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Remuneration Committee governance and firm performance in UK financial firms

Abstract

This paper investigates the association between the Remuneration Committee (RC) on firm performance. The research uses a data span of 63 financial institutions for a period of 12 years. Ordinary Least Square (OLS) and Random Effects (RE) regression estimations are used.

The ascertained empirical results indicate that the establishment of remuneration committee by the board is positively correlated to its performance, as measured by its Return on Assets (ROA), and is also statistically significant on the Market Value (MV) of the firm. Subsequent tests conducted show that presence of an RC had a positive and statistically significant correlation during the pre/post global financial crisis on the ROA of the firm. The MV measure during the pre-crisis indicates a positive and statistically significant impact, but only positive during the post-crisis. The findings are robust across econometric models that control for different types of endogeneity.

The outcome indicates that the establishment of an RC by the board assisted in achieving a positive impact on the profitability of UK financial institutions.

Keywords: Remuneration Committee, financial institutions, UK, financial crisis, performance.

JEL Classification: G20, G29, G01, G30.

Introduction

The Remuneration Committee (RC) is one of the sub-groups of the board whose duties are to scrutinize the decisions of the board which concern: rewards, salary, bonus, share options, superannuation payments, commission, company cars, private health insurance and participation in profit-sharing with shareholders, as well as advantageous pension contributions for corporate executives¹. These benefits are also known as 'Fat Cat Payments' (Conyon et al., 1995; Finkelstein & Hambrick, 1989; Gregg et al., 1993; Main & Johnston, 1993).

The salary and other fringe benefits are determined by the RC and are based on the qualifications, experience and past success of the directors, and also the size of the firm (Herdan et al., 2011; Conyon and Peck, 1998). The directors and Chief Executive Officer (CEO) expect salary increases on an annual basis. For example, a new CEO or director elected will expect a higher increase in salary and other benefits than the current CEO (Herdan et al., 2011).

The RC performs the dual functions of monitoring and advising executives on important decisions concerning remuneration and rewards (Baldenius et al., 2014). Supporting this statement is research by

Harrison (1987), who argues that there are two generic types of board committees, one, which focuses on monitoring or oversight, and the other, which concentrates on management support and/or operations. The RC provides both monitoring and oversight functions, the aim of which is to protect the interests of shareholders by delivering an objective and independent review to executive management. This management support helps to provide reviews and feedback to management and the board on any major business decisions (Mintah and Schadewitz, 2015; Jensen and Meckling, 1976; Fama and Jensen, 1983).

The board of directors plays an important role in safeguarding shareholders' interests by designing executive remuneration contracts which monitor the behavior of both the CEO and executive management (Hermalin and Weisbach, 2003; Murphy, 1999).

The function of the RC has caused controversy, attracting divergent opinion from the media, legislators, investors, academic research and the general public (Conyon, 2013). The reasons for these contentious opinions are that, firstly, executive management pay has increased significantly in the last decade, and many are critical of this soaring increase (Conyon, 2013). The second debate concerns the widely-held perception that executive remuneration is inadequately associated with their performance (Bebchuk et al., 2002; Bebchuk and Fried, 2003, 2006). The final contention is that corporate governance has failed to reign in alleged corporate excess by the executive management of a firm. The responsibility of the RC is to ensure that the interests of shareholders and executive management are closely aligned (Conyon, 2013).

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¹ In the UK, any rewards given to executive management are referred to as Remuneration and the responsibility for this rests with the Remuneration Committee (RC). Other countries such as the US use the terminology Compensation Committee. Since this research is centred on the UK, the term RC will be used primarily.

The primary objective of this study is to ascertain if the independence of the RC can improve the performance of the board in terms of ROA and MV. Its second objective examines the impact of the independence of the RC in assisting the performance of the board during the 2007/2008 global financial crises.

The principle concerning the pay of executive directors is that no one should take part in determining his or her remuneration (Conyon and Peck, 1998). Various corporate governance reforms in the UK have reiterated the need for firms to have a robust remuneration committee (RC) in place. For example, the Cadbury Report (1992) states that the 'boards should appoint compensation committees, consisting mainly of Non-Executive Directors (NEDs), and Chaired by a NED. The committee should propose to the board the compensation of the executive directors taking into consideration outside advice. The executive directors should play no part in decisions concerning their own compensation' (Cadbury Report, 1992).

The Greenbury Committee (1995), which deals with management pay reform, recommended the adoption of remuneration committees consisting mainly of NEDs or outside directors. The Turner Review (2009) recommends that the structure of remuneration in many banks should be looked at in order not to create any incentives for inappropriate risk-taking. The Combined Code (2008) and OECD Principles of Corporate Governance (2004) recommended a long-term remuneration contract for directors because it will give the principal enough time to observe the long-term outcomes of any financial activities in the company (Melis et al., 2012).

The Walker Review (2009) states that the RC should have a sufficient understanding of the approach of the company to the conditions of pay for all its employees. The committee should also state if employees have the right to receive any enhanced benefits in continued employment, termination, resignation or retirement beyond what the firm has already disclosed in the directors remuneration report.

The Financial Services Authority (FSA, 2012) amended the Remuneration Code relating to banks, building societies and investment firms. The Code was classified into three parts: first part: assessment of performance on an individual level; second part: the nature of the business or unit concerned; and third part: the overall results or performance of the firm. The aim of the amendment is not to reward failure. According to the Financial Reporting Council (FRC, 2014), the remuneration of executive

directors should be designed to support the long-term success of the company. Performance of executives should be transparent in order not to attract any ambiguity. The RC should also reward NEDs based on their time and responsibilities committed to the organization (FRC, 2014). All the corporate governance reforms in the UK ensure that salaries, bonuses and other fringe benefits are in line with the expectations of shareholders in order to avoid any agency conflict. Rewarding corporate executives without repercussions for shareholders is the specific task of the RC.

