Pay me a single figure

Citation for published version:
Li, H, Zhao, J, Ibrahim, S & Yan, Y 2018, 'Pay me a single figure', Paper presented at BAFA 2019 Annual Conference with Doctoral Masterclasses, Birmingham, United Kingdom, 9/04/19 - 10/04/19.

Link:
Link to publication record in Heriot-Watt Research Portal

General rights
Copyright for the publications made accessible via Heriot-Watt Research Portal is retained by the author(s) and/or other copyright owners and it is a condition of accessing these publications that users recognise and abide by the legal requirements associated with these rights.

Take down policy
Heriot-Watt University has made every reasonable effort to ensure that the content in Heriot-Watt Research Portal complies with UK legislation. If you believe that the public display of this file breaches copyright please contact open.access@hw.ac.uk providing details, and we will remove access to the work immediately and investigate your claim.


Pay me a single figure

Jinsha Zhao (Kingston University, the United Kingdom)
Salma Ibrahim (Kingston University, the United Kingdom)
Hao Li (Heriot-Watt University, the United Kingdom)
Yan Yan (Tsinghua University, People’s Republic of China)

Novembre 2018

Abstract

The paper examines the effect of the new reporting regulation that requires UK listed firms to report CEO compensation as a single figure. While the new regulation intends to curb CEO pay and enhance the pay-performance relationship, our results show that the new rule has not achieved the intended objectives. Our results are based on a hand-collected sample of FTSE 100 firms over the period of 2010-2016. The main findings are threefold: Firstly, we find that CEO total pay stays roughly the same before and after the new regulation. There is limited evidence that pay increases in firms that adopt the regulation early. Secondly, pay-performance actually declines after the new regulation. This effect is particularly evident in firms with weak corporate governance. Pay-performance drops almost 50% after the reform in firms with weak corporate governance. Thirdly, the new rule has no impact on pay gap, where the CEO-to-employee pay ratios are about the same before and after the regulation. Our results suggest that increasing the reporting transparency has limited impact on total pay and pay-performance.

Keywords: Executive compensation; Pay-performance; regulation; CEO pay gap

JEL code: M12; M48; M52
1. Introduction

Executive compensation in the UK continues to be a controversial topic due to the perception of excessive pay that is not linked to firm performance. Total pay for bosses of FTSE100 companies has quadrupled over the 18 years up to 2016 despite efforts by shareholders to control this (FT, 2017). At the same time, CEO pay is not related to shareholder returns (e.g. Ozkan 2011). As an example, Fred Goodwin, the former CEO of Royal Bank of Scotland, was awarded £16 million pension despite his poor strategies that cost billions of pounds to UK taxpayers to bail out the troubled bank (The Guardian, 2009). This ‘reward for failure’ is not an isolated case. Furthermore, the divergence between CEO and average employees’ pay remains high. In 2015, more than two-thirds of FTSE100 CEOs were paid more than 100 times the average UK salary (The Guardian, 2017a).

One approach the regulatory bodies in the UK have taken to address these issues is to require companies to publish and justify their pay. Specifically, the Large and Medium-sized Companies and Groups (Accounts and Reports) (Amendments) Regulation 2013 (hereafter LMCGR2013), which came into force on October 1st 2013, was introduced to increase transparency of reporting CEO pay. The regulation requires companies to report CEO total compensation as a single figure, making it easier to have a consistent estimate of pay including long-term incentive plans. It provides detailed specifications on what to disclose and how to present CEO compensation, effectively putting CEO compensation under scrutiny; thereby increasing pressure on companies to justify pay to their top managers. The new regulation is intended to rein in excessive pay and to better align pay with manager’s performance (Petrin, 2015). We refer to this reform as the ‘single figure regulation’, the ‘new regulation’ or the ‘reform’ throughout the paper.

Before the single figure regulation became mandatory, most firms disclosed some components of CEO pay but not aggregated total pay. For example, Barratt Developments, plc shows CEO pay of £1,417 thousand in the 2010 annual report including salary, bonus, pension, and benefits in kind (Barratt Developments, Plc, 2010 annual report, p. 50). However, no values were provided for long-term incentive plans or share option plans awarded/vested. Instead, only information on the number of shares awarded or options granted/vested were presented (Barratt

---

1 In addition, regulatory reforms have given more power to shareholders to vote down the compensation contracts. Shareholders have had an advisory vote for or against executive compensation contracts in the UK since 2002 and this has vote has been mandatory since 2013, to be carried out at least over a three year period (Enterprise and Regulatory Reform Act 2013). The current administration has proposed to mandate annual votes but this may apply only to some elements of pay (FT, 2016).
Developments, Plc, 2010 annual report, pp. 51-52) Therefore, to fully understand CEO’s total pay, different pay components, disclosed in different parts of the annual report, need to be collated. This complexity significantly reduces transparency of compensation.

Although well intended, it is far too early to say whether the single figure regulation will limit pay and improve pay-performance. Historically, some well-intended compensation reforms caused the exact opposite effect. In the US, the one million-dollar deductibility rule (i.e. US Internal Revenue Code Section 162(m)) led to higher CEO compensation, even though the rule was intended to reduce CEO pay (Perry and Zenner, 2001; Murphy 2013b). In the UK, the Corporate Governance Code introduced “say on pay” back in 2002, as an indirect mechanism to constrain CEOs’ excessive pay. However, empirical studies find that its effectiveness is very limited (Conyon and Sadler, 2010).

In this paper, we take a closer look at the single figure regulation and investigate its impact on UK compensation practice and its effectiveness in controlling excessive CEO pay. Using hand collected data from a sample of FTSE 100 firms in the years 2010-2016, we provide new evidence of the single figure regulation, complementing results of Gupta et al (2016). We focus on the 3 years prior to (2010-2012) and following (2013-2016) the mandated reform date. In addition, we examine firms that present the single pay in their annual report before the mandatory date in October 2013.

Our findings are threefold: firstly, the level of CEO pay does not change significantly after the introduction of the single figure requirement. Interestingly, firms that comply with the regulation before the October 2013 date actually increase CEO pay in the univariate test. These findings indicate that the reform has little impact, or the opposite effect than intended by the regulators, on the overall level of pay.

Secondly, we examine whether companies strengthen the pay-performance relationship following the reform. Our findings indicate that pay-performance (where firm performance is measured by return on assets) declines after the reform. Instead of strengthening the pay-performance relation, the new regulation actually makes executive compensation less sensitive to firms’ performance. This phenomenon is particularly evident in firms with weak corporate governance, where pay-performance declines the most. On average, pay-performance in weakly governed firms drops by more than 50%. Furthermore, this is more evident in firms that comply with the regulation early.
Thirdly, the pay gap between top CEO and average employees does not change in the full sample. While the reform intends to control the pay gap, its effectiveness is questionable. This result is similar to the findings of Gupta et al (2016) who doubt the regulation has any substance.

We contribute to the literature in the following ways. Firstly, we extend the literature on executive compensation by investigating the pay-performance sensitivity during a recent regulatory reform. We also consider other executive compensation attributes such as level of pay and CEO-to-employee pay ratio. Secondly, we extend the literature on firm disclosure by examining effects of increased reporting transparency on firms’ pay practice.

