Governance Structures and the Compensation of Powerful Corporate Leaders in Financial Firms during M&As

Abstract

We examine the impact of mergers and acquisitions (M&As) on the compensation of powerful corporate leaders [i.e., boards of directors, including Chief Executives Officers (CEOs), Chief Financial Officers (CFOs), and Board Chairs] of acquiring firms. Using one of the largest datasets on M&As, directors' compensation, and governance to-date, consisting of a sample of UK financials (banks, insurance firms, private equity firms, and speciality finance firms) over a 13-year period, our results obtained by employing multivariate regression analyses show that acquisitions, on average, have a positive and significant impact on directors' compensation. This effect applies to both powerful corporate executives (CEOs, CFOs, and all other executive directors) and other non-executive directors. However, the positive acquisition effect on top executive compensation is much higher in larger and more complex acquisitions. We also find that much of the acquisition-related pay raises is equity-based rather than cash-based. Finally, we find CEOs to be the top beneficiaries from acquisitions. We interpret our findings within a multi-theoretical framework that draws insights from agency, executive power, managerial talent, and tournament theories of top executive compensation.

Keywords: M&As; CEOs; Board of Directors; Executive compensation; Corporate governance; Financial firms; UK

1. Introduction

The compensation of top corporate leaders [i.e., boards of directors including Chief Executive Officers (CEOs), Chief Financial Officers (CFOs), and Board Chairs] is a subject that generates heated debate. This was particularly the case in the UK financial services industry following the government's bailout of big banks, such as the Lloyds Banking Group and the Royal Bank of Scotland, during the 2007-08 financial crisis. The public has been critical of the use of public funds to support financial institutions, whose powerful directors often were handsomely rewarded for merely taking excessive risks. In fact, the way in which top executives in financial firms were remunerated was widely seen as an important factor that contributed to the crisis. Therefore, it is an extremely relevant policy issue to consider how and why powerful directors of financial institutions are remunerated, and the extent to which top executive pay structures and decisions through mergers and acquisitions (M&As) contribute to excessive risk-taking in the financial sector.[1]

Against this background and the evidence that M&As are generally risk-increasing corporate events (Furfine & Rosen, 2011) and are a popular strategic tool used by powerful corporate executives for achieving inorganic growth (Agyei-Boapeah, 2015), we investigate whether the M&A activities of UK financial firms are a significant determinant of directors' pay. Specifically, we draw on the extant theoretical and empirical literature on M&As and managerial compensation to hypothesise and test whether boards of directors of British financial firms had incentives to pursue acquisition strategies as a vehicle to increase their private benefits in the form of higher pay levels. By this study, we seek to contribute to the literature on managerial compensation, governance structures, and M&A activities in several important ways.

We focus on the financial services industry, which, despite its high economic significance to the UK, remains relatively understudied in the extant literature, particularly in executive compensation and M&A research. In 2014 alone, financial and insurance services contributed nearly £127 billion, or 8%,

[1]To underscore its policy importance, during the 2007-08 financial crisis, the British government in February 2009 appointed Sir David Walker to review corporate governance in UK banks and other financial institutions and to make recommendations in several areas, including incentives inherent within the remuneration policies of financial institutions, in order to effectively manage risks in such institutions (The Walker Report, 2009).

of all gross value added to the UK economy.[2] Despite this, most existing empirical studies on M&As and managerial compensation tend to exclude financial firms from their analysis (Ozkan, 2011; 2012; Girma *et al.*, 2006). This leaves an important gap in the literature in respect of the relationship between M&As and top executive compensation among British financial firms. A common reason cited for excluding financial firms from executive compensation studies is their relatively heavy regulatory environment compared with their non-financial counterparts. This view implicitly presumes that the high regulatory environment in which financial firms operate can curb top executive pay excesses.

However, regulatory failures and limits present powerful executives in financial institutions with the same opportunities and agency problems that confront their counterparts in non-financial industries, which often lead to higher pay levels than in most industries. In fact, boards of UK financial firms set the levels of top executive remuneration just as is done in non-financial firms, implying that any weaknesses/failures in the internal corporate governance mechanisms of financial firms could easily result in higher/excessive executive pay in financial firms. Given the recent finding of weak non-executive directors in most UK financial firms by the Walker Report (2009),[3] the UK's financial sector offers the perfect setting to study the complex relationships among M&As, directors' compensation, and governance structures.

Another contribution we make to the literature is the extension of our analysis of top leadership pay to cover all classes of directors in positions of power, consisting of both executives (i.e., CEOs and CFOs) and non-executives; thus, allowing us to place emphasis on the board as an entity rather than simply focusing on the pay of single executives (often the CEO or the highest-paid executive director). By departing from most existing studies, which focus mostly on the CEOs, our approach recognizes the broad nature of corporate governance, with legal power residing in the board as a collective unit and not in any single individual. More so, studies focusing on a single top corporate executive seem to assume such individuals to be the key decision-makers who are likely to be faced with the agency

[2]See the House of Commons briefing document published on February 25, 2015 on *"The financial sector's contribution to the UK economy."* Available at: http://researchbriefings.parliament.uk/ResearchBriefing/Summary/SN06193 and accessed on 15/01/2017.

[3]The Walker Report (2009) suggests that non-executive directors on the boards of most banks and other financial institutions in the UK were not ready, able, and encouraged to challenge proposals put forward by the executive directors (see Recommendation 6).

problems (Ozkan, 2012; Grinstein & Hribar, 2004). While taking such a perspective seems largely reasonable, it also suggests that non-executive directors and other executive directors may be free from the principal-agent conflicts and that their role in the boardroom is limited to monitoring powerful CEOs to ensure that they pursue the interest of shareholders.

Meanwhile, there is growing evidence to suggest that most non-executive directors fail in their monitoring roles (Ozkan, 2012; The Walker Report, 2009), but are rather more active in taking important strategic decisions, such as acquisitions (Deutsch et al., 2007; Wright et al., 2002). For example, Deutsch et al. (2007) show that non-executive directors are more likely to be active in M&A decisions when they are paid by shares. Related corporate governance research also suggests that non-executive directors can be very active in corporate decisions by providing the firm with advice (Westphal, 1999; Goh & Gupta, 2016), a network of outside stakeholders (Jermias & Gani, 2013), some vital environmental information (Carpenter & Westphal, 2001), and legitimacy (Deutsch & Ross, 2003). Accordingly, our study takes the view that non-executive directors have an important influence on strategic decisions of their firms, such as M&As, and can be regarded as decision-makers in their own right, making them potentially self-serving agents like their top executive director counterparts. Therefore, we investigate the impact of M&A activities on the compensation of the entire board of directors, as well as separately for top executives (CEOs and CFOs), all other executives, and non-executive directors.

Finally, Sanders (2001) shows that the use of equity-based compensation may influence or reflect managerial risk appetite and encourage them to pursue risky/complex projects, such as cross-border acquisitions (Agyei-Boapeah et al., 2019; Ozkan, 2012). This motivates us to investigate how larger and riskier cross-border acquisitions (relative to less risky domestic acquisitions) may influence boards' total compensation and their equity-based compensation.

Our results indicate that the completion of M&As, on average, increases the board's annual total compensation by over £1.47 million, with about 80% of this pay rise representing equity-based compensation. This suggests that pay structures involving equity-based remuneration may incentivize self-interested boards to engage in acquisitions to increase their pay. Further analysis reveals that although the average rise in total compensation for top executive directors is over twice that of non-

executive directors, the pay award received by each non-executive member is not only significant, but almost equal to what is awarded to the average executive director. This suggests that non-executive members on the board are also significant beneficiaries of corporate acquisitions and thus may face similar agency problems as the executive directors they are supposed to monitor. Consistent with the tournament and managerial power theories of compensation, we also find that among the key members of the board, the positive acquisition effect on pay is greatest for the CEO. We also find that while domestic acquisitions do not significantly affect total board pay, cross-border acquisitions (which tend to be larger, complex, and riskier) have a significantly positive impact on total board pay. Our results imply that corporate boards of UK financial firms enhance their private benefits by engaging in large, complex, and risky cross-border acquisition deals to increase their pay, particularly the equity-based components of their pay.

Our results have some implications for managers, shareholders, policy makers, and regulators. The results suggest that the strict regulatory environment in which financial firms operate may not be sufficient to curb managerial incentives to pursue risky projects to maximize their private benefits. Therefore, there is the need for stronger and more effective external and internal governance mechanisms at the country and firm levels to check top leadership power. However, it is not clear whether non-executive directors in British financial institutions could help check top executive risk-taking since the non-executive directors themselves seem to be major beneficiaries from risky projects, such as cross-border acquisitions. In this case, it may be a good idea to strengthen the external governance environment, including the legal framework, and to encourage shareholder activism. Additionally, our findings have implications for the compensation structure of boards and suggest that the increasing use of equity-based pay may fail to align the interest of agents (boards) to principals (shareholders), but rather encourage powerful boards to pursue high-risk projects. Finally, our results imply that the managerial power and tournament theories have greater explanatory power over the principal-agent and managerial talent theories in enhancing our understanding of compensation arrangements in British financial firms.

The rest of the paper proceeds as follows: In Section 2, we conduct a review of the literature on the executive and non-executive compensation, as well as the M&A effect on pay, pointing out the

limitations of the current literature that this study seeks to address directly. Section 3 examines methodological and data issues, followed by our empirical analysis and discussions in Section 4. Section 5 then summarizes the paper, as well as highlights the implications of the findings.

2. Review of related literature

2.1 The remuneration structure of executive and non-executive directors in the UK

Although this paper focuses on the entire board of directors, it is important to highlight that the corporate governance guidelines in the UK make the remuneration structure of executive directors very different from that of non-executive directors. The UK Corporate Governance Code by the Financial Reporting Council (2018) [hereafter referred to as UK Corporate Governance Code (2018)] recommends performance-related remuneration for executive directors, but not for non-executive directors. The compensation of most UK executive directors is in three separate forms, comprising of: (1) a cash-based salary and managerial emoluments; (2) a cash bonus; and (3) a long-term pay, usually consisting of long-term incentive plans and share options (Coakley & Iliopoulou, 2006).

