	1.197124	0.2313
REMCON	-1686.110	1719.779	-0.980422	0.3269
TOBINSQ	-1106.211	62.49354	-17.70121	0.0000
R-squared	0.753756	Mean dependent var		28964.39
Adjusted R-squared	0.753485	S.D. dependent var		55635.04
Durbin-Watson stat	2.147024			

Table 4. MCAP Determinants USA 2010 – 2012

Variable	Coefficient	Std. Error	t-Statistic	Prob
BRDCHAIR	-6534.890	859.9221	-7.599398	0.0000
BRDDIV	2731.666	2617.389	1.043661	0.2967
CEOFIXED	874.2664	269.2920	3.246537	0.0012
CEOLTI	263.9187	125.6947	2.099681	0.0358
CEOSH	12.91385	0.060444	213.6484	0.0000
CEOSTI	690.7891	630.7404	1.095203	0.2734
DUALITY	2595.554	2472.040	1.049964	0.2937
EDFIXED	7.664855	144.5734	0.053017	0.9577
EDLTI	122.5515	88.86230	1.379117	0.1679
EDSTI	-187.9228	245.5968	-0.765168	0.4442
EXECDIR	-25094.52	2189.753	-11.45998	0.0000
ISHARES	-2364.965	1133.570	-2.086298	0.0370
REMCOM	2485.801	1695.104	1.466460	0.1425
REMCON	-1686.110	1403.918	-1.201003	0.2298
TOBINSQ	-1106.211	51.01574	-21.68373	0.0000
R-squared	0.753756	Mean dependent var		28964.39
Adjusted R-squared	0.753575	S.D. dependent var		55634.31
Durbin-Watson stat	2.147080			

4. Discussion of Results

In this paper, we have estimated financial performance equation for three different periods of pre-GFC, GFC, and post-GFC for USA listed companies. Results are shown in Table 1, 2, 3 respectively. A casual observation of the coefficients of determination and the statistical significance of major coefficients suggest that the selected model specification is quite satisfactory for the research purpose. For example, in all three models, the adjusted r-squared value exceeds 0.75 indicating that more than 75 percent of the variation in financial performance variable is explained by the selected model specification.

The main objective of this study was to identify the determinants of financial performance of

publicly listed companies in the USA. As explained in the data description section as well as in the introduction, we have 17 variables in each model, but they could be categorized into four groups. The first group is divided into two subgroups; remuneration variables linked to CEOs and those that are linked to other executives of the company. Interestingly, the majority of variables that we use to control for CEO remuneration is statistically significant. For instance, the estimated coefficient of CEOSH (the percentage of CEO shareholding that is currently held) is 12.9 and the p-value of the coefficient is 0.00 which suggests that one percent increase in CEO's shareholding would increase the MC of a firm by $12 million and this is statistically significant virtually at any level. Similarly, the fixed salary component as well as long term incentives offered to CEOs are positively related to the financial performance of the company. Statistical significance is stronger for both the CEO shareholdings and the fixed salary component compared to the long-term incentive component of remuneration package. This is contrary to what we have expected at the outset. In general, the fixed salary component should share a weaker link with the financial performance of a company compared with the longer-term benefits. In addition, we have found no noticeable change in the impacts of fixed salary component on the financial performance for all three time periods that we have investigated; pre-GFC, GFC, and post-GFC. Hence, there is no statistical evidence to reject the null hypothesis that GFC has altered the direction and the magnitude of the relationship between executive remuneration and financial performance of USA listed companies. This is equally true for CEO remuneration variables. As far as the other subgroups and variables are concerned, results are either statistically insignificant or conflicting to the established literature. For example, while the coefficient of independent board chair is statistically significant for all three models, the direction between the two variables is negative. The same is true with the institutional shareholdings. In relation to the impacts of remuneration committees on financial performance, we have found some mixed evidence. Estimation results based on pre-GFC data, points to a large positive relationship between remuneration committee variable and firm financial performance. However, the significance of this nexus has diminished during and after the Global Financial Crisis.