The remainder of the paper is as follows. The next section discusses the single figure regulation followed by a discussion of related literature and our hypotheses. Section 4 presents the sample, while section 5 discusses the research design and data. Our main findings are presented and discussed in section 6, followed by a conclusion in section 7.

2. The single figure regulation

The single figure regulation amends previous versions of the Large and Medium-sized Companies and Groups (Accounts and Reports) Regulations 2008. In the 2008 regulation, firms were required to disclose executives’ compensation in a separate section of the annual report – director’s remuneration. The 2008 regulation also outlines that CEO salary, bonus, benefits and other pay should be reported in a single table. A total of these pay components is also required to be disclosed. However, pensions and long-term incentive plans (hereafter, LTIPs) were not required to be disclosed in the same table. Following this regulation, most firms continued to disclose pensions and LTIPs in their respective sections. The practice is understandable as pensions and LTIPs are both complex instruments that need involved explanation. But this reduces transparency as the total compensation paid to CEOs is not clear. Readers of annual reports would then have to manually calculate the total, which is not an easy task even for experienced analysts (Li and Young, 2016). Since LTIP is a substantial part of CEO compensation (a survey of CEO pay in FTSE 100 companies in 2017 finds LTIPs to represent 56% of total pay, CIPD, 2018), the reported total significantly understates CEOs’ actual pay.

The single figure regulation addresses this issue and requires firms to report all pay components as well as pensions and LTIPs in the same table. Section 7.5 in part 3 of the new regulation states: “The most substantive introduction is the requirement for companies to disclose the
amount each director has been paid and to express this as a single figure taking account of all elements of remuneration.” (LMCGR, 2013). The firm must also explain the director’s actual performance, and the basis on which it has made decisions on the level of variable pay that is received. This is a considerable change as firms will have to adjust how LTIPs are presented and disclosed in annual reports. This regulation applies to annual reports on or after October 1st, 2013.

In addition to the single figure reporting rule, another three rules also directly relate to pay disclosure. The first is the new requirement to compare changes in CEO pay to changes in employee pay. Firms need to show justification for their CEOs pay rises. The second is the requirement to disclose the relative importance of spends on pay, where compensation paid to all executives is compared to dividend, profit after tax and total employee expenditure. Finally, firms are required to provide CEO’s actual pay and percentage of maximum that could have been paid each year. These three new rules address the pay gap between CEOs and average employees.

3. Related literature and hypotheses development

3.1 Effect of Compensation Reforms on CEO Pay Level

Firms usually adopt a comprehensive approach to CEO compensation, which involves linking CEO pay to a suite of performance metrics that capture diverse aspects of managers’ performance. The major downside of the approach is increased pay complexity. Total pay often breaks down into different components that evaluate CEO’s specific performance in a particular business area. As more firms embrace the comprehensive approach of remuneration, CEO pay becomes increasingly difficult to understand. Li and Young (2016) document that director’s remuneration reports in 2015 are 50% longer and 20% less readable compared to similar disclosures in 2004. Firms could even use complex compensation plans to hide what would eventually be paid to CEOs. The level of disclosure in these reports can have an effect on CEO pay. For example, Hooghiemstra et al. (2017) find that US firms that make their reports less readable face fewer shareholder dissent when CEO pay is excessive, suggesting that firms are using complex pay packages to hide CEO pay. But the results do not hold when large institutional shareholders are present, reinforcing the monitoring role of sophisticated investors.

Past examinations on compensation reforms suggest that compensation practices are market responses to regulation change. Murphy (2013b) documents that the initial popularity of stock
options (as well as its later downfall) in the 1950s and the extensive use of stock options in the 1990s were a market response to changes in compensation regulation. Evidence also indicates that government direct intervention in executive compensation usually has unintended consequences. Perry and Zenner (2001) study the effect of a new regulation intended to limit CEO total pay in the US by placing a cap on non-performance-based pay. Their results suggest that firms reduce salary and increase stock-based compensation after the introduction of the regulation, but overall pay levels do not change contrary to the regulation’s original intention.

Regulatory responses to the credit crisis also led to a number of compensation reforms that are intended to curb the rising CEO pay. The Remuneration Code in the UK and Bonus Cap in the EU are prime examples that are extensively discussed in the literature. Dittmann et al. (2011) discuss a few variants of the EU bonus cap. Their results suggest that restrictions on CEO pay can be easily circumvented. Conyon et al. (2011) analyse compensation reforms conducted in the past three decades in the UK and find that compensation reform has very little impact on the upward trend of CEO pay. Firms seem to always find a way to increase their CEOs’ pay. Murphy (2013a) provides some explanations on why directly regulating pay has limited success at reducing overall pay level. His results suggest that demand for talent and market competition renders bonus caps ineffective. Kleymonova and Tuna (2018) study consequences of the UK Remuneration Code in financial institutions over the period 2006-2012. They find that regulation lowered annual compensation but only because large amounts of pay are deferred. Their findings provide evidence that the regulation did not decrease overall pay.

The single figure reform proposes to reduce complexity and increase transparency. The reform introduced a standardised format for pay disclosure, with the aim of putting CEO compensation under scrutiny and increasing pressure on firms to justify pay to their top managers. Gupta et al. (2016) provide some early evidence on the impact of the single figure reform in a UK sample of FTSE 100 companies over the period 2011-2013. Their results suggest that the new regulation makes little impact. Therefore, in our first hypothesis we expect to find no effect on the level of CEO pay after the introduction of the new regulation. Our first hypothesis is formulated as follows:

\[ H1: \text{CEO pay does not change after the introduction of the single figure reporting regulation in 2013.} \]
3.2 Pay-performance

Agency problems arise in large public firms as top managers have different interests than that of firms’ diverse shareholders. Agency theory (Holmstrom, 1979) suggests that optimal contracting can alleviate the conflict between managers and shareholders, so positive pay-performance should be observed in large samples of public firms. Empirical evidence conducted in the US provides some support to the theory (e.g. Jensen and Murphy, 1990; Cohen et al., 2013). In the UK, there is both anecdotal and empirical evidence of a weak pay-performance relationship. For example, pay of CEOs of FTSE 350 companies rose 82% over a period of 13 years to 2014, while return on invested capital rose by less than 1% (The Guardian, 2016). Gregg et al. (1993) investigate the relationship between CEO pay and performance of around 300 UK companies in the 1980s and early 1990s. They find a weak link between pay and firm performance. More recently, Ozkan (2007) and Ozkan (2011) find a positive, albeit weak, relationship between CEO pay and firm performance.

The literature examining pay-performance following regulatory changes document some mixed evidence. For example, Kleymonova and Tuna (2018) find that financial institutions’ CEO pay was more sensitive to stock prices following the UK Remuneration Code requirements. However, Gupta et al. (2016) do not find an improvement in pay-performance sensitivity following the single figure reform. Therefore, we formulate our second hypothesis in the null form as follows:

*H2: CEO pay-performance does not change after the introduction of the single figure reporting regulation in 2013.*

3.3 CEO Pay Gap

CEO pay compared to average employee wages has been on the rise. For example, the average CEO of a large US firm makes 271 times the wages of the average worker (Fortune, 2017). Section 953(b) of the Dodd-Frank Wall Street Reform and Consumer Protection Act (2010) in the US requires the disclosure of the CEO to median employee pay ratio starting January 1, 2017. Kelly and Seow (2016), in an experimental setting, find that disclosing the CEO-to-median employee ratio in the US has a significant impact on the perceived CEO pay fairness. However, there is no research on whether the increased disclosure has curbed CEO pay, given the recency of the disclosure regulations.