The variable components of executive pay (i.e., cash bonus and especially the share-based long-term incentive plans) often provide an ambiguous incentive for corporate managers. In an agency theoretic framework involving risk-averse managers and risk-neutral shareholders, using share-based compensation is one way to achieve interest alignment since the share-based compensation encourages managers to take more risk and consequently increase firm value for shareholders (Liu, 2017; Bliss & Rosen, 2001; Jensen & Murphy, 1990). On the other hand, since managers do not pay for the shares awarded to them, and they also have a component of their pay which is fixed (i.e., base salary), they do not materially suffer firms' downside risk. Consequently, share-based compensation may rather incentivize them to take excessive risk to the detriment of shareholders.[4] There is some evidence that performance-related pay (particularly share-based compensation) is associated with corporate risk-taking activities, including earnings management (Detzen & Zülch, 2012; Armstrong et al., 2013), and acquisitions (Deutsch et al., 2007; Furfine & Rosen, 2011; Chen et al., 2017).

[4]We are grateful to two anonymous reviewers for suggesting some of these arguments here and for suggesting a discussion of the different ways of remunerating executive and non-executive directors in the UK.

While the UK Corporate Governance Code (2018) gives extensive guidance on executive pay, they only suggest that firms should compensate non-executive directors for their "time commitments and responsibilities of the role" (Cadbury, 1992; Greenbury, 1995). Accordingly, unlike the US where both executive and non-executive directors are remunerated on a performance-related basis, most non-executive directors in the UK are paid a flat fee, with little or no performance-related element. In addition to the flat fees, some non-executive directors who take on other responsibilities, such as chairing the board or serving on the remunerations or audit committees, do earn additional fees.

In general, the remuneration of non-executive directors in most large UK firms are cash-based and largely fixed. However, there can still be some variations in the remuneration of non-executive directors in the UK, which may be related to M&As. For instance, Hahn and Lasfer (2011) suggest that there is a strong correlation among UK non-executive directors' remuneration, firm size, and CEO pay. Therefore, M&As could drive non-executive directors' pay upwards through its positive effect on firm size and CEOs' pay. Moreover, to the extent that M&As make firms larger and more complex to govern, directors can argue that the remuneration of non-executive directors should be increased to reflect the demands of their role.[5] Furthermore, Strathopoulos et al. (2004) show that newly listed firms of the dot.com boom era in the late 1990s were more likely to ignore the UK guidance for fixed fees and provide share incentives to their non-executive directors. Thus, they suggest that despite the recommendations of the UK corporate governance guidelines, some UK firms may still incorporate share-based incentives in the compensation package of their non-executive directors.[6]

2.2 Theoretical perspectives on executive compensation

The theoretical lens for top executive pay determination is often viewed through the principal-agent (also known as the optimal contracting) theory, which assumes self-interested opportunism as the basis

[5]For example, the 2010 annual report of HSBC (p. 230), which forms part of our sample, states that "Having considered comprehensive data it is clear that the current non-executive directors' fee is below the level paid in other major UK companies. The approval will therefore be sought at the Annual General Meeting in 2011 for the fee of non-executive directors to be increased to £95,000 per annum (from £65,000 per annum) with effect from 1st January 2011."

[6]Our data supports this assertion. Over two-thirds of our sample firms adhered to the UK corporate governance guidance and offered no equity-based incentives to non-executive directors. Only a minority (one-third) of sample firms provided equity-based incentives to their non-executive directors.

of the contract between shareholders and corporate managers. The theory suggests that incomplete monitoring makes the shareholder (assumed to be a risk-neutral principal) design a compensation structure that motivates self-interested, risk-averse agent-managers to pursue shareholder value (see Grossman & Hart, 1983; Murphy, 1999). Therefore, the principal-agent theory views innovations in the design of top management remuneration packages as: (1) motivated by a desire to align the divergent incentives of the firms' decision-makers and their shareholders; and (2) capable of delivering such incentive alignment by effecting a strongly positive pay-performance sensitivity and rewarding risk-taking.

Early empirical researchers relied on the relationship between managerial pay and various measures of firm performance (accounting- and market-based performance measures) to test the principal-agent theory of executive compensation. However, much of the empirical evidence on pay-performance sensitivity is less robust and small in magnitude (Conyon & Gregg, 1994; Main Bruce, & Buck, 1996; Jensen & Murphy, 1990). For example, a US study by Jensen and Murphy (1990) reports that for every extra $1,000 of wealth created for shareholders, the typical CEO's current pay rises by only $3.25. They further report the managerial pay reward of $3.25 to be heavily weighted towards share-based compensation. UK evidence on the pay-performance sensitivity is generally weak (Ozkan, 2011; Conyon & Leech, 1994; Gregg et al., 1993; Conyon & Gregg, 1994), suggesting that performance is a less important consideration in remunerating top managers of British corporations.[7]

In contrast to the weak performance effect on top executive pay, empirical work on executive pay determination strongly supports a positive firm size effect. For example, Rosen (1992) shows that the positive impact of firm size on executive pay cuts across different countries, industries, and time periods. The domination of the size effect over the performance effect in the determination of executive pay presents a puzzle, which may be explained by other theories such as power, talent, and tournament.

Unlike the traditional principal-agent model, which assumes the contract between shareholders and corporate managers to be on an "arms-length" basis, the executive power (rent capture) theory

[7]Core et al. (2003) use the efficient market hypothesis to argue that the implications of an optimally designed compensation package for performance may already be incorporated into the firm's share price. This may undermine those empirical studies that try to establish a link between top executive pay and share performance.

recognizes that the social forces often at play in boardrooms give executive directors an upper hand in the negotiations. Some studies, including Westphal and Zajac (1995; 1997) and Porac et al. (1999), illustrate the importance of social influences and power dynamics in the boardroom. Therefore, advocates of the executive power theory (Lubatkin, Lane, & Schulze, 2001; Williamson, 1985) contend that executive compensation arrangements are largely based on a socially-driven executive power, which is designed to extract rent for management teams at the expense of other corporate stakeholders. Powerful corporate executives are seen as being able to exploit the internal and external governance mechanisms with the aim of constructing a process for setting pay in a manner that enhances their self-interests and is (perhaps) independent of shareholder welfare.[8] But in the main, the body of empirical evidence supports the executive power theory by failing to find significantly positive associations between managerial pay and performance.

The managerial talent theory takes a less cynical view of top management teams, as it considers the high pay of top executives to be reflective of the limited number of people who possess the talent, skills, and knowledge required to successfully manage a large and complex organization. Rosen (1982) and Fee and Hadlock (2003) contend that talented managers should be offered top jobs with high pay, such as positions of higher seniority in larger firms. Therefore, better managers should move to superior positions in the labor market for managers, and since not many talented executives exist, the few available more talented managers will command higher pay. Hubbard and Palia (1995) show that interstate banking deregulation in the US led to CEO turnover increases and high levels of pay for CEOs, and conclude that competitiveness in the banking environment resulted in higher CEO pay through mobility of managerial talent across firms. Fee and Hadlock (2003) also show that better top executives are more likely to take a CEO position at another firm, and when hired these managers are often awarded large grants, which are typically composed of cash bonuses, restricted stocks, and stock options.

Closely related to the managerial talent theory is tournament theory (Rosen, 1992; Messersmith, Guthrie, Ji, & Lee, 2011; Connelly et al., 2014), which sees the "prize" won by the leader at the top of

[8]Murphy (2002), an agency theorist, views the rent capture theory as a type of agency theory involving weak governance structures.

the organizational hierarchy to include a higher pay than received by other managers/workers at the lower levels of management. Proponents argue that this pay differential is necessary to maintain incentives. The prediction of this theory is that CEOs' compensation should be positively related to the height of the organizational hierarchy and, by extension, to firm size. The implication of tournament theory for executive pay is that the large pay for top management, as well as the wide pay differential between executives and employees, may not be due to efforts and performance, but merely due to the apex position occupied by directors in the organizational hierarchy. One does not need to look far for evidence that favors tournament theory. The yearly media coverage of exorbitant pay going to some of the highest-paid CEOs supports the tournament theory. Further, support for the tournament theory is documented in management research (Wade et al., 2006; Carpenter & Sanders, 2002) in the form of pay gap between levels of organization (i.e. CEO pay vs other top managers' pay).

The final theory we consider is the institutional theory, which posits that any governance innovations, including executive pay arrangements, must be socially legitimate in relation to the prevailing regulatory and normative influences on the firm (Scott, 2001). Thus, the adoption of pay designs inconsistent with existing local institutions and norms may be resisted. Rosen (1992) suggests that the widespread finding in the empirical literature of a positive relationship between CEO pay and firm size is due to an implied acceptance (in an environment) of firm size being a comparator in setting managerial compensation. For instance, in the UK environment where remuneration committees and remuneration consultants are prevalent, these committees are expected to work with some level of transparency, and firm size seems to present them with a relatively "objective" yardstick. Thus, firm size seems to be an "institutionalised yardstick" for pay determination in the UK. Williamson (2000) and Bruce et al. (2005) suggest that firm-, industry-, or country-level institutions may influence the applicability of the other perspectives on executive pay: agency, power, talent, or tournament. Those empirical studies observing high executive pay differentials across industries and countries (Murphy, 1999; Conyon & Sadler, 2005; Coakley & Iliopoulou, 2006) seem to provide evidence in support of this theory.[9] Bruce et al. (2005) note that although the agency and managerial power perspectives of

[9]Conyon and Sadler (2005) report that in 2003 the value of executive share ownership (ESO) grant for the average CEO in UK top firms is £0.19 million, compared with £2.03 million for top US firms.

executive pay seem most applicable to large firms in the US and UK, the UK governance mechanism (local institutional environment) has produced particular restraints on executive opportunism, leading to lower executive pay in the UK relative to the US.[10]

Institutional theory motivates our focus on executive compensation within the particular context of British firms in the financial services industry, where high executive pay, excessive risk-taking, and weak internal governance structures were believed to be the norm in the run-up to the 2007-08 financial crisis. We summarize the main theoretical perspectives on executive compensation in Table 1.

[INSERT TABLE 1 ABOUT HERE]

2.3 Related empirical literature and hypotheses development

2.3.1 M&A and total board compensation

The empirical literature generally documents a positive relationship between top management pay and firm size (Rosen, 1992; Conyon & Leech, 1994), and this has potentially significant implications for M&A behavior, governance, and top executive compensation. If indeed managerial compensation is closely related to firm size, then the expansion of firms via M&As may seem attractive for self-serving top executives seeking to increase their pay. Some and perhaps most managers pursuing their private benefits tend to use acquisitions to achieve firm growth, because acquisitions provide a speedy vehicle for managers to "build empires" which often provides them with juicy pay packages, more power, and other non-financial rewards (e.g., status and other perquisites) (Girma et al., 2006; Jensen, 1986).[11] Adding some credence to this perception is the evidence in the empirical literature suggesting

[10]For example, unlike the US, the UK had a series of informal, self-regulatory committees (Cadbury, 1992; Greenbury, 1995; Hampel, 1998; Higgs, 2003; Walker, 2009) that influenced corporate governance and executive pay over the past two decades.