In spite of several corporate governance reforms in the UK, the adoption of an RC by a firm is voluntary. This means that each financial institution can either comply with the Code or provide reasons for non-compliance. Non-compliance of the Codes by a firm should have an alternative practice similar to those firms which complied (Financial Reporting Council, 2014). The committee should design an effective compensation contract so that 'executives or management will have an incentive to behave consistently with shareholders' wishes' (Daily et al., 1996, p. 7; Conyon and Peck, 1998).

There has been a substantial amount of researches on the RC. This research is unique when compared to other previous empirical works because, primarily, it is the first to assess the impact of the RC on UK financial institutions and, secondly, on how the independence of the RC affected Board governance during the global financial crisis and afterwards. This is because no empirical research had been undertaken in UK financial institutions up to this point. This research will also help to fill any gap in the corporate governance research.

Williamson (1985) argues that the absence of an independent RC is akin to an executive writing his employment contract with one hand and signing it with the other hand². According to Williamson, the establishment of the RC helps to exercise Board control and design reward structures for management, which is consistent with the interest of shareholders (Conyon et al., 1995; Ezzamel & Watson, 1997; Main & Johnston, 1993). However, Abugu (2012) argues that the existing rules regarding monitoring of the remuneration packages of directors are ineffective, as they do not address the perks, expenses and other perquisites of the

² Remuneration of executive management has been an issue of concern in Anglo-Saxon countries such as UK and America, which are, centred more on shareholder model. For example, in the UK, investors and shareholders were shocked after the news about huge payment of £1.7 billion in bonuses to the managers of Royal Bank of Scotland (RBS) despite bank making a £3.6 billion loss during the 2009 financial year. This shows that executives management award themselves with compensation packages irrespective of the company performance (Solarz, p. 274).

office of director. According to him, the perks and other expenses reclaimed are more valuable to the director than the actual remuneration package and contribute to avenues for using company capital.

The choice of UK financial institutions research is motivated by the following reasons. *Ceteris paribus*, the sector is quite unique from other sectors of the economy as it is heavily regulated due to the capital structure of its members (Yermack, 1996; Guest, 2009; Lim et al., 2007; Levine, 2003). The Bank of England (BoE) requires these institutions to have adequate capital in case of any future uncertainty in business (Mintah, 2015; Macey and O'Hara, 2003; Zagorchev and Gao, 2015). The BoE regulations for these sectors are supported by such international bodies as the International Corporate Governance Network (ICGN), the Organization for Economic Co-operation and Development (OECD), the International Regulatory Framework for Banks (Basel III), the International Monetary Fund (IMF) and the World Bank. These international bodies help to create more global and competitive standards for the sector (Berger et al., 1995; Macey and O'Hara, 2003; Zagorchev and Gao, 2015).

The sector also provides a major economic boost as it is considered the second biggest financial market after America. It creates employment for people, tax revenue to the government, returns to shareholders, and serves as a major foreign exchange to the economy by offering services such as banking, insurance, mortgages, asset management, currency trade and mutual fund investment (BoE and HM Treasury, 2015).

Despite the above benefits, financial institutions still face other challenges such as information asymmetries between the executive management and shareholders. The challenges can be suppressed when the RC acts in the interest of shareholders. Studies by Levine (2003) demonstrate that financial firms are more opaque than non-financial firms due to the information asymmetries, which exist more in financial institutions. Information asymmetries make it difficult to design incentive packages between shareholders or equity holders and executive management (Levine, 2003).

This research paper will address the following questions: firstly, does the presence of RC independence influence the corporate board in terms of financial performance? Secondly, can the RC help the financial firms to have positive ROA and MV? And thirdly, what are the impacts of RC independence on the financial performance of the firms during the pre/post financial crisis periods? These research questions will help to answer all the puzzles in current corporate governance research as

far as the RC in UK financial institutions is concerned.

The empirical results indicate that the establishment of an independence RC by a board is both positively correlated to the performance of a firm as measured by ROA and statistically significant to the MV of that firm. The subsequent test conducted shows that the presence of an RC had a positive and statistically significant correlation during the pre/post global financial crisis on the ROA of the firm. The MV measure during the pre-crisis indicates a positive and statistically significant correlation, but only positive during the post-crisis.

The entire outcome indicates that the establishment of an RC by the board helped to have a positive impact on the profitability of UK financial institutions.

The next Section will give a brief background of the global financial crisis, the theoretical perspectives and the prior empirical research on the RC.

1. Literature review

1.1. The financial crisis – a brief background.

The global financial crisis in 2007/2008 started in the US mortgage market and hit the financial institutions in the UK, which eventually, affected the entire economy. The crisis occurred as a result of a credit boom in the mortgage market, which later turned into a 'bust' scenario (Mizen, 2008). The financial crisis exposed weaknesses in the corporate governance policies of financial institutions (Zagorchev and Gao, 2015). UK financial institutions such as the Bradford & Bingley, HBOS, Lloyds TSB, Northern Rock, Royal Bank of Scotland (RBS) and many others were affected during the crisis, which prompted the government to bail them out from their financial difficulties (Mintah and Schadewitz, 2015; HM Treasury Committee Report, 2009, pp. 4-115). The BoE also introduced 'Quantitative Easing' as a way to increase liquidity in the market by buying assets from financial institutions in order to inject cash and reduce interest rates (Mintah and Schadewitz, 2015; Bank of England Report, 2009)³. Prior studies by Mintah (2015) indicate that prior to the global financial crisis, the mortgage industry in the UK was seen as one of the 'finest investments one could ever make' due to its high returns.

Research by Sun et al. (2011) argues that corporate governance policies among firms worldwide were

³ 'The government spent £50bn of its initial £125billion program of 'Quantitative Easing' to pump more funds into the economy by purchasing government bonds' <http://www.bankofengland.co.uk/monetarypolicy/pages/qe/default.aspx>, accessed on 05/03/2014 (Mintah and Schadewitz, 2015).

not well implemented. They reiterate that the lack of proper implementation fuelled the crisis. According to the OECD Committee on Corporate Governance, areas such as executive remuneration, risk management, board practices and the exercise of shareholder rights caused the financial crisis (Sun et al., 2011; Mintah and Schadewitz, 2015). Bad regulation, unreliable credit agencies, mortgage securitization, lack of liquidity, greedy bankers, derivative trading, short and long sales all contributed to the global financial crisis (Mintah, 2015; Mizen, 2008; Mintah and Schadewitz, 2015).