In the UK, there are proposals to fully provide the pay gap details starting in 2020 (FT, 2018). To control pay at the top level, the current UK Labour leader, Jeremy Corbyn, has proposed a
maximum wage cap where CEO compensation cannot be over 20 times the wage of their lowest paid worker for government contractors (The Guardian, 2017b). While setting a pay cap is unlikely to succeed as companies can outsource low pay jobs (to effectively circumvent the cap), increased transparency may force companies to reduce this gap.

The single figure reform could force firms to narrow the pay gap between CEO and average employees. As pay disclosure becomes more standardised, firms should be more reluctant to increase CEO pay while employee wages stagnate. On the other hand, given the evidence that other regulatory compensation reforms appear to be boilerplate, there could be no impact on the CEO-employee pay gap. Therefore, we formulate the following hypothesis in the null form:

H3: CEO-to-non-CEO pay ratio does not change after the introduction of the single figure reporting regulation in 2013.

3.4 Early compliance

Prior to the single figure reporting regulation reform, which came into force on October 1st, 2013, CEO pay disclosure was not comprehensive. However, it is possible that some firms were more transparent in their disclosures and opted to disclose a single figure compensation. Furthermore, some firms may have decided to comply with the regulation early, given that information related to the regulation was known before the 2013 adoption date. Specifically, consultations on the matter were published in September 2011, followed by the announcement in January 2012 by the Secretary of State for Business of the incoming regulatory changes (FRC, 2012).

Firms have different reasons adopt regulations early. For example, prior research finds that better board governance is associated with more disclosure of compensation practices (Laksmana, 2008). Furthermore, firms may opt to comply with regulations early to signal their better compensation practices. Evidence of this can be found in other contexts. For example, Denicolo (2008), using a theoretical approach, show that firms that have a competitive advantage in the use of cleaner technology over-comply with environmental regulations in order to signal that compliance costs are low. Also, firms that chose to adopt International Financial Reporting Standards (IFRS) early, before it became mandatory, experience positive liquidity and valuation effects (Daske et al., 2008), implying perceived benefits from the stakeholders’ perspective.

On the other hand, early compliance may be a mechanism to signal to the market that the firm has effective governance mechanisms in place, when it is not always true. For example, Elsbach
et al. (1998) find that hospitals use anticipatory impression management tactics to fend off patients’ challenges and to prevent these from escalating. Similarly, Addy et al. (2014) argue that concerns over image can lead boards to take actions, which manage impressions of external stakeholders, so the boards can be seen as effective. Therefore, early adoption can be interpreted as window dressing with limited positive impact, although empirical evidence for this is scarce (Taylor et al., 2018).

Based on the above discussion, we are not certain about effects of the reform on early adopters. We formulate the following hypotheses in the null form:

H1a: CEO total pay of early adopters does not differ from that of late adopters after the introduction of the single figure reporting regulation in 2013.

H2a: CEO pay-performance of early adopters does not differ from that of late adopters after the introduction of the single figure reporting regulation in 2013.

H3a: CEO-to-non-CEO pay ratio of early adopters does not differ from that of late adopters after the introduction of the single figure reporting regulation in 2013.

4. Sample selection

Our sample consists of firms in the FTSE 100 index. We exclude financial and utility firms, as strict regulation in these two industries limit their comparability with firms in other industries. Firms are included if they are listed in the FTSE100 index at least once during the sample period, which covers 2010 to 2016. Companies only started reporting the single figure in October 2013, so we collect data for the period 2010-2016, to ensure there are 3 years of data both before and after the new regulation. We also remove observations that have missing firm characteristic data. The final sample consists of 518 firm year observations from 81 unique firms. Our data is comparable to Ozkan (2011) and Li and Young (2016) which both investigate compensation practices of FTSE 350 firms.

To calculate CEO total pay as a single figure prior to the single figure reform, CEO pension needs to be added to the figure reported by firms. We hand collect all CEO pension data from firm annual reports. CEO non-pension compensation and corporate governance data is collected from BoardEx. CEO total pay is calculated by summing up salary, bonus, long-term incentive plan pay (or LTIP), pension and other benefits. All other firm level data is from Bloomberg.
Table 1 presents the yearly and industrial distribution of the sample. The most represented industry in the sample as shown in Table 1 is Consumer Services (N=141) followed by Industrials (N=123), Consumer Goods (N=92), and Basic Materials (N=63). The remaining industries each constitute less than 10% of the sample. In terms of yearly distribution, the sample is evenly distributed across the years.

(Table 1)

Given that firms can choose to comply with the regulation early or present total pay in a single table before the regulation, we also collect from the annual report the first year of adoption of the new regulation. Of the 518 observations, 7 observations belonged to a firm that did not have long-term pay plans. Of the remaining 511 observations, 259 observations (51%) belonged to firms that adopted the regulation early and therefore presented a single remuneration table before October 2013. The remaining 252 observations (49%) belonged to firms that adopt the regulation in October 2013.

5. Research Design and Descriptive Statistics

5.1 Research Design

To investigate the first hypothesis examining the CEO pay level before and after the reform, we employ the following regression:

$$\ln(CEO \text{ total pay}_{it}) = \alpha + \beta_1 PostOct2013_{it} + \sum \beta_{2-9} Controls_{it} + \epsilon_{it}$$ (1)

In Equation (1), $\ln(CEO \text{ total pay})$ is the natural logarithm of CEO total pay for firm $i$ in year $t$, which includes salary, bonus, LTIP, benefits and pension. Our variable of interest is $PostOct2013$ which is a dummy variable that equals 1 if the observation is after October 2013 (when the regulation became effective), 0 otherwise. The control variables relate to CEO and firm characteristics. We first include an accounting performance measure, ROA since total CEO pay is higher in better performing firms (Tosi et al., 2000). We also include Firm size, Leverage, Volatility, and Market to book to control for firm characteristics that can impact the level of CEO pay (Tosi et al., 2000; Cadman et al., 2010). We include Board Independence as a governance variable to control for the effectiveness of the board. We also include CEO-specific variables, CEO duality and CEO tenure to control for the strength of the CEO position within the firm’s governance structure. All variables are defined in the appendix.

Finally, we employ firm and CEO fixed-effect to address firm-specific and CEO-specific unobservable variables. As shown in later sections, our results generally hold for both fixed-
effect models. Firm and CEO fixed effect models are widely applied in the literature. Graham et al. (2012) provide evidence that firm and CEO fixed effects explain a majority of the variation in executive compensation.

Our first hypothesis expects no difference in the level of CEO pay following the reform. Therefore, we should observe an insignificant coefficient on the variable, PostOct2013. The coefficient $\beta_1$ measures the difference in levels of CEO pay before and after the single figure reform that cannot be accounted for by differences in firm and CEO characteristics and firm (or CEO) fixed effects.

We also examine the impact of early adoption in $H1a$ by including an interaction term Early compliance, which equals 1 if the observation belongs to a firm that adopted the single figure reporting regulation before October 2013, 0 otherwise.