[11]A classic anecdotal example of this behavior is the case of Mr Frederick Goodwin, the former powerful CEO of the Royal Bank of Scotland (which is part of our sample). Mainly through aggressive M&As around the globe, Goodwin's bank became the largest in the world (by total assets) within a period of less than 10 years (2000 to 2008). This made him one of the powerful CEOs, not just only in the UK, but also in the world. However, as the 2007-08 financial crisis showed, most M&As were extremely risky and were mainly entered into recklessly, primarily motivated by empire building, ego, power grab, and pay motives. Consequently, he was forced to resign due to shareholder activism, political action, and especially strong public outrage (e.g., his personal home was attacked and broken into). Mr Goodwin forfeited his knighthood as well as some of his pay and pension entitlements due to the extremely poor financial position of the bank.

that most M&As fail to deliver value for shareholders of the acquirers or enhance the firms' profitability (Bliss & Rosen, 2001; Agyei-Boapeah, 2018).

Moreover, a bulk of the empirical literature directly examining the relationships between top executive pay and M&As is strongly supportive of the view that managers gain from acquisitions. Based on an analysis of US bank acquisitions during 1986-1995, Bliss and Rosen (2001) suggest that acquisitions lead to higher CEO pay, mainly through the size effect. Based on 327 large US acquisitions between 1993 and 1999, Grinstein and Hribar (2004) also show that powerful CEOs who can influence board decisions received increased pay in the form of huge bonuses. They further report that those powerful CEOs prefer to engage in larger deals, although such moves subsequently attract greater negative investor reactions. Further, Chen et al. (2017) show that although the compensation of CEOs of US banks is positively related to both merger and internal (non-merger) growth, the effect of merger growth is significantly larger.

Turning to UK evidence, Firth (1991) used 171 acquisitions in non-financial firms to study the post-acquisition changes in the remuneration of the highest-paid member of the board. He showed that the executive involved in both successful and unsuccessful acquisitions benefited from increased pay. Girma et al. (2006) utilized a sample of non-financial firms in the UK from 1981 to 1996 to replicate Firth's result for CEOs. They document that irrespective of the success of the acquisition, CEOs' pay increases by at least 5% within the two-year period following the acquisition activity. Conyon and Gregg (1994) examined the role of acquisitions in determining the pay of the highest-paid executive in 169 UK non-financial companies during 1985-1990. They report that CEOs who made frequent acquisitions earned around 6.5% more pay. Extending the analysis to cover other executive directors, Coakley and Iliopoulou (2006) find that for their sample of 100 non-financial firms, CEOs and other executive directors of acquiring firms receive about £84,000 more in cash pay for completing acquisitions, even after controlling for performance and firm size. They also show an association between higher post-acquisition pay levels and boards with less independence.

A common feature of the extant literature (regarding the UK) is its lack of attention to executive compensation in the banking and financial services sector. Financial firms are often excluded on the grounds that they are heavily regulated (Ozkan, 2012). While it cannot plausibly be argued that the high

regulatory environment of financial firms has no unique impact on their activities, prior research on executive compensation focused far too much on this issue. The previous studies also ignored the crucial fundamental drivers of top management pay: self-seeking managers, powerful executives writing their own contracts, special managerial talent, and prestigious tournament prizes. Amongst other things, all these factors prevail in the financial sector. For instance, Llewellyn, Steare, and Trevellick (2014) blame the 2007-08 UK banking crisis on a banking culture that was at its core fundamentally a self-seeking behavior. They argue that the interests of the bankers diverged from shareholders and the wider social good, and they further suggest that this culture led to a systematic disregard of the regulatory system in the pre-crisis years. Moreover, the Walker Report (2009) notes that the boardroom environment in many UK financial institutions during the pre-crisis years did not encourage the effective challenging of executive decisions, resulting in weak corporate governance environments. Therefore, the regulatory environment of financial institutions may fail to curb executive excesses in financial firms, including the executives pursuing projects that advanced their private benefits, such as M&As.

Besides the agency problems and potential regulatory failures/limits, managing a large bank is likely to require special talent and essentially represents a larger tournament with expectations of meriting a lucrative and commensurately attractive compensation package. These considerations together with the extant literature lead us to argue that if indeed self-seeking managers use acquisitions to grow their pay, then managers of UK financial firms might have done the same during the financial crisis as well as the years leading to it when there was laxity in regulation and weak internal governance mechanisms. Thus, we expect the acquisitions by financial firms in the pre-crisis and during the crisis years to significantly increase the pay of board members. Accordingly, we state our first hypothesis as follows:

H1: *M&As have a positive effect on total board pay (i.e. the acquisition effect), particularly on the pay of powerful individuals on the board.*

2.3.2 M&As and equity-based compensation

As noted in section 2.1, performance-related pay involving equity-based compensation incentivizes risk-averse managers to take more risk to increase shareholders' wealth (Liu, 2017; Bliss & Rosen, 2001; Main et al.,1996). Other studies (Detzen & Zülch, 2012; Armstrong et al., 2013; Bebchuk & Fried, 2004) further suggest that equity-based pay can sometimes cause managers to engage in excessive risk-taking to the detriment of shareholders. Given that M&As are generally risk-increasing corporate strategies (Furfine & Rosen, 2011), they may be correlated with managerial equity-based pay.

The empirical literature on the relationship between M&As and equity-based compensation is scant, but supports a positive association. Based on US firms from 1996-2002, Deutsch et al. (2007) report that equity-based compensation encourages corporate managers to support risky acquisitions. Similarly, Hagendorff and Vallascas (2011) show that higher contractual risk-taking incentives through equity-based compensation packages tend to encourage CEOs of US banks to engage in risk-increasing acquisition strategies. In the UK context, Ozkan (2012) suggests that at least half of the acquisition-related pay increases for CEOs of non-financial firms are equity-based. If risk-taking is generally higher in financial firms than non-financial firms, then it is plausible to expect greater acquisition effect on equity-based pay of boards in the financial sector. This leads us to our second hypothesis below:

H2: *The acquisition effect is stronger in equity-based compensation structures that are designed to incentivize powerful directors (particularly, executive directors) to pursue risky projects.*

2.3.3 The cross-border vs domestic M&A effect on board pay

Cross-border acquisitions are quantitatively important because they account for an increasing proportion of UK M&A activities (Agyei-Boapeah et al., 2019). Therefore, it is important to ascertain whether cross-border deals affect directors' pay in substantially different ways from domestic deals. To the extent that cross-border acquisitions result in larger, complex, and risky international organizations (due to currencies and cultural differences, geographic dispersion, etc.), they are likely to increase management's power to demand higher compensation.

Empirically, Ozkan (2012) and Guest (2009) use a sample of non-financial firms to examine whether the nationality of the target firm influences the pay increases that follow acquisitions. Ozkan

(2012) finds evidence in support of this view and finds that cross-border acquisitions lead to higher CEO pay than domestic acquisitions, and interprets the results to be consistent with the view that the geographic coverage of a firm affects the design of CEO pay. Guest (2009) shows that the acquisition of targets with high pay leads to acquisition-related pay increases. However, Guest finds no evidence of higher pay following the acquisitions of target firms from countries with high pay levels.

A limitation of prior empirical studies is that they excluded financial firms from their analysis. Meanwhile, the distinction between cross-border and domestic acquisitions is arguably more important for financial firms, particularly banks. This is because cross-border acquisitions do not just raise bank-specific risks (Furfine & Rosen, 2011; Hagendorff & Vallascas, 2011), but also increase overall systemic risks (De Nicolo & Kwast, 2002; Lehar, 2005). The concept of "too-big-to-fail" creates the incentive for directors to grow their banks internationally (via cross-border acquisitions) to make them "systemically important" on the global front (De Nicolo & Kwast, 2002; Lehar, 2005; Kimura, Silva, & Sobreiro, 2017). However, due to the potential public outcry and nationalistic sentiments, national governments are less likely to rescue internationally diversified foreign banks than to rescue their purely domestic banks. This makes cross-border acquisitions by financial firms riskier than domestic deals. Based on the foregoing discussions, we formulate our third hypothesis as follows:

H3: *The acquisition effect is stronger in cross-border acquisitions than in domestic acquisitions due to the size, complexity, and risk effects on top executive pay.*

2.3.4 The acquisition effect on execitive and non-executive directors

A large bulk of previous research on top leadership pay focuses mainly on the pay of a single member of the board, usually the CEO or the highest-paid executive director (Hagendorff & Vallascas, 2011; Ozkan, 2012). Non-executive directors were hardly covered and were implicitly assumed to be more of a monitoring mechanism for checking and ratifying executive decisions for shareholders. Meanwhile, some studies suggest that non-executive members of the board may be very active in some strategic moves, such as acquisition decisions (Goh & Gupta, 2016; Deutsch et al., 2007; Beckman & Haunschild, 2002). For example, Beckman and Haunschild (2002) show that firms connected to others

with varying acquisition experience (e.g., through their outside directors) make better acquisition decisions in the form of paying less for their targets and engaging in better-performing deals.

Deutsch et al. (2007) go further in suggesting that pay structures could make non-executive directors as self-serving as the executive directors they are expected to monitor. They provide evidence to suggest that stock options make non-executive directors more likely to support risky acquisitions. Brick, Palmon, and Wald (2006) also provide evidence to suggest "mutual back scratching" and "cronyism" in the boardroom, especially when excessive compensation of non-executive directors breeds a culture that does not promote intense scrutiny of executive decisions. Goh and Gupta (2016) show that non-executive directors' ability to directly contribute to board decisions is rewarded more highly by firms than their commitment to monitoring executives, such as showing more independence and challenging executive decisions. Taken together, non-executive directors may fail in their monitoring roles and rather be actively engaged in the acquisition decisions of firms. Thus, it is important to understand how the acquisition decision impacts the compensation packages of not just executive directors, but also the non-executive directors. Therefore, we state our final hypothesis as follows:

H4: *The acquisition effect on board pay cuts across both executive and non-executive directors.*

3 Data and methods

3.1 Method of analysis

The first objective of the current article is to examine the impact of M&As by UK financial firms on directors' pay. Distinctively, we are among the first to examine this relationship using data relating to the pay of all major types of powerful directors, including (i) CEOs, (ii) CFOs, (iii) board chairpersons, (iv) other executive directors, and (v) non-executive directors. To undertake this analysis, we utilize an empirical strategy similar to that of Coakley and Iliopoulou (2006), and model directors' pay as a function of a set of variables identified in the literature to be important determinants of executive pay.