1.2. Theoretical perspective: agency theory.

Agency theory has been chosen as the theoretical foundation for this empirical research. Agency theory is concerned with the conflict of interest existing between the Agent (manager), who has been assigned to perform some service on behalf of the Principal (owner/s) that involves delegating some decision making (Jensen and Meckling, 1976). The agency problem is caused as a result of the separation of ownership from control, which was first highlighted in the research of Berle and Means (1932). The separation of ownership from control results in the Agent (manager) not bearing the full consequences of any action they take concerning the resources of the Principal (Jensen and Meckling, 1976; Berle and Means, 1932; Eisenhardt, 1989).

The relationship between the Agent and Principal is inherently beset with, firstly, an information asymmetry problem between the two, and, secondly, a conflict of interest between them (Hill and Jones, 1992). Research by Holmstrom (1979) states that the Principal is always better off with more information about Agent behavior than less. Also, the Principal and the Agent can work together when they both have the same level of risk-attitude towards every project and have the same goals and interests in the firm (Eisenhardt, 1989). Having a common interest in the same project can also help resolve the conflicting interests between the Principals and the Agents (Jensen and Meckling, 1976; Fama, 1980).

The RC was established to reward incentives to the Agent in ways that satisfy the interest of the Principal and also make the Agent accountable for his/her actions (Abugu, 2012). Bolodeoku (2007, pp. 467-508) states that a remuneration package should be regulated in order not to create a burden on the shareholders. However, according to Herdan et al. (2011), many Agents (managers) work more efficiently when they receive strong motivations including perks, bonuses, fringe benefits, and stock options from the Principal.

The theory recommends that both the Principal and the Agent can work together towards a common interest. The RC, which is part of the Board, will ensure that share options, superannuation payments, commission, bonuses and pension packages given to executive management (the Agent) are in line with the expectations and interests of the shareholders (the Principal).

1.3. Prior studies and hypotheses. Empirical evidence on the effectiveness of the RC displays mixed results. For example, research by Main and Johnston (1993) used a sample of 220 large British listed firms to examine the role of the RC in British boardrooms. They reported that the presence of an RC is associated with higher executive pay, which reduces shareholder value. Murph (1999) investigated the relative success between cash compensations, firm performance and market-sector performance in the period 1970-1996. His research reveals no clear correlation between cash compensation and manager performance. However, remuneration of managers was correlated positively with the performance of a firm, but remuneration was negatively correlated with market and sector performance.

Gree et al. (2008) examined 288 large UK firms from 1983-1991. Their evidence shows that the pay of directors relates strongly with the size of a firm. They argue that a 50% increase in the revenue of a firm results in a 10% increase in the remuneration of directors. Also, during 1998, Conyon and Peck (1998) studied the RC and the executive pay of 94 UK companies in the period 1991-1994. They reported that the proportion of non-executive directors on an RC is positively related to senior management pay and sensitivity of pay to performance. They also stated that remuneration levels are greater in firms which adopt an RC. In response to the research of Conyon and Peck (1998), Anderson and Bizjak (2003) studied 110 large firms from NYSE, which highlighted that CEO remuneration is actually lower in firms where the CEO is a member of the RC. This led to the conclusion that an RC organized by directors seeks the best interest of the shareholders (Anderson and Bizjak, 2003).

Finkelstein et al. (1998) studied 1,000 fortune firms and ascertained that CEO remuneration is positively dependent on ROE (Return on Equity), firm size and managerial discretion such as market growth and Research and Development (R&D). The research of Murphy (1998) suggests that the positive relation between CEO pay and company size has weakened over time, even though it remains positive despite significantly different sizes; it also postulates that larger firms will pay more to their

board members than smaller ones. Supporting the research by Finkelstein et al. (1998) was another study by Murphy (1998) and Gibbons and Murphy (1992), which state that the pay relating to performance is smaller in large firms and that the final pay regarding performance may even decline depending on the size of the firm.

The research of O'Reilly et al. (1988) demonstrates that CEO compensation is greater when the CEOs sit on a different companies board.

Crespi and Gispert (1998) studied large Spanish companies to ascertain the relationship between board remuneration and the performance of the firm. Their research shows that remuneration has a stronger or positive impact on the book values of the firm than for stock market measures. Other empirical research on the RC demonstrates a negative impact on the firm. For example, Bertrand and Mullainathan (2001) highlight that CEO compensation is less strong or weak when the company is better managed. This means that a well-managed company can handle its remuneration to the satisfaction of both shareholders and executives. John and John (1993) studied top management remuneration on firms, and their results show a negative relationship between pay-performance and leverage. They concluded that managerial remuneration could play a role in minimizing agency cost.

Gregg et al. (2010) studied large UK firms and found that CEO pay has a negative or weak impact on the performance of a firm. Following their research, their data were split into two time periods, namely, 1983-1988 and 1989-1991. For the first time, this split revealed that CEO pay is positively related to the performance of a firm. Vafeas (1999) investigated 307 US listed firms from 1990 to 1994, and he reported a negative relationship between the establishment of board committees (such as Audit, Remuneration and Nomination) and the value of a firm. Also, Yermack (1996), Klein (1998) and Agrawal and Knoeber (1996) all find a negative relationship between the composition of the Board and the performance of its firm.

Finally, other empirical research on the RC shows no significant impact on firms. For example, Daily et al. (1998) found no link between excessive pay received by the CEO and the RC, which is dominated by executive directors. Klein (1998) used a sample of 486 US firms over the period 1992 to 1993 to examine the association between the presence of audit, remuneration, and nomination committees and financial performance, but found no statistically significant relationship. Klein (1998) demonstrated that her result is robust irrespective of

the changes in the composition of the membership of the committee.