5. Conclusion

This study examined the determinants of firm financial performance by utilizing a panel data set of 177 publicly listed USA companies over 2001-2012 period. The paper analysed 17 different possible explanatory variables, under four different groups. They are; (i) executive director and CEO remuneration and incentivisation factors, (ii) institutional ownership factors, (iii) board practice and diversity factors, (iv) remuneration committees and remuneration consultants' factors. Based on the results, the study concludes that for all three periods covered executive director and CEO remuneration variables exert a significant influence on firm financial performance. The policy implication of this research is that a well-structured CEO remuneration package can be used to improve financial performance of a company.

Within the jurisdiction of the USA, the contributions of this paper are (i) examining the differences between a select group of variables applied in a corporate setting and discovering and discussing how these variables behave under controlled circumstances. (ii) the study

extends over a multi period time period as discussed previously, being pre-GFC, GFC and post GFC. (iii) provides contemporary results that can be benchmarked against current reporting, legislation and media reports to test accuracy and validity moving forward to the future, and to implement required refinements to ensure a closer association between the variables of the study. (iv) examined incentivisation of executive directors and CEOs of public listed firms and the influence on the financial performance of firms. The study found that in all jurisdictions of the study that for the three (3) periods' covered incentivisation of executive director and CEO remuneration in the majority does have significant influence of firm financial performance. (v) examined institutional ownership and the influence on the financial performance of firms. (vi) examined board practice and the influence on the financial performance of firms. (vii) examined remuneration committees and the influence on the financial performance of firms. (viii) examined remuneration consultants and the influence on the financial performance of firms. (ix) examined pooled least squares analysis of the influence on the financial performance of firms.

References

Almazan, A., Hartzell, J. C., & Starks, L. T. (2005). Active Institutional Shareholders and Costs of Monitoring: Evidence from Executive Compensation. *Financial Management, 34*(4), 5-34. https://doi.org/10.1111/j.1755-053X.2005.tb00116.x

Armstrong, C. S., Gow, I. D., & Larcker, D. F. (2013). The efficacy of shareholder voting: evidence from equity compensation plans. *Journal of Accounting Research, 51*(5), 909-950. https://doi.org/10.1111/1475-679X.12023

Bebchuk, L. A., & Jackson, R. J. (2005). *Executive pensions (No. w11907)*. National Bureau of Economic Research. https://doi.org/10.3386/w11907

Bertrand, M., & Mullainathan, S. (2001). Are CEO's Rewarded for Luck: The Ones Without Principals Are. *Quarterly Journal of Economics, 116*(3), 901-932. https://doi.org/10.1162/00335530152466269

Brick, I. E., Palmon, O., & Wald, J. K. (2006). CEO Compensation: Director Compensation, and Firm Performance: Evidence of Cronyism?. *Journal of Corporate Finance, 12*(3), 403-23. https://doi.org/10.1016/j.jcorpfin.2005.08.005

Carmichael, L. (1983). Firm Specific Human Capital and Promotion Ladders. *Bell Journal of Economics, 14*(1), 251-258. https://doi.org/10.2307/3003551

Cheng, Q., & Warfield, T. D. (2005). Equity Incentives and Earnings Management. *The Accounting Review, 80*, 441-476. https://doi.org/10.2308/accr.2005.80.2.441

Chhaochharia, V., & Grinstein, Y. (2009). CEO compensation and board oversight. *Journal of Finance, 64*(1), 231-61. https://doi.org/10.1111/j.1540-6261.2008.01433.x

Conyon, M. (1998). Directors Pay and Turnover: An Application to a Sample of Large UK Firms. *Oxford Bulletin of Economics and Statistics, 60*(4), 485-507. https://doi.org/10.1111/1468-0084.00110

Core, J. E., Guay, W., & Larcker, D. F. (2008). The power of the pen and executive compensation. *Journal of Financial Economics, 88*, 1-25. https://doi.org/10.1016/j.jfineco.2007.05.001