The baseline regression model is specified below:

$$Pay_{it} = \beta_0 + \beta_1 Merger_{it-2} + \beta_k X_{kit-1} + f_{industry} + f_{year} + \varepsilon_{it} \quad \text{Eq. (1)}$$

where Pay_{it} is total board pay of firm *i* in year *t*, defined as the sum of direct compensation (comprising mainly of salary plus bonus) and the value of equity-based compensation (made up of LTIP and share options). Our definition of total board pay is largely in line with Conyon, Gregg, and Machin (1995). $Merger_{it-2}$ is an indicator variable which equals one if a firm completed any acquisitions in the previous two years (*t*-2), and otherwise zero. The estimated coefficient of this indicator variable (β_1) is the primary parameter of interest since it captures the pay differential in the current year that directors of acquiring firms receive for completing an acquisition in the previous two years, after controlling for the expected changes in compensation. We use a three-year window because it may take some time for the effects of an acquisition on directors' compensation to become observable (Bliss & Rosen, 2001).[12]

The vector, X_{kit-1}, controls for other observable factors that are known to influence directors' compensation. The control variables are lagged to minimize reverse causality concerns. The first control variable is firm size, proxied by the natural log of sales. To delineate the effect of growth by acquisitions from any internal growth by the firm, we also include a proxy for internal growth (asset growth), measured as the percentage growth in total assets relative to the previous year. We include abnormal stock returns [measured as the average annual, monthly stock return of a firm minus the average return for the Financial Times Stock Exchange (FTSE) All-Share index] and accounting return on assets (computed as the ratio of earnings before interest and tax to total assets) to capture the performance effect on directors' pay. Agency theory predicts that firm performance should be positively correlated with pay, so following previous literature (Ozkan, 2011; Guest, 2009) we include market-to-book value to control for growth opportunities. Previous studies (Conyon, 1997; Brick et al., 2006; Ozkan, 2011) suggest the importance of corporate governance in pay determination. Accordingly, we construct a corporate governance index (CG index) from nine variables to control for the corporate governance

[12]Varying the three-year window to consider a one-period lag or a contemporaneous variable does not qualitatively affect the results. We return to this issue in the robustness analysis section.

environment of the firm. Due to relevance of governance structures in our paper, we further discuss the construction of the CG index in Section 3.2. We include a single CG index instead of several variables in the interest of estimating a more parsimonious model.[13]

Following standard practice in the literature, we include dummies in Eq. (1) to control for industry and year fixed-effects, which are $f_{industry}$ and f_{year}, respectively. The industry dummies (e.g., banks, insurance firms, private equity firms, and speciality finance firms) are expected to control for industry demands and supply factors, while the year dummies capture economy-wide shocks. Finally, the model includes an intercept (β_0) and an error term (ε_{it}). The parameters of the model (in Eq. (1)) were estimated using random-effect generalised least squares panel data methodologies and we allowed standard errors to cluster at the firm level. All variables are defined in the Appendix.

3.2 The construction of corporate governance index

Previous studies (Liu et al., 2017) combined corporate governance characteristics into indices to proxy for the general internal governance environment of firms. We follow a similar approach by selecting nine governance variables drawn from the literature, intuition, and data availability for our sample firms. Our CG index includes board size, the average age of board members, the average number of other current directorships, and the presence of a "Big 4" auditor, an audit committee, a risk committee, a corporate governance committee, a remuneration committee, and a compensation consultant.

In constructing the CG index, we first add up those six indicator variables representing the presence of some committees (i.e., audit, risk, corporate governance, and remuneration), a "Big 4" auditor, and a compensation consultant. We take the view that since the UK Corporate Governance Code (2018) recommends the establishment of audit and remuneration committees, they are indicative of best corporate governance practices. Similarly, the UK Corporate Governance Code (2018, p. 13-14) acknowledges the role of risk and remuneration consultants in designing directors' remuneration, as

[13]Our findings do not qualitatively change when we include the individual corporate governance variables in the regression model. These are untabulated in the interest of brevity, but are available upon request.

well as generally promotes good corporate governance.[14] Thus, those firms with risk and corporate governance committees and those engaging the services of remuneration consultants may be deemed as having good governance structures. Further, drawing from the literature that suggests that "Big 4" auditors offer a higher quality of services (Fleischer et al., 2017), we consider the presence of a "Big 4" auditor to positively influence our CG index.

Next, we add up values obtained from the remaining three index components (i.e., board size, the average age of board members, and the average number of other current directorships held). Unlike the six indicator variables, the three index components do not enter the index linearly due to the mixed evidence in the literature. For instance, while larger boards are deemed to have a wide range of expertise and diversity (Zhou et al., 2018), they are also found to be less effective and more prone to free-riding problems when they become too large (Liu et al., 2017). Therefore, we consider firms with medium-sized boards to have a better governance structure than those with very small or very large boards. Specifically, we divide the sample into four based on board size and assign a score of one to firms in the mezzanine group (Q2 and Q3), and zero to the firms in the other groups (Q1 and Q4). We follow similar reasoning and procedures to assign values to firms based on their board age and other directorships held. This is because both board age and other directorship can enrich the experience of the board and enhance firm value (Agyei-Boapeah et al., 2019), but can also impact firms negatively (Abdul Wahab et al., 2018). Abdul Wahab et al. (2018) find boards with older members to have little incentive to engage in tax planning, while the UK Corporate Governance Code (2018) suggests that multiple directorships could place too much demands on directors' time and, consequently, affect their effectiveness.

Finally, the values from the six indicator variables and the assigned values from the three continuous variables are added up to form the CG index. The index ranges from zero to nine, with higher values indicating firms with good governance practices. In untabulated results, we examine the robustness of our findings to alternative calibrations of the CG index. Here, the six indicator variables remain as

[14]Although it is unclear why the UK Corporate Governance Code (2018) does not require firms to have a corporate governance committee, some UK firms have one. Perhaps the framers of the Code consider corporate governance as a matter that should rest with the entire board, rather than delegated to a committee. Restricting our CG index to only firms with those kinds of committees did not change our conclusions.

described above, while dummy variables are created from the three continuous variables. In creating the dummies, we considered larger, older, and busy boards to be good corporate governance characteristics and are therefore assigned a value of one to firms that had above-median values for board size, age, and other directorships held, and zero otherwise. Results based on this measure of CG index are qualitatively similar to those based on our first measure of CG index. The results again remain qualitatively similar when other governance variables, such as board independence and board diversity, are included in the CG index. These results are available upon request.

3.3 Data and descriptive statistics

The data utilized in the analysis are derived from three main credible, publicly available database sources. The first is *Datastream*, from where a list of UK financial firms over the period 1993 to 2010 is retrieved. The sample period is chosen to coincide with: (1) the years during and preceding the 2007-08 financial crisis, a period characterised by a surge in M&A activities (see Figure 1); and (2) the implementation of the report recommendations of Cadbury (1992) and Greensbury (1995). Cadbury (1992) recommended corporate governance best practices, including a greater role for non-executive directors in the UK, and listed companies reporting in 1993 were expected to comply or give reasons for non-compliance. Similarly, Greensbury (1995) encouraged the use as well as the disclosure of share-based compensation among UK firms. Thus, the changes witnessed in the UK corporate governance environment in the mid-1990s made it relatively easy to gather relevant information on executive and non-executive directors.

[INSERT FIG. 1 ABOUT HERE]

Second, we collected data on executive compensation and corporate governance relating to all types of financial firms (e.g., banks, insurance companies, and private equity firms) from the *BoardEx* database. *BoardEx* contains data on compensation and governance at individual-, firm-, and country-levels, thereby allowing us to collect and analyze extensive data relating to five categories of directors (CEOs, CFOs, chairpersons, other executive directors, and non-executive directors). Financial and accounting information on firms (such as sales, total assets, and profitability) were collected from *Datastream*. The final sample with all required data consists of an unbalanced panel of 167 financial

firms over the period 1998 and 2010, for which we have 917 firm-year observations. Thus, the average firm has approximately six years of observation. Table 2 displays the balance of the panel by year and industry (banks, insurance companies, private equity firms, and speciality and other finance firms).

[INSERT TABLE 2 ABOUT HERE]

Finally, the data for M&As are drawn from the *Thomson Financial Securities Data Corporation (SDC)* Database. This database helps us to identify every acquisition made by the sample firms over the sample period. Over the sample period, firms that made at least one acquisition were classified as acquirers, whereas non-acquirers made no acquisitions. These definitions allowed us to split our sample of 917 observations into 342 acquirers and 575 non-acquirers. Our sample of acquirers made 751 acquisitions over the period, which averages to about five acquisitions per firm during the period. Although domestic deals (455) outnumbered cross-border deals (296) in our sample, the average cross-border deal was larger than that of domestic acquisition (£187 million vs £177 million). The fact that cross-border acquisitions are relatively large suggests that their implementation may be complex and riskier compared to completing a domestic deal. The yearly breakdown of the sample of acquirers and non-acquirers and the types of acquisitions are shown in Table 3.

[INSERT TABLE 3 ABOUT HERE]

Table 4 presents the descriptive statistics and correlation matrix for the variables used in the study. The average board earns a total compensation of about £3.1 million per annum, with about 40% of the compensation being equity-based (£1.3 million). With an average board size of nine directors for our sample firms, this implies that an average director receives over £144,000 per annum in equity-based compensation and about £340,000 per annum in total compensation. The observed £144,000 equity-based compensation per director compares with a value of executive share ownership grant of £190,000 for the average CEO in UK top firms in 2003 (Conyon & Sadler, 2005). As seen in Table 4, there is a high variability in the compensation variables (as indicated by standard deviations of £5 million and £2.9 million for total compensation and equity-based compensation, respectively); and, thus, it will be interesting to examine whether acquisition activity may partly explain this variation in directors' pay.

Finally, the correlation among the independent/control variables is low (below 0.49), suggesting that multicollinearity is unlikely to pose any serious challenges to our empirical analysis. It is also

noteworthy that there is a positive and significant association between our acquisition variable and the compensation measures, providing some preliminary evidence of the link between acquisition activity and executive compensation (see Table 4). We explore this matter further in a multivariate regression framework in the next section.