Vafeas and Theodorou (1998) used 250 UK listed firms in 1994 to investigate the impact of audit, remuneration and nomination committees on the performance of these companies. They found no evidence in favor of the idea that the existence of the three board committees significantly affects financial performance. Similarly, Newman and Mozes (1999) supported this research when they analyzed 161 firms in the US in 1992 and stated that there is no relationship between CEO pay and executive director participation in the RC. This means that executive directors do not necessarily influence CEO pay during remuneration meetings.

Following the above prior empirical studies, the following hypotheses are developed to help answer the research questions:

H1: Ceteris paribus, there is a positive association between the Remuneration Committee on Return on Assets (ROA) as a measure of performance of financial institutions.

H2: Ceteris paribus, there is a positive and statistically significant association between the Remuneration Committee on Market Value (MV) as a measure of performance of financial institutions.

H3: Ceteris paribus, there is a positive and statistically significant association between the Remuneration Committee on ROA during the pre/post financial crisis period.

H4: Ceteris paribus, there is a positive association between the Remuneration Committee on MV during the pre/post financial crisis period.

2. Research method

2.1. Data and sample section. The data for this research were extracted from DataStream (Thomson Reuters), which covered the independent variable, dependent, and the controls. DataStream is known for providing historical data and information from companies. The data cover 12 years worth of company annual reports from December 2000 to December 2011.

As suggested by prior empirical studies, for example, Botosan (1997); Cheung et al. (2007); Ho and Williams (2003); Mangena and Chamisa (2008); Ntim et al. (2013); Zagorchev and Gao (2015); Mintah (2015), annual reports are the major reporting documents to use for research. This means that this piece of research is in line with prior studies.

As at the time of data collection, a total of 63 financial firms were fully available for extraction.

These 63 financial firms, over a twelve-year period, generated 756 firm year observations, which are still large when compared with prior empirical studies such as Meth (1986), which used 36 annual reports for studying the information requirements of investment analysis for companies. April et al. (2003) used only 20 annual reports for examining intellectual capital disclosures amongst mining firms. Research by Aanu et al. (2014) used 25 manufacturing firms from Nigeria covering the period 2004 to 2011, whilst Zagorchev and Gao (2015) used 41 corporate governance dataset covering the years 2002-2009. Recent studies on the RC by Lee et al. (2015) used only 53 firms and ROA for two years and Tobin's Q.

This research follows previous empirical studies by Mintah (2015) where 63 financial firms from December 2000 to December 2011 were used. Previous empirical works suggest that the data for this research are enough to make a significant contribution to the corporate governance literature. The financial firms are made up of Investment Banking, Insurance, Mortgages, Investment Trust and Banking services. Financial firms were chosen for this research because, primarily, the sector is unique from other sectors of the economy as they are heavily regulated due to their capital structure (Yermack, 1996; Guest, 2009; Lim

et al., 2007; Levine, 2003; Mintah, 2015). The second reason is that BoE regulation on these sectors is supported by international bodies such as the ICGN, OECD, International Regulatory Framework for Banks (Basel III), IMF and the World Bank (Berger et al., 1995; Macey and O'Hara, 2003; Zagorchev and Gao, 2015).

Finally, the sector also provides a major economic boost as it is considered the second biggest financial market after America. It creates employment for people, tax revenues to the government, returns to shareholders, and serves as a major foreign exchange to the economy by offering services such as banking, insurance, mortgage, asset management, currency trade and mutual fund investment (BoE and HM Treasury, 2015).

The research used panel data analysis, as this is known to give: a greater degree of freedom; less collinearity among variables; more cross-sectional and time series variability; more efficiency; and accounts for more observable firm-level heterogeneity in individual-specific variables (see, for example, research by Gujarati, 2003; Cheng et al., 2008; Ntim et al., 2013; Danso and Adomako, 2014; Mintah and Schadewitz, 2015; Mintah, 2015).

The breakdown of the firms used and other descriptions can be seen in Table 1.

Table 1. Classification and representation of variables

	Variables	Representation			
Remuneration Committee independence	Does exist	100			
	Does not exist	0			
Industry (IND)	List of financial institutions	Representation	Percentage	Numbers	Ranking
	Investment banking	1	29	18	1
	Insurance	2	21	13	2
	Mortgages	3	19	12	3
	Investment trust	4	17	11	4
	Banking services	5	14	9	5
	Total		100	63	
Big4Auditors (BIG4)		Representation			
	Deloitte & Touche	1			
	PriceWaterhouse Coopers	1			
	Ernst & Young	1			
	KPMG	1			
	Grant Thornton	0			
	BDO International	0			
Firms Cross-listed (DUALIST)	Does exist	1			
	Does not exist	0			
Pre-financial crisis	2000-2006 (3 years)	0			
Financial crisis period	2007-2008	-			
Post-financial crisis	2009-2011 (3 years)	1			

Source: Mintah and Schadewitz (2015), Mintah (2015).

2.2. The regression design. In testing the RC hypotheses, the regression models used are indicated as:

$$ROA_{it} = \alpha_0 + \alpha_1 Remuneration_{it} + \sum_{i=2}^n \alpha_i Control_{it} + \varepsilon_{it}, \quad (1)$$

$$Market Value_{it} = \beta_0 + \beta_1 Remuneration_{it} + \sum_{i=2}^n \beta_i Control_{it} + \varepsilon_{it}, \quad (2)$$

where the dependent variables are: ROA_{it} = Return on Assets for firm i at time t ; $Market Value_{it}$ = Market Value for firm i at time t . The independent variable is = $Remuneration$ (RC). The Control variables are = GRW, LEV, FSIZE, BIG4, DUALIST, IND and YED. Denote: α_0 is constant, β denotes the coefficients. The definition of ε is the error term. All variables are defined in Table 2.