Hypothesis 2 examines the pay-performance association around the adoption of the single figure reporting regulation. To test hypothesis 2, we employ the following panel equation (see, for example, Aggarwal and Samwick (1999), Graham et al. (2012), John et al. (2010), and Murphy (1985)):

$$\ln(CEO \ total \ pay_{it}) = \alpha_1 + \beta_1 PostOct2013_{it} + \beta_2 ROA_{it} + \beta_3 PostOct2013_{it} \ast ROA_{it} + \sum \beta_{4-10} Controls_{it} + \epsilon_{it}$$  \hfill (2)

In the above regression, we include ROA as an accounting performance measure to capture the pay-performance association. As an alternative, we also use Stock Return in untabulated results and find qualitatively similar results. The coefficient $\beta_2$ measures pay-performance sensitivity of CEO’s total pay. The coefficient $\beta_3$ on the interaction variable measures the incremental difference in pay-performance sensitivity after the single figure reform. If pay-performance does not change after the reform, we should observe an insignificant coefficient on the interaction term.

To examine the effect of early adoption, we run the analysis for equation (2) separately for early and late adopters and observe the coefficient $\beta_3$.

Our final hypothesis relates to the ratio of CEO pay to other employees. Similar to hypothesis 1, we test hypothesis 3 using the following equation:

$$CEO \ to \ non - CEO \ pay \ ratio_{it} = \alpha + \beta_1 PostOct2013_{it} + \sum \beta_{2-6} Controls_{it} + \epsilon_{it}$$  \hfill (3)

In equation (3), the dependent variables, $CEO \ to \ non-CEO \ pay \ ratio$, equals to total CEO pay divided by the median employee wages for firm $i$ in year $t$. We include the same control
variables as those presented in equation (1). We also include firm or CEO fixed-effect in our regressions to account for unobservable variables that related to firm and CEO characteristics. The regression examines how pay gap changes after October 2013. If the new regulation does not improve the pay gap, then we should observe an insignificant coefficient, $\beta_1$ in the above equation.

5.2 Descriptive Statistics

The sample descriptive statistics are presented in Table 2. Average total pay is over £4.5 million, a large proportion of this figure being variable pay (Bonus = £1.2 million and Long-term incentive pay (LTIP) = £2.0 million); non-variable pay on the other hand is much smaller with salary = £0.9 million, pension = £0.4 million and benefits = £0.1 million. These results reflect the general pay practice in the UK, where most pay is performance-related. On the corporate governance side, most CEOs do not hold the position as chairperson (CEO duality = 0.03), Independent directors also out-number executive directors (Board independence = 72.45). Furthermore, CEO tenure is on average 5.76 years. All variables are defined in the appendix.

The mean firm size in the sample is £27 billion, while stock returns have a mean of 13.41% and stock price volatility a mean of 29%. The variable, return on assets (ROA), a measure of firms’ accounting performance, is 7.13% on average. We also report that the CEO-to-employee pay ratio is 112 times on average. Overall, these characteristics are consistent with the profile of FTSE 100 firms.

Table 3 presents the correlation between our main variables. We find that the performance measure, ROA, is positively correlated with total CEO pay and this is statistically significant at the 1% level (coefficient = 0.18). Our test variable is PostOct2013, which equals to 1 for observations on or after 1st October 2013, and 0 otherwise. We find no significant correlation between PostOct2013 and CEO total pay or CEO to non-CEO pay ratio. This suggests that the single figure reform may have little impact on CEO pay. The correlation between Early compliance which represents adoption of the single pay reform before October 2013 is positively and significantly correlated with CEO to non-CEO pay ratio (coefficient = 0.19), firm size (coefficient = 0.18) and board independence (coefficient = 0.15). It is also negatively correlated with firm volatility (coefficient = -0.28).
We also examine three corporate governance variables and find that they have varied correlation with CEO pay. *Board independence* is generally positively associated with the different pay components; *CEO duality* generally negatively correlates to pay; while *CEO tenure* positively correlates to pay. Overall, the three variables show that corporate governance is an important determinant of CEO pay. Finally, the *CEO to non-CEO pay ratio* is highly correlated with total CEO pay. This is because CEO pay varies largely every year but employee wages are usually stable, so variation of the pay ratio stems mostly from variation of CEO pay. For this reason, regression results for CEO pay and pay ratios, as demonstrated in later section, are largely the same.

6. Discussion of results

6.1 The impact of single figure pay reform on CEO total pay

Our first hypothesis examines the impact of the single pay reform on CEO pay level. Table 4 demonstrates univariate results of the differences before and after the reform. The simple mean and median comparison in panel A shows the difference of CEO compensation pre- and post-the reform. We present results for *CEO total pay* as well as components of pay. Most pay components show little difference post the reform. For example, mean and median difference for salary, bonus, benefits and pension are all insignificant. The only exception is LTIPs which shows substantial and significant increase after the reform. On average, CEO LTIP is £740,000 more than it is before the reform. Interestingly, total pay also increases by a similar amount after the reform, although the difference is not significant. Firms seem to adjust the incentive structure rather than increase CEO’s overall pay. We explore this further in the next subsection. Finally, there are no significant differences in the ratio of CEO to employee pay after the reform, which indicates the reform has not achieved its target.

((Table 4))

Panels B and C present differences in *CEO total pay* as well as *CEO to non-CEO pay ratio* in the subsamples of firms with early compliance (before October 2013) and non-early compliance, respectively. In panel B, we find a significant increase in *CEO total pay* for firms that adopted the regulation before October 2013 (mean difference = £1.25 million, significant at the 10% level). In panel C, we find no significant differences. Overall, there is limited evidence that the regulation had the intended impact on CEO pay or pay ratio.

Table 5 examines further the impact of the reform on total pay, while controlling for other factors that can impact pay using equation (1). We employ both firm-fixed and CEO-fixed
effect models which are commonly used in the compensation literature (e.g. Graham et al, 2012). As discussed previously, we use fixed-effect models to capture the time-invariant omitted variables. Our results are generally consistent in both regressions. Columns 1, 2 and 3 include firm fixed-effects and columns 4, 5 and 6 include CEO fixed-effects.

((Table 5))

Our variable of interest is PostOct2013, which captures the effect of the reform. The results confirm the univariate tests shown in Table 4. Specifically, CEO’s total pay is not affected by the single figure reform as most coefficients on the PostOct2013 variable are insignificant. These results hold with and without control variables, with firm fixed-effects (columns 1-3) as well as with CEO fixed-effects (columns 4-6). The only exception is in column 4 without the inclusion of control variables. This is a rather disappointing finding given that the single figure reform was designed to mitigate the rising CEO pay.

The results also indicate that CEO pay is positively associated with ROA, indicating a positive pay-performance relationship. Pay is also positively associated with firm size and book-to-market ratio consistent with findings in the literature (Aggarwal and Samwick, 1999). Furthermore, CEO pay is negatively associated with firm Leverage and Volatility, consistent with the principal-agent theory (Holmstrom, 1979; Holmstrom and Milgrom, 1991). These results are consistent across both firms and CEO fixed-effect models and demonstrate that firm characteristics are an important determinant of CEO pay. On the other hand, corporate governance variables show no impact on total pay with insignificant coefficients on Board independence and CEO duality. Overall, we find little changes in CEO pay following the single pay reform of 2013, which supports the null expectation in hypothesis 1. Therefore, the intended result of the reform was not met.