[INSERT TABLE 4 ABOUT HERE]

4 Empirical analysis and discussion

4.1 Do acquisitions lead to higher pay for directors?

Table 5 presents the estimation results for total and equity-based pay for directors. In Column (1), the coefficient estimate for acquisition dummy is positive and statistically significant, indicating that acquisitions lead to increases in directors' total pay. Specifically, the completion of an acquisition seems to lead to a rise in total directors' pay by an average of £1.47 million. This pay rise is not just statistically significant (*p-value*=0.001), but economically significant as well. This £1.47 million pay rise associated with completing an acquisition translates to an average pay increment of about £163,000 per board member (i.e., with an average board size of nine). Given that the average board member receives an annual compensation of £340,000, our results suggest that firms undertaking acquisitions increase each board member's pay by about 48%. This significant rise in directors' pay following the completion of acquisitions is consistent with our first hypothesis (*H1*), implying that self-serving powerful directors could easily deploy acquisitions as a tool to realizing higher private benefits.

The results in Column (2) of Table 5 show that much of the pay rise associated with acquisitions is in the form of equity-based compensation. In the model used for the results in Column (2), we replace the total pay in Eq. (1) with only the equity-based compensation. We find that M&As resulted in a statistically significant increase in directors' equity-based compensation by an average of £1.18 million. Relating this to the result in Column (1) implies that as much as 80% of the acquisition-induced rise in total directors' pay is paid out in the form of shares or share options. This supports our second hypothesis (*H2*), suggesting that shareholders through the remuneration committees do recognize the potential for powerful directors to utilize acquisitions to pursue their self-interest, and attempt to use equity-based compensation to align directors' interest to that of shareholders (Bliss & Rosen, 2001;

Jensen & Murphy, 1990). The results also suggest that previous studies that did not include equity-based pay in their analysis might have significantly underestimated the acquisition effect on top executive pay.

[INSERT TABLE 5 ABOUT HERE]

The impacts of the other determinants of pay (control variables) are consistent with prior research. In line with studies documenting dominance of size effect over performance effect (Conyon & Gregg, 1994; Conyon & Leech, 1994; Gregg et al., 1993), we find that firm size has a significantly positive effect on board pay, while abnormal stock return and return on assets (*ROA*) are insignificantly related to top executive pay. The coefficient for asset growth is positive but insignificant, indicating that internal growth by undertaking capital expenditure may not be used by managers to argue for higher pay (Harford & Li, 2007). Finally, as seen in Ozkan (2012), market to book ratio (growth opportunities) and corporate governance have positive effects on pay. These results are robust and largely hold throughout the rest of the analysis. Our regression models also generally explain much of the variations in board pay as indicated by our satisfactory *R*-square values.

4.2 Do cross-border acquisitions lead to higher pay increases than domestic acquisitions?

Columns (3)-(6) of Table 5 present the results for the effect of cross-border acquisitions and domestic acquisitions on directors' compensation. In the models reported in Columns (3) and (4), we modify Eq. (1) by defining acquisitions to be an indicator variable equal to one if a firm undertakes a cross-border acquisition, otherwise zero. Similarly, an acquisition is defined in Models (5) and (6) as a dummy variable which is equal to one if a firm completed a domestic acquisition, and zero otherwise.

As displayed in Columns (3) and (4), undertaking cross-border acquisitions increase directors' total pay and equity-based compensation by an average of £3.73 million and £3 million, respectively. These increases in pay are statistically significant at the 1% level. Moreover, completing a cross-border acquisition seems to increase directors' total pay by over twice the pay increase associated with an average acquisition (£3.73 million vs £1.47 million). However, the pay increases of about £560,000 (total pay) and £216,000 (equity-based pay) associated with domestic acquisitions are relatively small, as well as statistically insignificant (see Columns (5) and (6)). This finding provides support for

Hypothesis 3 (*H3*) and is consistent with Ozkan (2012) but contrary to Guest (2009) who finds no evidence of higher pay increases in cross-border acquisitions relative to domestic acquisitions.

Given that cross-border acquisitions are on average larger and may be more complicated to negotiate and manage (Agyei-Boapeah, 2015), these results provide weak support for the managerial talent arguments that the geographic scope of a firm affects the complexity of directors' task, and that their pay packages are designed to attract and retain an appropriate pool of directors' talent. As we consider cross-border acquisitions to be riskier than domestic acquisitions, our findings may also fit the principal-agent theory of executive compensation. The executive power and tournament theories both offer plausible explanations for our results.

Collectively, our findings in Table 5 suggest that the average director sitting on the board of a UK financial firm receives a pay reward of between £24,000 and £406,000 following the completion of an acquisition, with higher rewards associated with cross-border acquisitions. Much of the pay awards are equity-based rather than cash-based, suggesting an attempt to align managerial and shareholders' interests in acquisition transactions. It seems managerial power and tournament theories play a dominant role in explaining the remuneration dynamics observed in our data, and it may be interesting to understand the internal corporate governance dynamics in the boardrooms of financial firms during acquisitions. The next section offers some insights into this matter through an analysis of the pay rewards collectively to executive and non-executive directors, and also to some powerful individual members of the board – CEO, CFO, and Board Chairperson.

4.3 Who are the top acquisition beneficiaries in the boardroom?

We now decompose our analysis into the acquisition-related pay rewards for powerful executive and non-executive directors, and also for some key board members for which we have data on their compensation. In these analyses, the dependent variable in Eq. (1) becomes the total pay for the type of directors or the particular director who is the focus of analysis. Consistent with hypothesis 4 (*H4*), we find acquisitions to positively and significantly impact the pay of both executive and non-executive directors (see Columns (1) and (2) of Table 6). With non-executive directors also benefiting substantially from acquisitions, it is plausible that non-executive directors may also suffer from some

agency problems and they might fail to effectively monitor and scrutinize executive proposals on acquisitions (Deutsch et al., 2007). As suggested by Beckman and Haunschild (2002), the pay increments for non-executive directors may make them more active in the acquisition decision.

Although executive directors as a group appear to benefit more from acquisition transactions relative to non-executive directors (£1.12 million vs £451,000), the average reward per member shows a narrower gap. Specifically, an executive director receives an average of around £193,000 pay increase following an acquisition (as the average number of executive directors is six), compared to an average pay rise of about £150,000 for non-executive directors (with an average number of three). The £43,000 pay gap may represent the additional efforts expended by executive directors in completing the deal.

[INSERT TABLE 6 ABOUT HERE]

Next, we find acquisitions to significantly increase the pay of key senior members of the board of directors (i.e., the CEO, CFO, and Board Chair) who are likely to be the most powerful. As displayed in Columns (3)-(5), the mean pay rise following acquisitions for CEOs, CFOs, and Board Chairs is around £492,000, £80,000, and £107,000, respectively. Consistent with the tournament theory of executive pay, the CEO earns substantially higher from the acquisition deal compared to the average executive director (£492,000 vs £193,000). This also supports why most prior studies on executive compensation tend to focus on the CEO (Bliss & Rosen, 2001; Grinstein & Hribar, 2004; Ozkan, 2012; Chen et al., 2017). Lastly, the results suggest that Board Chairs may not necessarily be the top beneficiaries among the non-executive directors, since they get an average pay increase of £107,000 compared to the £150,000 pay raise given the average non-executive director.

Overall, we provide evidence to suggest that both executive and non-executive directors make significant gains in the form of increased total pay from completing acquisitions. This implies that acquisitions offer scope for non-executive directors to earn more, and be more self-interested and less effective monitors in matters involving M&As. Therefore, in the context of acquisitions, shareholders may need to view non-executive directors as self-interested agents and not as mere monitors of executives acting on behalf and in the interest of the shareholders (Deutsch et al., 2007). But the top most beneficiary from acquisitions in the boardroom is the CEO, whose pay rise is greater than the combined pay rise for all non-executive directors combined.

4.4 Additional analysis

Table 7 reports the results of additional analysis that attempts to reflect the risk levels associated with the acquisitions and the corporate governance environment of the sample firms. We earlier argued that because cross-border acquisitions were larger than domestic deals, they are likely to carry greater risk and complexity. We extend that analysis by considering serial acquisitions (engaging in more than one acquisitions over the period) and larger acquisitions (both cross-border and domestic deals that are valued over £10 million) to be acquisition strategies that are more likely to create larger organizations with several layers of hierarchy, and may yield greater private benefits to directors. Furthermore, serial acquisitions and larger acquisitions could represent more risky acquisition strategies. For example, serial acquisitions imply managers are spreading organizational resources over several deals, which could result in overstretched resources and increased risks of failure. Similarly, larger acquisitions may prove complex to negotiate and even when completed pose a challenge to integrating the merging firms.

[INSERT TABLE 7 ABOUT HERE]

Overall, the complexity and riskiness of these serial and larger acquisitions could be used as a basis for negotiating higher pay. Thus, powerful boards are more likely to use serial and larger acquisition strategies to boost their pay. The results in Columns (1)-(4) of Table 7 support this view. We find board pay to increase significantly for firms undertaking serial and larger acquisition strategies, but not for those undertaking single and small acquisition strategies (i.e., pay increases of £4.5 million vs £140,000 for serial vs single acquisition strategies; and £3 million pay rise vs £99,000 pay cut for large vs small acquisition strategies). To the extent that serial and large acquisition strategies are risky corporate strategies, and given our earlier finding that a bulk of the directors' acquisition-related pay rise is equity-based, our results suggest that the remuneration structure of the board (i.e., increasing reliance on equity-based compensation) may drive firms to pursue risky projects. This supports the finding of Harford and Li (2007), who show that CEOs with high equity-based compensation have the incentive to undertake acquisitions. Again, our results are consistent with Bebchuk and Fried's (2004) argument

that equity-based compensation may be an important part of the rent extraction processes that lie at the heart of top executive remuneration.

Further, weaknesses in the internal corporate governance arrangements of firms may also explain why directors receive higher pay following acquisitions. If the determination of executive pay following acquisition is associated with agency problems, then acquisition-induced pay should be constrained in good and effective corporate governance environments (Liu et al., 2017). Harford and Li (2007) show that in well-governed US firms, CEOs' pay following an acquisition becomes sensitive to performance even if a bulk of their pay is equity-related. Core et al. (1999) report that powerful CEOs who can influence the selection of board members often receive higher pay. Overall, the literature suggests that the strength of the corporate governance environment may influence board pay increases following acquisitions. We expect pay awards following acquisitions to be constrained in stronger corporate governance environments.