2.3. Dependent and controls variables. The choice of the dependent and controls variables in supporting this empirical study are discussed as follows.

The financial performance serving as the dependent variables are Return on Assets (ROA) and the Market Value (MV). These financial performances have also been used in a number of prior studies, such as Agrawal and Knoeber (1996), Yermack (1996), Gompers et al. (2003), Klapper and Love (2004), Beiner et al. (2006), Black et al. (2006), Haniffa and Hudaib (2006), Henry (2008), Guest (2009), Ntim et al. (2015), Mintah and Schadewitz (2015), Mintah (2015), and Lee et al. (2015). All used ROA and Market Value (MV) as proxies for

the accounting and market measures of financial performance respectively.

The choice to use these two measures of financial performance was made due to the fact that previous research advocates that Insiders (managers) and outsiders (shareholders and other stakeholders) value corporate governance differently (Black et al., 2006; Lindenberg and Rose, 1981; Mintah and Schadewitz, 2015). The ROA, which serves as the accounting based measure of performance, attempts to capture the wealth effects of corporate governance from the views of company management (Insiders) (Yermack 1996; Beiner et al., 2006; Mintah and Schadewitz, 2015).

The Market Value (MV) captures the wealth of the firm from investors (outsiders) perspectives (Lindenberg and Rose, 1981; Mintah and Schadewitz, 2015).

2.4. The control variables. In reducing any potential omitted variable biases, a number of control variables will be used. These include Growth (GRW); Leverage (LEV); Firm Size (FSIZE); Big4 (BIG4); Dual-listing (DUALIST); Industry (IND) and Year (YED). These controls have also been used in prior research (see examples: Chenhall and Moers, 2007; Van Lent, 2007; Larker and Rusticus, 2008; Black et al., 2006; Henry, 2008; Gompers et al., 2003; Klapper and Love, 2004; Haniffa and Hudaib, 2006; Guest, 2009; Ntim et al., 2015; Mintah and Schadewitz, 2015; Mintah, 2015). These control variables can affect the financial outcome of a firm (Chenhall and Moers, 2007).

Table 2. Summary of definitions and explanation of variables

Dependent variables	
ROA	The book value of operating profit at the end of a financial year, divided by the book value of total assets at the end of a financial year
MV	The market value of equity plus the book value of total assets minus the book value of equity divided by the book value of total assets
Independent variable:	
Remuneration	Deals with executive management salary and other fringe benefits in line with shareholders' expectations. A dummy variable equals to "100" if a firm has independence remuneration committee, otherwise "0"
Control variables	
GRW	Growth is the percentage of the current year's sales minus previous year's sales scaled by the previous year's sales
LEV	Leverage is the percentage of total debt to total assets
FSIZE	Firm size is the natural Log of total assets
BIG4	A dummy variable equals to "1" if a firm is audited by a big four audit firm, otherwise "0"
DUALIST	A dummy variable equals to "1" if a firm is dual-listing, otherwise "0"
IND	Classifies into 5-sectors namely: 1. Investment services 2. Insurance 3. Mortgages 4. Investment trust 5. Banking services
YED	Include the years from 2000 to 2011. They are represented as follows: 2000 (YED); 2001 (YED); 2002 (YED); 2003 (YED); 2004 (YED); 2005 (YED); 2006 (YED); 2007 (YED); 2008 (YED); 2009 (YED); 2010 (YED); 2011 (YED).

Table 3. Descriptive statistics for all the variables

	Count	Mean	Median	Std. dev.	Min	Max
MV	756	10.461	5.881	13.066	0.000	72.712
ROA	756	5.584	2.400	9.005	0.000	70.080
Remuneration	756	55.820	100.000	49.693	0.000	100.000
GRW	756	0.239	0.116	0.457	0.000	6.190
LEV	756	2.027	1.231	2.572	0.000	17.617

Table 3 (cont.). Descriptive statistics for all the variables

	Count	Mean	Median	Std. dev.	Min	Max
FSIZE	756	9.911	13.143	6.214	0.073	19.709
BIG4	756	0.968	1.000	0.175	0.000	1.000
DUALIST	756	0.968	1.000	0.175	0.000	1.000
IND	756	3.333	3.000	1.334	1.000	5.000

Notes: The table represents the descriptive statistics for all the variables under this research. The above table shows 756 observations of all their variables with their Mean, Median, Standard deviations, Minimum and Maximum values of each variable. The rest of the variables are defined as follows: MV: is defined as the market value of equity plus the book value of total assets minus the book value of equity divided by the book value of total assets; Return on Assets (ROA): is defined as the book value of operating profit at the end of a financial year, divided by the book value of total assets at the end of a financial year; Remuneration: this deals with executive management salary and other fringe benefits in line with shareholders expectations. GRW: is defined as the ratio of sales growth to total assets growth; LEV is defined as the Percentage of total debt to total assets; FSIZE: is defined as the natural log of total assets; BIG4- are (PricewaterhouseCoopers, Deloitte & Touche, Ernst & Young and KPMG); DUALIST: is defined as a situation where the firm is cross-listed in other countries; IND: classifies into 1. Investment services, 2. Insurance, 3. Mortgages, 4. Investment trust, 5. Banking services.

3. Analysis and discussions

The analysis of this research will seek to answer the following:

1. The impact of the remuneration committee (RC) on the financial performance of a firm amongst UK financial institutions.
2. The effects of the independence of the RC during the global financial crisis in 2007/2008 and afterwards on UK financial institutions will be ascertained. See, for example, similar research by Mintah and Schadewitz (2015), Mintah (2015).

In order to answer the above, the analysis is divided into two parts. The first portion will look at the whole sample duration (December, 2000 to December, 2011). The next part of the analysis will split the research data into two sub-groups. The first group will cover the period from 2000 to 2006. The second set of data will cover the years 2009 to 2011. This means that data for 2007 and 2008 is excluded

from the analysis since the crisis occurred at that time (see, for example, Danso and Adomako, 2014; Mintah and Schadewitz, 2015; Mintah 2015).