6.2 The impact of single figure pay reform on pay-performance

In this section, we provide evidence related to hypothesis 2. Rather than curbing total pay, the single pay reform could force firms to justify their CEO pay. Therefore, we examine whether firms increase the pay-performance relation to ensure CEOs’ incentives are aligned with shareholders’ after the reform. We employ ROA to measure firms’ performance. To test changes in pay-performance, we run regressions using LN(CEO total pay) as the dependent variable, and using the interaction term between the reform dummy and the performance variable to capture the incremental effect of the single figure reform. Our results are presented
in Table 6. Similar to Table 5, both firm characteristics and corporate governance variables are included as controls. We find the coefficient on ROA, which captures the pay-performance relation, is positive and statistically significant for all specifications indicating that pay is largely associated with firm performance. The value of the coefficients is around 0.04 in all regressions, indicating that a 1% increase in ROA is associated with 4.08% (\(=e^{(1\times0.04)}-1\)) increase in CEO total pay. While the pay-performance is low compared to findings conducted in the US (Gao and Li, 2015), where they find the coefficient for ROA is around 0.7, the result is consistent with studies in the UK, where pay-performance is much lower than that in the US. For example, using a sample of FTSE 350 firms, Ozkan (2011) finds the coefficient on performance is around 0.06.

\[\text{(Table 6)}\]

The interaction term \(PostOct2013\times ROA\) captures the incremental difference between pay-performance sensitivities before and after the single figure reform. The coefficients on the interaction terms are negative and significant, and the results hold for both CEO and firm fixed-effect model. While the single pay reform intends to strengthen pay-performance relationship, the results suggest that pay-performance actually declines after the reform. To be precise, coefficients for the interaction term is -0.02 for all regressions. Suggesting that after the single figure reform a 1% increase in ROA is only associated with a 2.02% (\(=e^{(1\times[0.04-0.02])}-1\)) increase in CEO total pay, instead of a 4.08% increase in CEO pay before the reform. This is a 50% reduction in the pay-performance relation.

We also find a significant relationship between pay and most control variables, other than Board independence and CEO duality.

While the reform reduces pay-performance in general, it is possible that the reform has a different impact on different firms. Prior evidence points to the governance structure impacting the pay-performance relationship (e.g. Ozkan, 2011). Therefore, we divide our sample in two groups based on the strength of their corporate governance. We measure a corporate governance (CG) index by assigning a score to each firm based on the three governance measures: Board independence, CEO tenure and CEO duality. The detailed definition of the scoring system is presented in the appendix. The score can take a value of either 0, 1, 2 or 3. The higher the score, the stronger the firm’s corporate governance. For example, a firm is assigned a score of 3, if its Board independence is higher than the median board independence in the sample, its CEO duality does not equal 1 (CEO is not chairman) and CEO tenure is less
than the median tenure in the sample. Firms that have corporate governance (CG) score equals to 2 or 3 are classified in the high CG index group, whereas the low CG index group consists of firms with CG score equals to 0 or 1.

We then rerun regressions from Table 6 in each of the subsamples; the results are presented in Table 7. We find as before the coefficients on ROA are positive and about the same in both high and low CG groups. As before, the coefficients on the interaction term are negative and these hold for both high and low CG group. But they are not significant for firms in the high CG group. This supports the view that the decline in pay-performance stems from firms with weak corporate governance.

((Table 7))

To sum up the main findings in this subsection, the accounting measure of firm performance (return in assets) is positively associated with CEO pay, i.e. there is a positive accounting pay-performance relation. The single figure reform has a significant impact on firm’s pay-performance relation, which does not support hypothesis 2. However, rather than strengthening the relationship or having no effect on this relationship, the reform actually makes pay-performance worse. This is driven by firms with weaker corporate governance structures.

In addition to results discussed above, we also run regressions using each pay component as dependent variables, e.g. bonus and LTIPs. These results are not reported as they are largely in line with Table 5 and 6, that is, total amount of bonus and LTIPs show no change before and after the reform. Pay-performance from bonus and LTIPs also drop after the reform.

6.3 The impact of single figure pay reform on pay ratio

In this sub-section, we examine hypothesis 3. Table 8 presents results of the impact of the reform on the CEO to employee pay ratio. We rerun all regressions in Table 6 using CEO to non-CEO pay ratio as the dependent variable. Similar to results in Table 4, we do not find evidence that the reform affected the pay ratio. The coefficients of PostOct2013 are mostly insignificant except when using CEO fixed-effect models (Table 8 columns 4 and 5) where corporate governance controls are not employed. Specifically, the pay gap appears to have increased in the post-reform period (coefficient on PostOct2013 is 27.16, significant at the 10% level in column 5). As noted in our previous discussion, the pay ratio simply is a proxy for CEO’s total pay. Since employee wages are relatively constant across time, variation of the pay ratio comes solely from the CEO’s total pay. This is also evident from Table 3 where pay
ratio and total pay are highly correlated. Overall, this result suggests that reforming CEO compensation alone is not effective at improving the pay gap between CEO and average employees.

((Table 8))

6.4 The effect of early compliance

In this section, we examine the effect of early compliance of the new single pay regulation. Firms that adopted the single pay reporting format before 1st October 2013 are considered early adopters. Our hypotheses $H1a$, $H2a$, and $H3a$ relate to the effect of the reform on total CEO pay, the pay-performance relationship and CEO pay gap across firms that complied with the regulation early (early adopters) and those that did not.

We begin by examining the determinants of early compliance through logit regressions. The dependent variable is $Early\ compliance$, which is a dummy that equals 1 if the firm complied with the single pay reform early, 0 otherwise. We include as independent variables the level of CEO pay as well as firm characteristics (e.g. $ROA$, $firm\ size$, $volatility$) and governance variables (e.g. $board\ independence$ and $CEO\ tenure$). The results, presented in table 9, show that firms that comply early with the regulation are those that have higher total pay, e.g. coefficient on $LN(CEO\ total\ pay)$ is 0.37 and significant at the 1% level in column 3; lower volatility e.g. coefficient on $Volatility$ is -0.04 and significant at the 1% level in column 1; and higher CEO tenure e.g. coefficient on $CEO\ tenure$ is 0.07 and significant at the 1% level in column 2. It appears that firms with long-tenured CEOs decide to comply with the regulation early...

((Table 9))

Results relating to the change in CEO total pay in relation to the reform and the early compliance decision are presented in Table 10. We include an interaction term $PostOct2013*Early\ compliance$ to capture this combined effect. We find the coefficient to be insignificant in all columns, even when controlling for firm, CEO and governance characteristics. We find evidence for $H1a$ that changes in total CEO pay for early adopters does not differ from that of late adopters. Specifically, neither group shows any decrease (or increase) in total pay. All remaining control variables are significant other than $Board\ independence$ and $CEO\ duality$.

((Table 10))
In Table 11, we examine the differential effect of the reform on the pay-performance relationship for early adopters (Early compliance group) and later adopters (Non-early compliance group) separately. The results for the ‘Early compliance group’ show that the negative impact on pay-performance is somewhat more pronounced than that in the non-early compliance group. Specifically, the interaction term PostOct2013*ROA is negative and significant in the ‘Early compliance group’ (coefficient = -0.04 and -0.03, both significant at the 1% level in columns 1 and 2, respectively) and somewhat larger than in the Non-early compliance group (coefficient = -0.02, significant at the 1% level, in columns 3 and 4). However, these differences do not appear to be significant. Therefore, the impact of the reform on pay-performance does not appear to be different between firms that chose to comply with the single pay reform early and those that did not. This supports H2a.