To explore this issue, we divide the sample into stronger vs weaker corporate governance firms based on the median value of our CG index. As indicated earlier, higher values of our CG index represent stronger corporate governance environments. The results are shown in Columns (5) and (6) of Table 7, and seem contrary to our expectations. While we find the positive association between board pay and acquisition activity to persist in both stronger and weaker corporate governance environments, the relationship is stronger in stronger corporate governance environments. While this finding may seem odd, it may be that our proxy for corporate governance does not adequately measure "good" governance. It is also possible that a good corporate governance design may not be effectively implemented in practice. For example, although the presence of a remunerations committee is largely seen as a good corporate governance practice, some of its members may be too close to the executives and become generous in their pay awards. Higgs (2003) shows that the appointment of non-executive directors (some of whom sit on the remunerations committee) in the UK tends to be too informal, leading to an excessively familiar atmosphere in the boardroom. The Walker Report (2009) also highlights that the essential task of challenging executive decisions and their proposals appear to be ignored in many boardrooms of UK financial firms in the years leading to the financial crisis. Overall, our finding of higher board pay in "strong" corporate governance environments may be due to the UK governance

system and environment during the sample period when corporate governance structures (e.g., audit and remunerations committees) did not operate as effectively as expected or desired.

Finally, we conduct further analysis of the managerial power theory by comparing pay raises of boards where the CEO has greater power relative to those with constrained CEO power. Teti et al. (2017) contend that powerful CEOs who double as the board chairperson (CEO duality) become entrenched and can pursue their personal interest during acquisitions. On the contrary, the separation of CEO and chair positions reduces the power of the CEO to control the board. Thus, we use CEO duality to gauge the extent of managerial power and run separate regressions for more and less powerful CEO scenarios. As shown in Columns (1) and (2) of Table 8, the acquisition-related pay increases are greater when the roles of CEO and Board Chair are vested in a single individual (£1.7 million) than when they are separated (£1.4 million). Thus, the evidence supports the view that powerful corporate executives are able to extract more acquisition benefits in the form of higher compensation.

[INSERT TABLE 8 ABOUT HERE]

Similar conclusions are drawn from the results in Columns (3) and (4) of Table 8 when board independence is used to proxy for executive power. Firms are considered to have more powerful executives if their boards are less independent (i.e., their boards have below the median proportion of non-executive directors). Board pay rises by £2.5 million when the board is less independent, compared with a pay rise of £1 million when the board is more independent. Overall, these results imply that some governance mechanisms, such as separating the positions of CEO and Board Chair, as well as greater board independence (i.e., more non-executive directors) may be able to constrain the pay rises associated with acquisitions.

4.5 Robustness testing

We test the robustness of our results to a raft of econometric specifications. In the interest of brevity, we only report the results for the primary analysis (i.e., the acquisition effect on pay). Columns (1) and (2) in Table 9 show the analysis of Eq. (1) when the independent variable (acquisition dummy) is lagged one-year (in Column (1)) or included as a contemporaneous variable (Column (2)). As shown in Table

9, the acquisition dummy remains significantly positive in both specifications, though the magnitude of the estimated coefficient is smaller in the contemporaneous specification. This suggests that there may indeed be some lagged effect of the acquisition on board pay, in that the full effect of the acquisition on executive pay may not be observed in a single year. Girma et al. (2006) attribute this lag to a deliberate strategy used by executives to smooth their pay and prevent the negative publicity associated with large pay awards.

[INSERT TABLE 9 ABOUT HERE]

Investigating the relationship between board pay and acquisitions raises the problem of potential endogeneity caused by self-selection. In our estimated model reported in Column (3) of Table 9, we utilize the Heckman (1979) correction to ameliorate any potential selection bias that may arise because acquirers and non-acquirers are not selected from a random population of firms. Any omission of a relevant variable influencing firm's likelihood to undertake acquisitions that correlates with variables influencing board pay would lead to biased estimates without Heckman correction. Thus, we estimate a probit model involving pre-acquisition financial leverage, cash ratio, firm size, Tobin's q, ROA, stock return, and industry and year dummies as explanatory variables. Column (3) of Table 9 reports the results, which includes the Heckman correction. As can be seen, the effect of acquisition on total board pay is statistically significant and similar in magnitude to that reported in the baseline model (£1.77 million vs £1.47 million). Thus, our results are robust to several potential sample selection problems.

Lastly, we control for persistence in the pay model by estimating a system-Generalised Method of Moments (GMM) regression. Girma et al. (2006) and Guest (2009) suggest the inclusion of a lagged dependent variable in the estimation of pay models to account for persistence in pay and to control for firm-fixed effects and possible endogeneity problems. Our system-GMM results in Column (4) of Table 9 still show a positive and statistically significant effect of acquisitions on board pay.[15] The completion of an acquisition increases board pay by an average of about £303,000, translating to £34,000 per board member, even after controlling for the general persistence in pay. The coefficient for the lagged

[15]Our system-GMM estimation satisfies the usual diagnosis tests of the absence of second-order serial correlation and instrument validity.

dependent variable (board pay) is significantly negative, suggesting that deviations from a steady state in pay experience some level of correction over time.

5 Summary and conclusions

This article contributes to the literature on the relationship among the compensation of powerful corporate leaders, corporate governance structures, and corporate acquisitions. With comprehensive compensation data on the entire board of directors of all types of UK financial firms, we are able to distinctively shed some new insights on how mergers and acquisitions influence the total pay of the boards of financial firms in the UK over a 13-year period. Our results show that the acquisitions by financial firms during this period led to significantly higher pay rises for the board of directors, suggesting that acquisitions represent a vehicle through which the board can increase its pay. Further analysis of the pay structure revealed that over three-quarters of the acquisition-related increase in board compensation was awarded in the form of equity-based pay. This suggests that shareholders, suspecting the board to make self-serving acquisition decisions, make attempts (though overall unsuccessful) to design acquisition-related compensation packages expected to align the interest of the board to theirs.

Examining the pay awards associated with cross-border acquisitions and domestic acquisitions confirms the view that the compensation structure seems to reward risky deals. We find that cross-border acquisitions, which tend to be complex and more risky, led to higher board pay than domestic acquisitions. Overall, these results suggest that directors have strong incentives to undertake acquisitions, especially cross-border acquisitions to increase the size of their pay packages. Additional examinations indicate even larger compensation packages for directors that engaged in riskier acquisition strategies, such as those undertaking serial acquisitions and those completing larger deals. Thus, there appears to be an incentive for the board to deploy acquisitions as a tool to pursue higher risk and to be able to argue for higher pay for undertaking complex tasks.

A critical component of the corporate governance system, intended to monitor executive strategic choices and decisions, is the non-executive members of the board. So, we investigate whether the non-executive directors themselves benefited from the acquisition transactions, and could perhaps be self-interested as well. Our findings show that both executive and non-executive directors benefited from

the pay increases associated with completing acquisitions, implying that non-executive directors may themselves be self-seeking, and are less effective in their monitoring role when it comes to acquisitions. Consistent with tournament theory and to some extent managerial talent theory, we find CEOs to be the topmost beneficiaries in the boardroom, receiving a pay increase of over three times the amount awarded to the average director. The Board Chairperson and CFO also benefited significantly from the acquisition transactions. We further find pay awards to be higher where the CEO or executives have too much power. Finally, we find no evidence that strong internal corporate governance environment can constrain the high board pay rises resulting from acquisitions.

Collectively, our findings imply that acquisitions provide a channel for opportunistic behavior by the board. When acquisitions, especially the risky and complex types, are completed, the board argues for higher pay, justified by increasing risk and complexity. Our results seem to fit the tournament theory and the managerial power theory of compensation more than the principal-agent and talent theories. Further, the results are generally in line with the public view of excessive risk-taking coupled with excessive remuneration in the UK banking sector during the crisis era. Our results also imply that non-executive directors may need to be viewed as agents who could be as self-serving as the executive directors they are expected to monitor. This casts some doubt on effective monitoring of executive decisions by non-executive directors and suggests the need for relying more on external governance structures as well as political/public outcry in curbing executive excesses.

Although we make important contributions to the literature, our analysis and conclusions are based on a limited UK sample. So, interpretation and application of the results, especially outside the UK context, should be done with caution. Future studies can use a global sample to provide more widely applicable results. Similarly, our sample covered the period during and before the 2007-08 financial crisis, and did not extend to the post-crisis period. Given the increased public scrutiny and outrage over bankers' pay after the financial crisis, it will be interesting for future studies to investigate whether the incentives of directors of financial firms have changed following the financial crisis.

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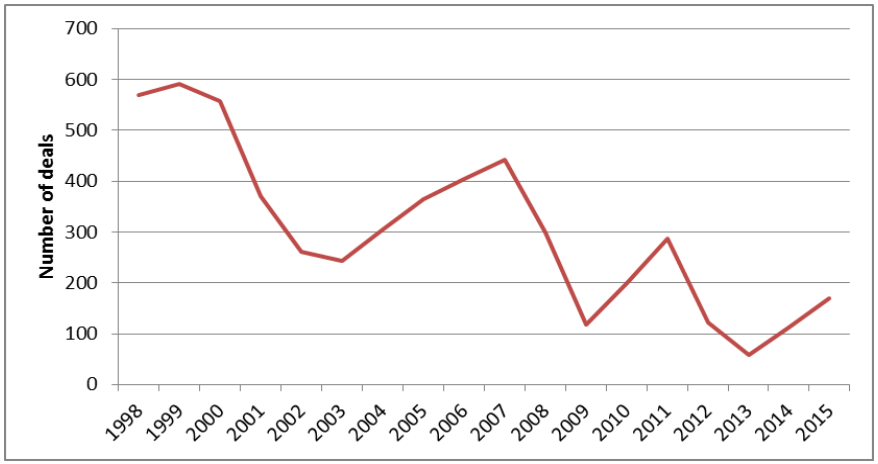
Figure 1: Number of outward acquisitions by UK firms



Source: *Office of National Statistics (ONS), 2016*

ONS acquisition statistics do not include deals valued under £1 million. Fig.1 shows that relative to the post-crisis years (2010 onwards), the volume of acquisitions by UK firms was high in the pre-crisis period (from 1998).