3.1. Testing for multicollinearity. One issue that could potentially affect any regression results is that of multicollinearity (Hair et al., 1998). According to Klein (1998), multicollinearity takes place in regression results where there is a high correlation between control variables in a regression model. If this occurs, it creates instability in the regression results, which need to be controlled. In testing for multicollinearity in the current analysis, a Pearson correlation matrix was examined. Hair et al. (1998) state that the correlation between any two pair of independent variables should not be greater than 0.80. Tables 4 and 5 did not reveal any multicollinearity between the variables. This means that multicollinearity was not an issue in interpreting the result of the regression analysis (Hair et al., 1998; Klein, 1998). See similar research by Mintah and Schadewitz (2015), Mintah (2015).

Table 4. Multicollinearity for ROA and Market Value (MV)

	ROA	Remuneration	GRW	LEV	FSIZE	BIG4	DUALIST	IND
ROA	1.000							
Remuneration	0.229***	1.000						
GRW	0.118***	0.020	1.000					
LEV	-0.034	0.178***	-0.057	1.000				
FSIZE	0.180***	0.096***	-0.017	-0.148***	1.000			
BIG4	-0.019	-0.009	-0.029	0.017	-0.092**	1.000		
DUALIST	-0.130***	0.036	-0.031	0.040	0.137***	-0.033	1.000	
IND	0.248***	-0.053	-0.047	-0.222***	0.193***	-0.226***	-0.091**	1.000

Table 5. Multicollinearity for ROA and Market Value (MV)

	MV	Remuneration	GRW	LEV	FSIZE	BIG4	DUALIST	IND
MV	1.000							
Remuneration	0.301***	1.000						
GRW	0.019	0.020	1.000					
LEV	-0.044	0.178***	-0.057	1.000				
FSIZE	-0.012	0.096***	-0.017	-0.148***	1.000			
BIG4	-0.013	-0.009	-0.029	0.017	-0.092**	1.000		

Table 5 (cont.). Multicollinearity for ROA and Market Value (MV)

	MV	Remuneration	GRW	LEV	FSIZE	BIG4	DUALIST	IND
DUALIST	0.065*	0.036	-0.031	0.040	0.137***	-0.033	1.000	
IND	-0.026	-0.053	-0.047	-0.222***	0.193***	-0.226***	-0.091**	1.000

Note: Table 4 & 5 represent the Pearson's correlation coefficients. The table did not reveal any multicollinearity between the variables. The variables are as follows: ROA; MV. These represent firm financial performance. Remuneration: deals with executive management salary and other fringe benefits in line with shareholders' expectations; represents the independent variable. The control variables are: GRW; LEV; FSIZE; BIG4- are (PricewaterhouseCoopers, Deloitte & Touche, Ernst & Young and KPMG); DUALIST; IND; classifies into 1. Investment services, 2. Insurance, 3. Mortgages, 4. Investment trust, 5. Banking services. *** Significant at 1% level, ** Significant at 5% level, * Significant at 10% level.

3.2. Controlling for endogeneity. Endogeneity in this research was controlled by lagging all the variables and they were significant. This follows similar research done by Fich and Shivdasani (2006); Krishnan et al. (2011); Danso and Adomako (2014); Mintah and Schadewitz (2015); Mintah (2015).

3.3. Robustness/sensitivity test. In testing for the robustness or sensitivity of the regression results, I conducted similar studies to Mintah and Schadewitz (2015) and Mintah (2015). The prior studies used Random Effects (RE) along with Ordinary Least Square (OLS) to help check the robustness and consistency of each of the results. The result shows that each variable, their coefficient and significance level did not change much either using OLS or RE. This suggests that the results shown were stable and consistent across a number of proxies. This also implies that the Random Effects (RE) results were not very much different from what had already been reported in OLS estimation (Mintah and Schadewitz, 2015; and Mintah, 2015). The results on the impact of the RC governance on UK financial institutions are robust using different research models similar to the Mintah and Schadewitz (2015) and Mintah (2015) studies.

3.4. Empirical discussion 1. Table 6 below represents the OLS and RE results on how RC governance can influence ROA and Tobin's Q of UK financial firms. As I reiterate during the robustness test, these two regression models were done to show consistency in the statistical results. The results show 756 numbers of observations. The R^2 is 0.229 for ROA and 0.273 for MV. The p-values for both ROA and MV are all statistically significant in the regression. The years in the regression cover the period 2000-2011 and are all statistically significant compared to the year 2000. This means that each year is important in ascertaining the impact of the RC on the financial performance of the firm.

The outcome on the industry shows that Insurance (2) is positive when ROA and MV were used as a financial measure during the OLS and RE models. The result implies that Insurance is positive from

Investment Services (1) in terms of the ROA or MV of the firm.

3.4.1. Remuneration committee's impact on the firms ROA. In terms of the controls, GRE, FSIZE and BIG4 had a positive impact on the ROA of the firm when using the OLS and RE estimation. This implies that these controls helped the firm to make higher returns. However, DUALIST did not have any impact on the ROA of the firm. The establishment of each of the industries also had a positive impact on the ROA of the firms. The presence of the RC on the Board shows a positive relationship to the ROA of the firms when using the OLS and RE estimation. This suggests that the committee was able to scrutinize, monitor and advise executive management on decisions concerning salary, which helped to reduce agency cost and eventually led to a positive ROA. The empirical result supports the given hypothesis that there is a positive association between the RC and ROA as a measure of performance of financial institutions.

3.4.2. Remuneration committee's impact on the firm MV. The empirical result shows that apart from DUALIST, which had a positive impact on the MV of the firms, the rest of the controls did not affect the MV of the firms much. The industries and the years all had a positive association with MV.