((Table 11))

Our final test examines the change in ratio of CEO pay to employees’ wages following the reform in firms that comply with the single pay regulation early compared to those that do not. We run equation (3) by including an interaction term PostOct2013*Early compliance. The results, presented in table 12, indicate that firms that comply with the regulation early have a higher CEO to non-CEO pay ratio following the reform period. Specifically, the coefficient on PostOct2013*Early compliance is 29.03 (significant at the 5% level) after controlling for firm, CEO and governance characteristics. However, the interaction term is not significant in any of the regressions using CEO fixed-effects. There is some evidence that early adopters increase pay ratio after the reform. The same results are not observed in CEO total pay in Table 10, suggesting that employee pay must have decreased during the same period. Overall, we find very limited evidence that the reform has a negative effect on early compliance firms.

((Table 12))

7. Conclusion

This paper examines the so-called single figure regulation, which requires firms to report CEO total compensation as a single number. Prior studies (Gupta et al, 2016) with a limited sample find that the new regulation has little impact on the level of total pay, and pay-performance do not improve after the new regulation is introduced. Our findings are in line with Gupta et al. (2016) that the new regulation does not have any impact on CEO pay. The regulation does not improve CEO-to-employee pay ratio either. Using a more comprehensive data than Gupta et
al. (2016), however, we are able to provide additional evidence about the unintended consequences of the single figure regulation.

Rather than improve the link between pay and firm performance, pay-performance actually declines after the introduction of the new regulation. This is particularly obvious in firms with weak corporate governance where pay-performance reduces almost 50% after the regulation became effective. This unintended effect highlights the dilemma regulators now face. While directly regulating CEO pay has already proven to be ineffective at controlling pay rises (Dittmann et al, 2011, Murphy, 2013a, Kleymenova and Tuna, 2018), the moderate approach of increasing disclosure and transparency is also problematic.

We also focus on the compliance with the single pay regulation presentation by examining the date when firms started presenting all elements of pay in a single table format. We find that early CEO pay of early adopters is not significantly different from late adopters...

As with all research, our study has limitations. The sample is small and includes only firms that belong to the FTSE350 index, which tend to be larger. Therefore, the generalisability of the results may not hold. Furthermore, findings related to the early compliance sub-sample do not take into account incentives for this early adoption. This group of firms include firms that complied with the regulation either near the actual compliance date or several years before, which may indicate other factors leading to the single figure reporting. We do not disentangle these which means our sample may suffer from self-selection bias.
References:


Fortune (2017). Top CEOs make more in two days than an average employee does in one year; Grace Donnelly, July 20th, 2017; available at: http://fortune.com/2017/07/20/ceo-pay-ratio-2016/.


FT (2018). UK to force companies to justify pay gaps between CEOs and staff, Financial Times, Tom Belger, June 10, 2018, available at: https://www.ft.com/content/db9d0b4c-6b25-11e8-8cf3-0c230fa67aec.


Table 1: Sample Distribution

This table reports industrial and yearly distribution for the sample of UK FTSE 100 non-financial and non-utility firms from 2010-2016. Total number of observations is 518 from 81 unique firms and 132 unique CEOs. The industrial distribution is based on the ICB classification used by FTSE.

<table>
<thead>
<tr>
<th>Industry</th>
<th>N</th>
<th>%</th>
<th>Year</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Materials</td>
<td>63</td>
<td>12.16%</td>
<td>2010</td>
<td>69</td>
<td>13.32%</td>
</tr>
<tr>
<td>Consumer Goods</td>
<td>92</td>
<td>17.76%</td>
<td>2011</td>
<td>73</td>
<td>14.09%</td>
</tr>
<tr>
<td>Consumer Services</td>
<td>141</td>
<td>27.22%</td>
<td>2012</td>
<td>72</td>
<td>13.90%</td>
</tr>
<tr>
<td>Health Care</td>
<td>35</td>
<td>6.76%</td>
<td>2013</td>
<td>78</td>
<td>15.06%</td>
</tr>
<tr>
<td>Industrials</td>
<td>123</td>
<td>23.75%</td>
<td>2014</td>
<td>78</td>
<td>15.06%</td>
</tr>
<tr>
<td>Oil &amp; Gas</td>
<td>38</td>
<td>7.34%</td>
<td>2015</td>
<td>79</td>
<td>15.25%</td>
</tr>
<tr>
<td>Technology</td>
<td>13</td>
<td>2.51%</td>
<td>2016</td>
<td>69</td>
<td>13.32%</td>
</tr>
<tr>
<td>Telecommunications</td>
<td>13</td>
<td>2.51%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>518</td>
<td>100%</td>
<td><strong>Total</strong></td>
<td>518</td>
<td>100%</td>
</tr>
</tbody>
</table>
Table 2: Descriptive Statistics

This table reports descriptive statistics for the sample of UK FTSE 100 non-financial and non-utility firms from 2010-2016. Total number of observation is 518 from 81 unique firms and 132 unique CEOs. All variables are winsorized at 1% level and defined in the appendix.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Q1</th>
<th>Med.</th>
<th>Q3</th>
<th>Std.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEO total pay (£000s)</td>
<td>4,667</td>
<td>1,847</td>
<td>3,206</td>
<td>5,816</td>
<td>5,493</td>
</tr>
<tr>
<td>Salary (£000s)</td>
<td>938</td>
<td>688</td>
<td>875</td>
<td>1,096</td>
<td>462</td>
</tr>
<tr>
<td>Bonus (£000s)</td>
<td>1,155</td>
<td>469</td>
<td>930</td>
<td>1,524</td>
<td>1,127</td>
</tr>
<tr>
<td>LTIPs (£000s)</td>
<td>2,049</td>
<td>0</td>
<td>682</td>
<td>2,504</td>
<td>4,540</td>
</tr>
<tr>
<td>Benefits (£000s)</td>
<td>120</td>
<td>21</td>
<td>39</td>
<td>93</td>
<td>323</td>
</tr>
<tr>
<td>Pension (£000s)</td>
<td>404</td>
<td>103</td>
<td>225</td>
<td>341</td>
<td>1,063</td>
</tr>
<tr>
<td>CEO to non-CEO pay ratio (times)</td>
<td>112</td>
<td>39</td>
<td>72</td>
<td>126</td>
<td>122</td>
</tr>
<tr>
<td>Early compliance (dummy)</td>
<td>0.50</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0.50</td>
</tr>
<tr>
<td>Firm size (£ m)</td>
<td>27,144</td>
<td>3,283</td>
<td>6,679</td>
<td>22,344</td>
<td>57,972</td>
</tr>
<tr>
<td>ROA (%)</td>
<td>7.13</td>
<td>3.87</td>
<td>6.55</td>
<td>9.94</td>
<td>6.15</td>
</tr>
<tr>
<td>Leverage (%)</td>
<td>19.68</td>
<td>12.01</td>
<td>19.57</td>
<td>26.47</td>
<td>11.78</td>
</tr>
<tr>
<td>Volatility (%)</td>
<td>29.09</td>
<td>21.53</td>
<td>26.73</td>
<td>34.55</td>
<td>10.07</td>
</tr>
<tr>
<td>Market to book (times)</td>
<td>4.00</td>
<td>1.64</td>
<td>2.82</td>
<td>4.88</td>
<td>4.23</td>
</tr>
<tr>
<td>Board independence (%)</td>
<td>72.45</td>
<td>66.67</td>
<td>75.00</td>
<td>80.00</td>
<td>10.57</td>
</tr>
<tr>
<td>CEO duality (dummy)</td>
<td>0.03</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.17</td>
</tr>
<tr>
<td>CEO tenure (years)</td>
<td>5.76</td>
<td>2.25</td>
<td>4.40</td>
<td>7.60</td>
<td>5.28</td>
</tr>
</tbody>
</table>
Table 3: Correlation Matrix

This table presents the Pearson correlation coefficients for the sample of 518 observations from UK FTSE 100 non-financial and non-utility firms during 2010-2016. Typeface is bold if it is significant at least at 1% level. All variables are defined in the appendix.