David, P., Kochhar, R., & Levitas, E. (1998). The effect of institutional investors on the level and mix of CEO compensation. *Academy of Management Journal, 41*, 200-208. https://doi.org/10.2307/257102

DeNavas-Walt, C., Proctor, B. D., & Lee, C. H. (2006). *US Census Bureau, Current Population Reports: Income, Poverty, and Health Insurance Coverage in the United States,* 2005. Washington, DC: US Government Printing Office. pp. 60-231. https://doi.org/10.1037/e615712007-001

EU Commission of European Communities, (2007).

Fahlenbrach, R. (2009). Shareholder Rights, Boards, and CEO Compensation. *Review of Finance, 13*(1), 81-113. https://doi.org/10.1093/rof/rfn011

Fama, E. F. (1980). Agency problems and the theory of the firm. *Journal of Political Economics, 88*, 288-307. https://doi.org/10.1086/260866

Fama, E., & Jensen, M. (1983a). Agency problems and residual claimed. *Journal of Law and Economics, 26*, 327-349. https://doi.org/10.1086/467038

Fels, A. (2010). Executive Remuneration in Australia. *Australian Accounting Review, 20*, 76-82. https://doi.org/10.1111/j.1835-2561.2010.00081.x

Finkelstein, S., & D'aveni, R. A. (1994). CEO duality as a double-edged sword: How boards of directors' balance entrenchment avoidance and unity of command. *Academy of Management journal, 37*(5), 1079-1108.

Fried, J. M. (2011). Share Repurchases, Equity Issuances, and the Optimal Design of Executive Pay. *Texas Law Review, 89*(5), 1113. https://doi.org/10.5465/256667

Getmanenko, S. (2010). Executive Compensation: The Law and Incentives. *Wake Forest Intellectual Property Law Journal, 11*(1), 2010-2011.

Gillan, S. L., & Starks, L. T. (2000). Corporate Governance Proposals and Shareholder Activism: The Role of Institutional Investors. *Journal of Financial Economics, 57*, 275-305. https://doi.org/10.1016/S0304-405X(00)00058-1

Goh, L., & Gupta, A. (2010). Executive Compensation, Compensation Consultants, and Shopping for Opinion: Evidence from the UK. *Journal of Accounting, Auditing and Finance, 25*(4), 607-643. https://doi.org/10.1177/0148558X1002500407

Greenbury, R. (1995). *Directors' Remuneration: Report of the Study Group*. Gee Publishing, London, pp. 1-54.

Grossman, S., & Hart, O. (1980). Takeover bids, the free rider problem, and the theory of the corporation. *Bell Journal of Economics, 11*, 42-64. https://doi.org/10.2307/3003400

Gujarati, D. N. (2009). *Basic econometrics.* Tata McGraw-Hill Education.

Hartzell, J., & Starks, L. (2003). Institutional investors and executive compensation. *Journal of Finance, 58*(6), 2351-2374. https://doi.org/10.1046/j.1540-6261.2003.00608.x

Hausman, J. (1978). Specification tests in econometrics. *Econometrica, 46*(6), 1251-1271. https://doi.org/10.2307/1913827

Hermalin, B. E., & Weisbach, M. S. (2007). *Transparency and corporate governance.* National Bureau of Economic Research. https://doi.org/10.3386/w12875

Jensen, M. C. (1993). The Modern Industrial Revolution: Exit, and the Failure of Internal Control Systems. *Journal of Finance, 48*(3), 831-80. https://doi.org/10.1111/j.1540-6261.1993.tb04022.x

Laksmana, I. (2008). Corporate Board Governance and Voluntary Disclosure of Executive Compensation Practices. *Contemporary Accounting Research, 25*(4), 2008. https://doi.org/10.1506/car.25.4.8

Lazarides, T. G., Drimpetas, E., & Koufopoulos, D. N. (2008). Executive Board Members' Remuneration: A Longitudinal Study. *Corporate Ownership and Control, 6*, 94-103. https://doi.org/10.22495/cocv6i3p9

Linck, J. S., Netter, J. M., & Yang, T. (2008). The determinants of board structure. *Journal of financial economics, 87*(2), 308-328.