The establishment of an RC shows a positive and statistically significant relationship on the MV of the firm using the two estimation results (that is, OLS and RE). A positive and statistically significant relationship implies that the RC within the Board is supplying a beneficial influence on the profit of the firm. Consistent with this empirical work are studies conducted by Mintah (2015), which reiterate that a positive and statistically significant MV shows that shareholders have accepted the corporate governance policy of the firms. Secondly, this can help generate liquidity in the open market when the need arises. The empirical results support our hypothesis, which states that there is a positive and statistically significant association between the RC and MV as a measure of performance on financial institutions.

Table 6. ROA and MV regression results

	(OLS)	(Random effects)	(OLS)	(Random effects)
	ROA	ROA	MV	MV
Remuneration	0.005 (0.66)	0.011 (0.26)	0.078*** (0.00)	0.056*** (0.00)
GRW	2.072** (0.04)	2.224* (0.05)	-1.841*** (0.01)	-0.360 (0.46)
LEV	-0.014 (0.96)	0.358 (0.40)	-0.005 (0.98)	0.103 (0.66)
FSIZE	0.178*** (0.00)	0.376*** (0.00)	-0.211** (0.02)	0.149 (0.30)
BIG4	2.091* (0.09)	2.554 (0.11)	-4.257** (0.01)	-3.272 (0.48)
DUALIST	-5.899** (0.04)	-7.100 (0.12)	5.330*** (0.00)	3.756 (0.16)
Insurance-2	0.017 (0.99)	0.669 (0.82)	3.112* (0.09)	0.028 (0.99)
Mortgages-3	3.618* (0.06)	4.216* (0.10)	9.209*** (0.00)	6.379 (0.11)
Invest.Trust4	1.876 (0.51)	2.219 (0.58)	20.688*** (0.00)	16.439** (0.02)
Banking-5	5.625*** (0.01)	6.045* (0.07)	2.683 (0.16)	-0.194 (0.96)
2001	2.452*** (0.00)	2.183*** (0.00)	6.957*** (0.00)	6.428*** (0.00)
2002	2.418*** (0.00)	1.910*** (0.00)	4.665*** (0.00)	4.647*** (0.00)
2003	2.575*** (0.00)	1.941*** (0.01)	6.288*** (0.00)	5.960*** (0.00)
2004	2.849*** (0.01)	1.772 (0.10)	2.736** (0.05)	3.356 (0.10)
2005	4.303*** (0.00)	3.112*** (0.01)	5.455*** (0.00)	6.030** (0.01)
2006	7.859*** (0.00)	6.537*** (0.00)	7.970*** (0.00)	8.227*** (0.00)
2007	8.436*** (0.00)	7.162*** (0.00)	9.719*** (0.00)	10.527*** (0.00)
2008	7.164*** (0.00)	5.776*** (0.00)	6.668*** (0.00)	7.461*** (0.00)
2009	8.443*** (0.00)	7.069*** (0.00)	7.696*** (0.00)	8.498*** (0.00)
2010	5.886*** (0.00)	4.877*** (0.00)	9.397*** (0.00)	10.237*** (0.00)
2011	1.995* (0.07)	2.468** (0.01)	15.506*** (0.00)	15.653*** (0.00)
_cons	-0.957 (0.82)	-3.041 (0.64)	-4.738* (0.10)	-4.702 (0.50)
N	756	756	756	756
R ²	0.229		0.273	
p	0.000	0.000	0.000	0.000

Note: The result shows 756 observations of the various variables; the R² and the p-value are significant; remuneration: deals with executive management salary and other fringe benefits in line with shareholders' expectations. The impact of remuneration committee on firm performance is measured using ROA and MV. The ROA is defined as the book value of operating profit at the end of a financial year, divided by the

book value of total assets at the end of a financial year. The MV is defined as the market value of equity plus the book value of total assets minus the book value of equity divided by the book value of total assets. The control variables are: GRW: is defined as the ratio of sales growth to total assets growth; LEV: is defined as the Percentage of total debt to total assets; FSIZE: is defined as the natural log of total assets, BIG4- are (PricewaterhouseCoopers, Deloitte & Touche, Ernst & Young and KPMG); DUALIST: is defined as a situation where the firm is cross-listed in other countries; IND: classifies into 1. Investment services, 2. Insurance, 3. Mortgages, 4. Investment trust, 5. Banking Services. The year's chosen for the research is from 2000 to 2011. *** significant at 1% level, ** significant at 5% level, * significant at 10% level.

3.5. Empirical discussion 2: pre/post financial crisis analysis. The second part of this analysis will concentrate on the impact on the firm of the presence of an RC during the 2007/2008 global financial crises as it affected UK financial institutions. This will follow the same research pathway used by Mintah and Schadewitz (2015) and Mintah (2015).

Table 7 below represents the pre/post financial crisis result where ROA and MV serve as the measure of financial performance for the firms. The result shows 441 and 189 number of observations for the pre and post global financial crisis, respectively. The 2007 and 2008 data were dropped as the crisis happened in these two periods. This implies that a total of 126 observations covering the two years were excluded in the second analysis as it was indicated during the introduction part of the analysis. The R² and the p-value for both the pre/post financial crisis period on ROA and MV are all significant in the regression model.

The ROA of the financial firms during the pre-crisis (2000-2006) and post-crisis (2009-2011), the result shows a positive and statistically significant relationship on the establishment of RCs. This suggests that the establishment of an RC by the Board helped achieve a positive result for the ROA of the firms. The committee members were able to scrutinize decisions concerning rewards and salaries in line with the expectations of shareholders, which eventually reflected on the profitability of the firm and helped to avoid any agency cost to them. This result is in line with research by Mintah (2015), which reiterates that a positive ROA during the pre/post global financial crisis can imply that investors and shareholders have accepted the adoption of corporate governance policies by the firms. Supporting this analysis there is the research by Choi et al. (2004), which reports positive performances of Korean firms during the Asian financial crisis in 1997.

However, in terms of the MV of the firm, the results during the pre/post global financial crisis show something different. The MV during the pre-crisis

period (2000-2006,) shows a positive and statistically significant relationship with the establishment of an RC in the firm. A positive and statistically significant MV may suggest that investors are confident about the task being performed by the RC and the other responsibilities of the board.