<table>
<thead>
<tr>
<th>Variable</th>
<th>(1) LN (CEO total pay)</th>
<th>(2) Early compliance</th>
<th>(3) CEO to non-CEO pay ratio</th>
<th>(4) PostOct2013</th>
<th>(5) ROA</th>
<th>(6) Stock return</th>
<th>(7) Firm Size</th>
<th>(8) Leverage</th>
<th>(9) Volatility</th>
<th>(10) Market to book</th>
<th>(11) Board independence</th>
<th>(12) CEO duality</th>
<th>(13) CEO tenure</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) LN (CEO total pay)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2) Early compliance</td>
<td></td>
<td></td>
<td></td>
<td>0.22</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3) CEO to non-CEO pay ratio</td>
<td>0.54</td>
<td>0.19</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(4) PostOct2013</td>
<td>0.01</td>
<td>-0.02</td>
<td>0.04</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(5) ROA</td>
<td>0.18</td>
<td>0.06</td>
<td>0.18</td>
<td>-0.12</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(6) Stock return</td>
<td>0.06</td>
<td>0.01</td>
<td>0.08</td>
<td>-0.16</td>
<td>0.10</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(7) Firm Size</td>
<td>0.41</td>
<td>0.18</td>
<td>0.06</td>
<td>0.08</td>
<td>-0.25</td>
<td>-0.19</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(8) Leverage</td>
<td>-0.03</td>
<td>-0.02</td>
<td>-0.08</td>
<td>0.09</td>
<td>-0.11</td>
<td>-0.05</td>
<td>0.05</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(9) Volatility</td>
<td>-0.29</td>
<td>-0.28</td>
<td>-0.22</td>
<td>-0.15</td>
<td>-0.22</td>
<td>0.17</td>
<td>-0.18</td>
<td>-0.15</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(10) Market to book</td>
<td>0.17</td>
<td>0.08</td>
<td>0.12</td>
<td>0.05</td>
<td>0.47</td>
<td>0.08</td>
<td>-0.15</td>
<td>0.28</td>
<td>-0.21</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(11) Board independence</td>
<td>0.26</td>
<td>0.15</td>
<td>0.12</td>
<td>0.18</td>
<td>-0.01</td>
<td>-0.16</td>
<td>0.45</td>
<td>0.03</td>
<td>-0.12</td>
<td>-0.02</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(12) CEO duality</td>
<td>0.02</td>
<td>-0.04</td>
<td>0.01</td>
<td>0.03</td>
<td>-0.02</td>
<td>-0.06</td>
<td>0.02</td>
<td>-0.02</td>
<td>0.11</td>
<td>-0.05</td>
<td>0.17</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>(13) CEO tenure</td>
<td>0.20</td>
<td>0.10</td>
<td>0.30</td>
<td>-0.04</td>
<td>-0.02</td>
<td>0.01</td>
<td>-0.07</td>
<td>-0.03</td>
<td>0.08</td>
<td>0.04</td>
<td>-0.23</td>
<td>0.08</td>
<td></td>
</tr>
</tbody>
</table>
Table 4: Univariate test

This table reports the univariate tests comparing the CEO pay before and after “Single figure pay” reform (2013 Oct). The sample includes UK FTSE 100 non-financial and non-utility firms from 2010-2016. Total number of observation is 518 from 81 unique firms and 132 unique CEOs. Panel A is for the full sample. Panel B presents results for the subsample which adopted “Single pay figure” before October 2013, while the non-early compliance sample is shown in panel C. A t-test is used to compare the mean while the Wilcoxon test is used to compare the median. The asterisks *, **, *** denote statistical significance at 10%, 5% and 1% levels, respectively. All variables are winsorized at the 1% level. All variables are defined in the appendix.

Panel A: Full sample

<table>
<thead>
<tr>
<th>Variable</th>
<th>Prior to 2013 Oct</th>
<th>After 2013 Oct</th>
<th>Difference in Mean</th>
<th>Difference in Median</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (1) Median (2)</td>
<td>Mean (3) Median (4)</td>
<td>(3)-(1) (4)-(2)</td>
<td></td>
</tr>
<tr>
<td>CEO total pay (£000s)</td>
<td>4,297 3,206</td>
<td>5,001 3,225</td>
<td>704</td>
<td>19</td>
</tr>
<tr>
<td>Salary (£000s)</td>
<td>943 243</td>
<td>934 276</td>
<td>-9</td>
<td>33</td>
</tr>
<tr>
<td>Bonus (£000s)</td>
<td>1147 919</td>
<td>1161 961</td>
<td>14</td>
<td>42</td>
</tr>
<tr>
<td>LTIPs (£000s)</td>
<td>1,656 576</td>
<td>2,396 854</td>
<td>740*</td>
<td>278*</td>
</tr>
<tr>
<td>Benefits (£000s)</td>
<td>108 39</td>
<td>139 41</td>
<td>31</td>
<td>2</td>
</tr>
<tr>
<td>Pension (£000s)</td>
<td>444 236</td>
<td>369 222</td>
<td>-75</td>
<td>-14</td>
</tr>
<tr>
<td>CEO to non-CEO Pay ratio (times)</td>
<td>109 69</td>
<td>117 78</td>
<td>8</td>
<td>9</td>
</tr>
</tbody>
</table>

Panel B: Early compliance sample

<table>
<thead>
<tr>
<th>Variable</th>
<th>Prior to 2013 Oct</th>
<th>After 2013 Oct</th>
<th>Difference in Mean</th>
<th>Difference in Median</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (1) Median (2)</td>
<td>Mean (3) Median (4)</td>
<td>(3)-(1) (4)-(2)</td>
<td></td>
</tr>
<tr>
<td>CEO total Pay (£000s)</td>
<td>4,731 3,948</td>
<td>5,982 3,961</td>
<td>1,251*</td>
<td>13</td>
</tr>
<tr>
<td>CEO to non-CEO Pay ratio (times)</td>
<td>123 74</td>
<td>154 89</td>
<td>31</td>
<td>15</td>
</tr>
</tbody>
</table>