Table 1: Summary of the dominant theories on executive compensation

No.	Theory	Core argument	Prediction on:			
			Directors' pay	**Acquisition type**	**Acquisition performance**	**Remarks**
1	Principal-agent	Pay packages incentivize (risk-averse) managers to take risks that maximize shareholder value.	A positive relation between pay (particularly equity-based pay) and acquisition.	Relations stronger in large and risky projects (i.e. cross-border acquisitions).	Shareholders gain in large and risky projects (i.e. cross-border acquisitions).	Competes with executive power theory.
2	Executive power	Managers exploit governance arrangements to set pay packages that benefit them and are independent of shareholder value.	A positive relation between pay and acquisition, especially in weak corporate governance environments and when non-executive directors are potentially self-interested and poor monitors.	Relations stronger in large and complex projects (i.e. cross-border acquisitions) since managers power usually increases with the size and complexity of the organization.	Shareholders do not necessarily make any gains from acquisitions. They could even make losses from acquisitions.	Competes with principal-agent theory.
3	Managerial talent	Talented managers are rare on the managerial labor market. Since few talented managers exist, they command higher pay.	A positive relation between pay and acquisition, especially for better managers.	Relations stronger in large, complex, and risky projects (i.e. cross-border acquisitions) where superior skills are required to succeed.	Shareholders gain acquisitions, especially in large, complex, and risky cross-border acquisitions.	Competes with tournament theory.
4	Tournament	The pay differential necessary to sustain incentives requires pay to increase with organizational hierarchy.	A positive relation between pay and acquisitions since pay grows firm size and often hierarchy.	Relations stronger in large and complex projects (i.e. cross-border acquisitions) which increase firm size and organizational hierarchy.	Shareholders make no gains from acquisitions. They could even make losses from acquisitions.	Competes with managerial talent theory.

Table 2: Distribution of sample firms across year and industry

Years/ Industry	Banks	Insurance	Private Equity	Speciality Finance	Total
1998	6	3	0	3	12
1999	8	4	0	4	16
2000	7	10	0	12	29
2001	7	16	0	23	46
2002	10	19	0	28	57
2003	11	20	0	31	62
2004	10	24	0	40	74
2005	9	28	0	55	92
2006	10	29	0	67	106
2007	10	28	1	80	119
2008	8	26	1	98	133
2009	7	27	1	91	126
2010	1	2	2	40	45
Total	**104**	**236**	**5**	**572**	**917**

Table 3: Distribution of sample firms and acquisitions across years

Years/ Industry	Number of firms		All deals		Cross-border deals		Domestic deals	
	Acquirers	Non-acquirers	Number	Value (£'m)	Number	Value (£'m)	Number	Value (£'m)
1998	8	4	30	2,095.98	15	813.55	15	1,282.43
1999	10	7	32	8,924.32	15	6,568.39	17	2,355.93
2000	17	12	52	43,273.21	13	7,320.25	39	35,952.96
2001	22	24	49	3,222.37	23	1,117.30	26	2,105.07
2002	27	30	59	2,979.92	21	1,854.59	38	1,125.33
2003	26	36	52	13,149.08	14	10,248.22	38	2,900.86
2004	28	46	53	5,269.64	26	3,379.49	27	1,890.15
2005	28	64	61	9,422.21	21	6,219.31	40	3,202.90
2006	33	73	83	19,304.85	29	7,967.72	54	11,337.13
2007	42	77	82	4,874.28	39	3,347.99	43	1,526.29
2008	43	90	98	4,757.51	42	3,946.60	56	810.91
2009	39	87	76	17,352.67	30	1,593.58	46	15,759.09
2010	19	26	24	1,418.84	8	1,027.45	16	391.38
Total	**342**	**575**	**751**	**136,044.86**	**296**	**55,404.44**	**455**	**80,640.43**

Acquirers (non-acquirers) made (no) acquisitions during the sample period. Cross-border deals have targets from countries other than the UK, while domestic deals have UK targets.

Table 4: Summary statistics and Pearson correlation matrix

Variables / Statistics	**Mean**	**Std. dev.**	**Min.**	**Max.**	**PAY**	**EQUITY**	**M&A**	**SIZE**	**GROWTH**	**RETURN**	**MTBV**	**ROA**	**CGI**
Dependent variables													
Total pay (PAY) (£'000)	3,089.74	4,985.06	1.00	44,892.00	1.000								
Equity-based pay (EQUITY) (£'000)	1,258.50	2,922.36	0.00	30,187.00	0.934	1.000							
Independent variable													
Acquisition dummy (M&A)	0.373	0.484	0.00	1.00	0.367	0.296	1.000						
Control variables													
Firm size (SIZE)	11.736	3.162	1.946	22.163	0.529	0.431	0.330	1.000					
Asset growth (GROWTH)	0.152	0.441	-0.999	1.000	**0.038**	**0.042**	0.076	0.089	1.000				
Abnormal stock return (RETURN)	-0.005	0.160	-0.990	1.000	**0.019**	**0.012**	**-0.016**	**0.039**	**0.007**	1.000			
Market-to-book value (MTBV)	1.426	1.035	0.247	13.676	-0.060	**-0.051**	**0.001**	-0.166	-0.058	-0.083	1.000		
Return on assets (ROA)	5.282	8.909	-1.000	74.615	-0.075	-0.096	**-0.019**	-0.122	0.081	**-0.003**	0.491	1.000	
Corporate governance index (CGI)	4.806	1.807	0.000	9.000	0.332	0.267	0.222	0.539	**0.010**	**0.048**	-0.066	**-0.046**	1.000

Appendix contains variable definitions. The correlation statistics in **bold** are not significant at conventional levels (i.e. 10% and below).

Table 5: The effect of M&A activities on the compensation of board of directors

Models/variables	All M&As		Cross-border M&As		Domestic M&As	
	(1)	(2)	(3)	(4)	(5)	(6)
	Total pay	**Equity-linked pay**	**Total pay**	**Equity-linked pay**	**Total pay**	**Equity-linked pay**
M&A dummy $_{t-2}$	1470.439***	1177.457***	3651.673***	3048.620***	560.655	216.145
	(0.001)	*(0.000)*	*(0.000)*	*(0.000)*	*(0.118)*	*(0.454)*
Firm size $_{t-1}$	569.385***	270.166***	553.377***	229.117***	607.001***	320.167***
	(0.001)	*(0.009)*	*(0.000)*	*(0.005)*	*(0.000)*	*(0.005)*
Asset growth $_{t-1}$	376.025	355.651	469.490	432.168	400.786	377.647
	(0.544)	*(0.416)*	*(0.425)*	*(0.294)*	*(0.533)*	*(0.405)*
Abnormal stock return $_{t-1}$	-193.218	-106.165	-134.799	-62.061	-67.917	38.850
	(0.821)	*(0.822)*	*(0.855)*	*(0.875)*	*(0.927)*	*(0.913)*
Market-to-book value $_{t-1}$	374.652**	250.659*	372.426**	234.032*	341.544*	233.171*
	(0.035)	*(0.073)*	*(0.035)*	*(0.085)*	*(0.052)*	*(0.087)*
ROA $_{t-1}$	-16.782	-13.422	-18.895	-13.617	-19.136	-17.635
	(0.471)	*(0.428)*	*(0.380)*	*(0.395)*	*(0.434)*	*(0.305)*
Corporate governance index $_{t-1}$	345.181**	189.987*	298.084**	153.152*	358.210**	198.481*
	(0.033)	*(0.096)*	*(0.040)*	*(0.096)*	*(0.034)*	*(0.092)*
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
Constant	-6054.244***	-3403.374***	-5668.964***	-2855.764***	-6175.716***	-3635.194***
	(0.000)	*(0.000)*	*(0.000)*	*(0.000)*	*(0.000)*	*(0.000)*
R-squared:						
Within	0.184	0.072	0.185	0.075	0.188	0.073
Between	0.498	0.434	0.551	0.502	0.461	0.392
Overall	0.443	0.331	0.498	0.395	0.416	0.305

This table presents regression results on the average merger effect on executive pay (based on Eq. (1)) for the full sample and for the cross-border and domestic acquisition subsamples. Cross-border acquisitions have targets from countries other than the UK, while domestic acquisitions have UK targets. The dependent variable is either the total board pay scaled by the board size or the total equity-linked pay scaled by board size. Appendix A1 contains variable definitions. All models contain year and industry dummies. Figures in parenthesis are *p*-values and standard errors are allowed to cluster by firm. ***, **, and * denote statistical significance at the 1%, 5%, and 10%, respectively.

Table 6: The effect of M&A activities on the total compensation of top corporate executives

Models/ dependent variables	(1) Executive Directors	(2) Non-executive Directors	(3) CEOs	(4) Finance Directors	(5) Board Chairpersons
M&A dummy $_{t-2}$	1158.955***	451.477***	492.640***	80.455*	107.334*
	(0.001)	*(0.002)*	*(0.004)*	*(0.089)*	*(0.058)*
Firm size $_{t-1}$	354.924***	228.996***	189.939***	56.845***	33.934
	(0.005)	*(0.000)*	*(0.000)*	*(0.003)*	*(0.149)*
Asset growth $_{t-1}$	222.900	160.227	75.155	18.988	66.516
	(0.615)	*(0.476)*	*(0.765)*	*(0.716)*	*(0.492)*
Abnormal stock return $_{t-1}$	-205.083	15.330	-83.706	4.000	41.193
	(0.717)	*(0.961)*	*(0.764)*	*(0.965)*	*(0.449)*
Market-to-book value $_{t-1}$	270.738**	119.921	223.028***	30.456	74.689
	(0.021)	*(0.184)*	*(0.003)*	*(0.343)*	*(0.127)*
ROA $_{t-1}$	-3.876	-12.223	-15.885*	4.740	-6.946
	(0.825)	*(0.197)*	*(0.098)*	*(0.218)*	*(0.113)*
Corporate governance index $_{t-1}$	206.282*	137.800**	140.780*	28.408	-4.991
	(0.077)	*(0.049)*	*(0.068)*	*(0.113)*	*(0.794)*
Year dummies	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes
Constant	-3707.894***	-2534.271***	-1973.811***	-435.753**	-297.812*
	(0.001)	*(0.000)*	*(0.000)*	*(0.027)*	*(0.095)*
R-squared:					
Within	0.132	0.146	0.157	0.177	0.079
Between	0.422	0.438	0.336	0.263	0.233
Overall	0.361	0.360	0.281	0.360	0.202

This table presents regression results on the merger effect on executive pay (based on Eq. (1)) for executive and non-executive directors and for selected top executives. The dependent variable is either the total pay for the class of directors or the total pay of the individual director concerned. Appendix contains variable definitions. All models contain year and industry dummies. Figures in parenthesis are *p*-values and standard errors are allowed to cluster by firm. ***, **, and * denote statistical significance at the 1%, 5%, and 10%, respectively.