Also, the result for the post-crisis (2009-2011), shows that the establishment of an RC within the firm had a positive impact on its MV. This may suggest that after the 2007/2008 global financial crises, the presence of the RC helped in achieving a positive impact on the MV of the firm. The firms were able to attain a positive MV despite the macroeconomic challenges facing the nation. The results in terms of ROA and MV during the pre/post global financial crisis indicate that the establishment of an RC by the Board had a positive impact on the profitability of UK financial institutions.

Table 7. Pre/post financial crisis

	(Pre crisis)	(Post-crisis)	(Pre-crisis)	(Post-crisis)
	ROA	ROA	Tobin's Q	Tobin's Q
Remuneration	0.023*** (0.00)	0.044*** (0.00)	0.089*** (0.00)	0.009 (0.70)
GRW	4.848*** (0.00)	-0.192 (0.86)	-0.450 (0.45)	-2.078 (0.13)
LEV	-0.271** (0.01)	0.865 (0.28)	0.108 (0.59)	-0.255 (0.50)
FSIZE	0.126*** (0.00)	0.220* (0.06)	-0.052 (0.54)	-0.420* (0.06)
BIG4	0.127 (0.92)	6.173** (0.02)	-1.021 (0.43)	-8.660* (0.07)
DUALIST	-3.173 (0.39)	-6.457 (0.18)	2.407* (0.06)	8.975*** (0.00)
Insurance-2	-1.100 (0.29)	4.028 (0.27)	1.953 (0.34)	4.249 (0.25)
Mortgages-3	1.409 (0.11)	6.770** (0.03)	5.246** (0.01)	15.534*** (0.00)
Invest.Trust4	-2.294 (0.15)	10.691* (0.08)	16.334*** (0.00)	24.562*** (0.00)
Banking-5	2.302** (0.02)	10.815*** (0.00)	1.858 (0.36)	3.412 (0.39)
_cons	3.462 (0.40)	-6.570 (0.37)	-0.683 (0.80)	10.758 (0.10)
N	441	189	441	189
R ²	0.262	0.228	0.260	0.194
p	0.000	0.000	0.000	0.000

Note: The result shows 441 and 189 number of observations for the pre and post financial crisis, respectively. The R^2 shows 0.262 and 0.228 for the ROA and 0.260 and 0.194 for the MV. All R^2 and the p-value are significant in the regression. Remuneration: deals with executive management salary and other fringe benefits in line with shareholders' expectations. The impact of remuneration committee on firm performance is measured using ROA and MV. The ROA is defined as the book value of operating profit at the end of a financial year, divided by the book value of total assets at the end of a financial year.

The MV is defined as the market value of equity plus the book value of total assets minus the book value of equity divided by the book value of total assets. The control variables are: GRW: is defined as the ratio of sales growth to total assets growth; LEV: is defined as the percentage of total debt to total assets; FSIZE: is defined as the natural log of total assets; BIG4- are (PricewaterhouseCoopers, Deloitte & Touche, Ernst & Young and KPMG); DUALIST: is defined as a situation where the firm is cross-listed in other countries; IND: classifies into 1. Investment services, 2. Insurance, 3. Mortgages, 4. Investment trust, 5. Banking services. The year's chosen were (2000-2006-covering the pre-financial crisis and 2009-2011, covering the post crisis period. The 2007 and 2008 was excluded because the financial crisis happened in these periods. *** significant at 1% level, ** significant at 5% level, * significant at 10% level.

Table 8. Summary of the regression results

Dependent variable	ROA	MV	ROA during pre/post crisis	MV during pre/post-crisis
Outcome	Sign obtained	Sign obtained	Sign obtained	Sign obtained
Remuneration committee	+	+	+/+	+/+

Conclusion

The establishment of an RC by the Board helps to scrutinize rewards, salaries and other fringe benefits in line with the expectation and interest of the shareholders. The function of the RC has attracted huge debate from different stakeholders, as other researchers are of the view that the members of the RC have not done enough to align the interest of executive management and shareholders (Conyon, 2013).

The empirical results indicate that the establishment of an RC by the Board is positively correlated to the performance of a firm as measured by ROA and is also statistically significant in respect of the MV of the firm. The subsequent test conducted shows that the presence of the RC had a positive and statistically significant correlation during the pre/post global financial crisis on the ROA of the firm. The MV measure during the pre-crisis indicates a positive and statistically significant result, but only a positive one during the post crisis. The entire outcome indicates that the establishment of an RC by the Board helped to have a positive impact on the profitability of UK financial institutions.

Despite the benefit of having an RC implemented by the corporate Board, in the UK the adoption of the RC by a firm is voluntary. This means that each financial institution can either comply with the code or be forced explain its reasons for non-compliance. Non-compliance to the codes by a firm should have an alternative practice similar to those firms which comply (Financial Reporting Council, 2014).

This research is the first study to assess the value of the establishment of an RC in UK financial institutions. It has also evaluated the impact of the

RC on Board governance during the global financial crisis and afterwards, as no empirical research had been undertaken before this research. The result has filled a major gap in the corporate governance research literature (see similar research by Mintah, 2015).

The empirical results have strengthened the corporate governance literature on the importance of a firm having an RC in place. From a practical standpoint, regulators and policy makers can use these empirical results to encourage other firms to adopt the establishment of an RC by their boards. The theoretical stance supports the view that the presence of an RC within a firm can help bring the

interest of the Agent (executive management) and the Principal (shareholders) together.

Despite the material benefit of this research, it still has some limitations. Firstly, the research only focuses on the impact of the RC on the financial performance of a firm. Secondly, the paper is only concentrated on financial firms in the UK. In the future, similar research can look at CEO compensations and how they impact on a firm where an annual salary and other benefits of the CEO can be checked against the annual performance of the firm. Also, the impact of the presence of an RC can be ascertained from other sectors of the economy to help enhance the debate.

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