Lorsch, J. W., & Zelleke, A. (2005). Should the Chairman and CEO Jobs Be Split?. *Sloan Management Review, 46*(2), 71-74.

Main, B. G. M., & Johnston, J. (1993). Remuneration committees and corporate governance. *Accounting and Business Research, 23*(91A), 351-62. https://doi.org/10.1080/00014788.1993.9729903

Murphy, K. (1985). Corporate performance and managerial remuneration: An empirical analysis. *Journal of Accounting and Economics, 7*, 11-42. https://doi.org/10.1016/0165-4101(85)90026-6

Murphy, K. J. (1999). *Chapter 38 Executive compensation.* In: Orley, C. A., & David, C. (Eds.), Handbook of Labor Economics, pp. 2485-2563, Elsevier. https://doi.org/10.1016/S1573-4463(99)30024-9

Murphy, K. J., & Sandino, T. (2010). Executive pay and 'independent' compensation consultants. *Journal of Accounting and Economics, 49*, 247-262. https://doi.org/10.1016/j.jacceco.2009.12.001

Nelson, J., Gallery, G., & Reza, P. (2011). *The Impact of Corporate Governance on CEO Remuneration in the aftermath of the GFC.* School of Accountancy, QUT, Brisbane, QLD.

Ogbechie, C. I. (2012). *Key determinants of effective board of directors-evidence from Nigeria.*

Peng, L., & Röell, A. A. (2008). Manipulation and Equity-Based Compensation. *American Economic Review, 98*(2), 285-90. https://doi.org/10.1257/aer.98.2.285

Penin, J. (2005). Patent Verses Ex Post Rewards: A New Look. *Research Policy, 34*(5), 641-656. https://doi.org/10.1016/j.respol.2005.02.005

Pozen, R. C. (2006). Before you split that CEO/Chair. *Harvard Business Review, 84*(4), 26-28.

Raheja, C. (2005). Determinants of board size and composition: A theory of corporate boards. *Journal of Financial and Quantitative Analysis, 40*(2), 283-306. https://doi.org/10.1016/j.jfineco.2007.03.004

Raheja, C. (2005). Determinants of board size and composition: A theory of corporate boards. *Journal of Financial and Quantitative Analysis, 40*(2), 283-306. https://doi.org/10.1017/S0022109000002313

Renneboog, L., & Zhao, Y. (2011). Us knows us in the UK: On director networks and CEO compensation. *Journal of Corporate Finance, 17*, 1132-1157. https://doi.org/10.1016/j.jcorpfin.2011.04.011

Ruiz-Verdú, P., & Singh, R. (2014). *Board reputation, CEO pay, and camouflaged compensation.*

Shin, J. Y. (2005). *The Composition of Institutional Ownership and the Structure of CEO Compensation.* SSRN eLibrary. https://doi.org/10.2139/ssrn.639797

Shleifer, A., & Vishny, R. W. (1986). Large Shareholders and Corporate Control. *Journal of Political Economy, 94*(3), 461-88. https://doi.org/10.1086/261385

Spira, L. F., & Bender, R. (2004). Compare and Contrast: perspectives on board committees. *Corporate Governance: An International Review, 12*(4), 489-499. https://doi.org/10.1111/j.1467-8683.2004.00389.x

Suchman, M. C. (1995). Managing Legitimacy: Strategic and Institutional Approaches. *The Academy of Management Review, 20*(3), 571-610. https://doi.org/10.5465/amr.1995.9508080331

Wells, H. (2009). 'No Man can be worth $1,000,000 a Year': The Fight over Executive Compensation in 1930s America. *44 U. Rich. L. Rev. 669*, 1-81.

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