Table 7: The effect of M&A activity on the total compensation of the board

Models/ dependent variables	(1)	(2)	(3)	(4)	(5)	(6)
	Serial acquirers	**Single acquirers**	**Large acquirers**	**Small acquirers**	**Strong CG**	**Weak CG**
M&A dummy $_{t-2}$	4520.630***	140.992	3039.784***	-99.719	2194.529***	924.361*
	(0.000)	*(0.550)*	*(0.000)*	*(0.656)*	*(0.003)*	*(0.056)*
Firm size $_{t-1}$	464.718***	208.170*	467.729***	178.200**	919.722***	499.589***
	(0.004)	*(0.079)*	*(0.009)*	*(0.015)*	*(0.000)*	*(0.004)*
Asset growth $_{t-1}$	150.565	460.312	705.110	509.016	1375.671	-87.991
	(0.831)	*(0.310)*	*(0.395)*	*(0.270)*	*(0.375)*	*(0.863)*
Abnormal stock return $_{t-1}$	238.179	140.844	611.524	121.198	-1272.558	25.344
	(0.744)	*(0.744)*	*(0.497)*	*(0.738)*	*(0.421)*	*(0.965)*
Market-to-book value $_{t-1}$	573.005*	294.384*	422.698**	473.414**	458.497	318.644*
	(0.072)	*(0.068)*	*(0.025)*	*(0.043)*	*(0.408)*	*(0.066)*
ROA $_{t-1}$	-1.879	-18.951	-12.632	-18.873	-27.157	8.506
	(0.941)	*(0.277)*	*(0.603)*	*(0.333)*	*(0.509)*	*(0.711)*
Corporate governance index $_{t-1}$	133.200	223.360**	427.103**	245.790***	387.411	237.593
	(0.394)	*(0.034)*	*(0.045)*	*(0.002)*	*(0.484)*	*(0.138)*
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
Constant	-5157.786***	-1952.324**	-5544.316***	-2414.025***	-11671.072***	-4363.508***
	(0.000)	*(0.021)*	*(0.000)*	*(0.000)*	*(0.006)*	*(0.002)*
R-squared:						
Within	0.146	0.242	0.163	0.196	0.298	0.129
Between	0.576	0.302	0.534	0.385	0.575	0.420
Overall	0.527	0.311	0.463	0.309	0.464	0.437

This table presents regression results on the merger effect on executive pay (based on Eq. (1)) for different subsamples. Serial (single) acquirers made more than one acquisitions (only one acquisition) over the sample period. Large (small) acquisitions have deal values £10 million and above (not more than £10 million). Strong (weak) CG sample has above (below) median CG index. Appendix contains variable definitions. All models contain year and industry dummies. Figures in parenthesis are *p*-values and standard errors are allowed to cluster by firm. ***, **, and * denote statistical significance at the 1%, 5%, and 10%, respectively.

Table 8: Further analysis of CEO and executive power

Models/variables	(1) CEO also Board Chair (CEO duality)	(2) Separate CEO & Board Chair	(3) Less independent board	(4) More independent board
M&A dummy $_{t-2}$	1743.426***	1409.105*	2499.247***	1034.686**
	(0.001)	*(0.051)*	*(0.004)*	*(0.026)*
Firm size $_{t-1}$	783.332***	153.301	525.900*	635.353***
	(0.000)	*(0.470)*	*(0.074)*	*(0.000)*
Asset growth $_{t-1}$	227.448	180.969	-796.728	1441.376
	(0.759)	*(0.823)*	*(0.402)*	*(0.124)*
Abnormal stock return $_{t-1}$	6.927	1264.129	-606.420	-622.653
	(0.994)	*(0.677)*	*(0.743)*	*(0.332)*
Market-to-book value $_{t-1}$	409.130*	-107.824	-133.763	472.380**
	(0.081)	*(0.803)*	*(0.719)*	*(0.016)*
ROA $_{t-1}$	-6.112	-54.056	22.381	-43.039
	(0.828)	*(0.110)*	*(0.516)*	*(0.102)*
Corporate governance index $_{t-1}$	232.695	603.190**	169.263	507.054**
	(0.236)	*(0.017)*	*(0.360)*	*(0.015)*
Year dummies	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes
Constant	-7447.755***	-3086.845	-5145.601**	-7703.376***
	(0.000)	*(0.115)*	*(0.017)*	*(0.000)*
R-squared:				
Within	0.197	0.131	0.176	0.215
Between	0.584	0.571	0.576	0.461
Overall	0.470	0.448	0.547	0.364

This table presents regression results on the merger effect on executive pay (based on Eq. (1)) for different subsamples based on the level of CEO or executive power. Firms that have below- (above) median proportion of non-executive directors are considered to have less (more) independent boards. Appendix contains variable definitions. All models contain year and industry dummies. Figures in parenthesis are *p*-values and standard errors are allowed to cluster by firm. ***, **, and * denote statistical significance at the 1%, 5%, and 10%, respectively.

Table 9: Robustness analysis - Other econometric specifications

Models/ variables	**(1)**	**(2)**	**(3)**	**(4)**
	RE-GLS $_{t-1}$	**RE-GLS $_{t}$**	**Heckman $_{t-2}$**	**Sys-GMM $_{t-2}$**
M&A dummy $_{t-2}$	1266.057***	883.391***	1765.000**	303.180***
	(0.000)	*(0.003)*	*(0.031)*	*(0.001)*
Firm size $_{t-1}$	610.671***	511.640***	1367.500***	1119.351***
	(0.000)	*(0.000)*	*(0.000)*	*(0.000)*
Asset growth $_{t-1}$	503.107	175.468	197.950	-13.506
	(0.150)	*(0.527)*	*(0.845)*	*(0.956)*
Abnormal stock return $_{t-1}$	396.677	642.561**	-4105.514	7161.750**
	(0.178)	*(0.012)*	*(0.216)*	*(0.020)*
Market-to-book value $_{t-1}$	279.231***	191.802**	-245.581	3245.595***
	(0.009)	*(0.019)*	*(0.713)*	*(0.000)*
ROA $_{t-1}$	-4.065	-7.943	80.114	-333.295***
	(0.742)	*(0.402)*	*(0.430)*	*(0.000)*
Corporate governance index $_{t-1}$	223.304	219.607*	494.629*	1748.912***
	(0.139)	*(0.096)*	*(0.058)*	*(0.000)*
Lag of board pay				-0.196***
				(0.000)
Inverse Mills ratio			1134.740	
			(0.701)	
Year dummies	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes
Constant	-5994.140***	-4687.512***	-16884.734**	
	(0.000)	*(0.000)*	*(0.045)*	

This table presents regression results on the merger effect on executive pay (based on Eq. (1)) using different econometric specifications. Lag of board pay is the one-period lag of the dependent variable; and Inverse Mill's ratio is constructed following Heckman's (1979) procedures. Appendix contains variable definitions. All models contain year and industry dummies. All explanatory variables in Model (2) are not lagged. Figures in parenthesis are *p*-values and standard errors are allowed to cluster by firm. ***, **, and * denote statistical significance at the 1%, 5%, and 10%, respectively.

Appendix - Definition of Variables

Variables	Definitions	Data sources
Compensation or pay		
Total board pay	The sum of direct compensation (salary + bonus) and the value of equity-based pay for all board members.	BoardEx
Equity- (or share) based pay	The value of long-term incentive plans (LTIPs) and share options for all board members.	BoardEx
Executive pay	The sum of direct compensation (salary + bonus) and the value of equity-based pay for all executive directors.	BoardEx
Non-executive pay	The sum of direct compensation (salary + bonus) and the value of equity-based pay for all non-executive directors.	BoardEx
CEO pay	The sum of direct compensation (salary + bonus) and the value of equity-based pay for the CEO.	BoardEx
Chairperson pay	The sum of direct compensation (salary + bonus) and the value of equity-based pay for the Board Chairperson.	BoardEx
CFO pay	The sum of direct compensation (salary + bonus) and the value of equity-based pay for the CFO.	BoardEx
Mergers and acquisitions (M&As)		
Merger or acquisition	A dummy variable of 1 if a firm made an acquisition during the focal period (i.e. in the previous two years), otherwise 0.	Thomson One SDC
Cross-border acquisition	A dummy variable of 1 if a firm made a cross-border acquisition (i.e. target firm is in a different country) during the focal period, otherwise 0.	Thomson One SDC
Domestic acquisition	A dummy variable of 1 if a firm made a cross-border acquisition (i.e. target firm is in the same country as the acquirer) during the focal period, otherwise 0.	Thomson One SDC
Serial acquisition	Firms that made more than one acquisitions during the focal period.	Thomson One SDC
Single acquisition	Firms that made a single acquisition during the focal period.	Thomson One SDC
Large acquisitions	Firms that made acquisitions that are over $US 10 million during the focal period.	Thomson One SDC
Small acquisitions	Firms that made acquisitions that are less than or equal to $US 10 million during the focal period.	Thomson One SDC
Control variables		
Firm size	The natural log of sales.	Datastream
Asset growth	Percentage change in total assets.	Datastream
Abnormal stock return	Average of the annual monthly stock return minus the average return for the FTSE All-share index.	Datastream

Return on assets (ROA)	Ratio of earnings before interest and tax to total assets.	Datastream
Market to book ratio	The ratio of market capitalization to total assets.	Datastream
Corporate governance (CG) index	The sum of values assigned to nine corporate governance variables. See Section 3.2 for a detailed description of the construction procedure.	BoardEx
Others		
Strong governance environment	Firms with above-median CG index.	BoardEx
Weak governance environment	Firms with below-median CG index.	BoardEx
Audit committee	A dummy variable of 1 if the firm has an audit committee, otherwise 0.	BoardEx
Remunerations committee	A dummy variable of 1 if the firm has a remunerations committee, otherwise 0.	BoardEx
Risk committee	A dummy variable of 1 if the firm has a risk committee, otherwise 0.	BoardEx
Corporate governance committee	A dummy variable of 1 if the firm has a corporate governance committee, otherwise 0.	BoardEx
Big 4 auditor	A dummy variable of 1 if the firm has a "Big 4" auditor, otherwise 0.	BoardEx
Remunerations consultant	A dummy variable of 1 if the firm has a remunerations consultant, otherwise 0.	BoardEx
Board size	The number of directors.	BoardEx
Board age	The average age of directors.	BoardEx
Board directorship	The average number of other directorships held by the board.	BoardEx
Board independence	The ratio of non-executive directors to the board size.	BoardEx
CEO duality	A dummy variable of 1 if the CEO is also the Board Chairperson, otherwise 0.	BoardEx