Panel C: Non-early compliance sample

<table>
<thead>
<tr>
<th>Variable</th>
<th>Prior to 2013 Oct</th>
<th>After 2013 Oct</th>
<th>Difference in Mean</th>
<th>Difference in Median</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (1) Median (2)</td>
<td>Mean (3) Median (4)</td>
<td>(3)-(1) (4)-(2)</td>
<td></td>
</tr>
<tr>
<td>CEO total Pay (£000s)</td>
<td>3,818 2,652</td>
<td>3,754 2,669</td>
<td>-64</td>
<td>17</td>
</tr>
<tr>
<td>CEO to non-CEO Pay ratio (times)</td>
<td>94 66</td>
<td>86 70</td>
<td>-8</td>
<td>4</td>
</tr>
</tbody>
</table>
Table 5: The impact of “single figure pay” reform on CEO total pay

This table reports the estimation of the impact of UK “single figure pay” reform on CEO total pay. The sample includes UK FTSE 100 non-financial and non-utility firms from 2010-2016. Total number of observations is 518 from 81 unique firms and 132 unique CEOs. The dependent variable is \( \ln(\text{CEO total pay}) \). The variable \textit{PostOct2013} is a dummy that equals to one if the observation is after 1st October 2013, the date the “single figure pay” reform becomes effective, zero otherwise. Firm fixed effect and CEO fixed effect are employed in columns (1) to (3) and (4) to (6) respectively. P-values are based on robust standard errors adjusted for heteroscedasticity and clustered by firm or CEO (White cross-section). T-statistics are reported in parentheses. The asterisks *, **, *** denote statistical significance at 10%, 5% and 1% levels, respectively. All variables are winsorized at the 1% level and defined in the appendix.

<table>
<thead>
<tr>
<th>Variable</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PostOct2013</td>
<td>0.05</td>
<td>-0.02</td>
<td>0.05</td>
<td>0.29**</td>
<td>0.18</td>
<td>0.06</td>
</tr>
<tr>
<td></td>
<td>(0.45)</td>
<td>(-0.21)</td>
<td>(0.47)</td>
<td>(2.23)</td>
<td>(1.55)</td>
<td>(0.43)</td>
</tr>
<tr>
<td>ROA</td>
<td>0.02***</td>
<td>0.02***</td>
<td>0.02***</td>
<td>0.02***</td>
<td>0.02***</td>
<td>0.02***</td>
</tr>
<tr>
<td></td>
<td>(4.09)</td>
<td>(4.19)</td>
<td>(3.88)</td>
<td>(4.02)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm size</td>
<td>0.41***</td>
<td>0.32***</td>
<td>0.51***</td>
<td>0.40**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(3.68)</td>
<td>(2.98)</td>
<td>(3.00)</td>
<td>(2.41)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leverage</td>
<td>-0.01**</td>
<td>-0.01**</td>
<td>-0.02**</td>
<td>-0.02**</td>
<td>-0.01*</td>
<td>-0.01</td>
</tr>
<tr>
<td></td>
<td>(-2.59)</td>
<td>(-2.27)</td>
<td>(-2.21)</td>
<td>(-2.04)</td>
<td>(-1.71)</td>
<td>(-1.48)</td>
</tr>
<tr>
<td>Volatility</td>
<td>-0.01***</td>
<td>-0.01***</td>
<td>-0.01*</td>
<td>-0.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-3.61)</td>
<td>(-2.73)</td>
<td>(-1.71)</td>
<td>(-1.48)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Market to book</td>
<td>0.02***</td>
<td>0.02***</td>
<td>0.02**</td>
<td>0.02*</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2.11)</td>
<td>(2.76)</td>
<td>(1.93)</td>
<td>(1.82)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Board independence</td>
<td>-0.01</td>
<td></td>
<td>-0.01</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-1.38)</td>
<td></td>
<td>(-0.67)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CEO duality</td>
<td>-0.30</td>
<td></td>
<td>0.32</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-1.21)</td>
<td></td>
<td>(0.86)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CEO tenure</td>
<td>0.06***</td>
<td></td>
<td>0.05</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(5.29)</td>
<td></td>
<td>(1.57)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>8.03***</td>
<td>4.62***</td>
<td>5.82***</td>
<td>7.91***</td>
<td>3.54**</td>
<td>4.71***</td>
</tr>
<tr>
<td></td>
<td>(113.36)</td>
<td>(4.03)</td>
<td>(6.50)</td>
<td>(85.23)</td>
<td>(2.15)</td>
<td>(3.36)</td>
</tr>
</tbody>
</table>

Firm fixed effect | Yes     | Yes     | Yes     | No      | No      | No      |
CEO fixed effect  | No      | No      | No      | Yes     | Yes     | Yes     |
N                | 518     | 518     | 518     | 518     | 518     | 518     |
Adjusted R\(^2\) | 0.51    | 0.56    | 0.60    | 0.62    | 0.65    | 0.65    |
Table 6: The impact of “single figure pay” reform on CEO pay-performance sensitivity

This table reports the estimation of the impact of UK “single figure pay” reform on CEO pay-performance sensitivity. The sample includes UK FTSE 100 non-financial and non-utility firms from 2010-2016. Total number of observations is 518 from 81 unique firms and 132 unique CEOs. The dependent variable is LN(CEO total pay). The variable PostOct2013 is a dummy that equals to one if the observation is after 1st October 2013, the date the “single figure pay” reform becomes effective, zero otherwise. Firm fixed effect models are employed in columns (1) to (3), while CEO fixed effect models are used in columns (4) to (6). P-values are based on robust standard errors adjusted for heteroscedasticity and clustered by firm or CEO (White cross-section). T-statistics are reported in parentheses. The asterisks *, **, *** denote statistical significance at 10%, 5% and 1% levels, respectively. All variables are winsorized at the 1% level and defined in the appendix.

<table>
<thead>
<tr>
<th>Variables</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PostOct2013</td>
<td>0.26*</td>
<td>0.13</td>
<td>0.20*</td>
<td>0.47***</td>
<td>0.33**</td>
<td>0.21</td>
</tr>
<tr>
<td></td>
<td>(1.77)</td>
<td>(1.04)</td>
<td>(1.72)</td>
<td>(2.88)</td>
<td>(1.97)</td>
<td>(1.08)</td>
</tr>
<tr>
<td>ROA</td>
<td>0.05***</td>
<td>0.04***</td>
<td>0.04***</td>
<td>0.05***</td>
<td>0.04***</td>
<td>0.04***</td>
</tr>
<tr>
<td></td>
<td>(9.94)</td>
<td>(13.65)</td>
<td>(8.94)</td>
<td>(5.46)</td>
<td>(4.70)</td>
<td>(4.91)</td>
</tr>
<tr>
<td>PostOct2013 * ROA</td>
<td>-0.02**</td>
<td>-0.02***</td>
<td>-0.02***</td>
<td>-0.02**</td>
<td>-0.02*</td>
<td>-0.02*</td>
</tr>
<tr>
<td></td>
<td>(-2.21)</td>
<td>(-2.81)</td>
<td>(-2.95)</td>
<td>(-2.34)</td>
<td>(-1.93)</td>
<td>(-1.92)</td>
</tr>
<tr>
<td>Firm size</td>
<td>0.43***</td>
<td>0.33***</td>
<td>0.51***</td>
<td>0.40**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(3.59)</td>
<td>(2.94)</td>
<td>(3.01)</td>
<td>(2.50)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leverage</td>
<td>-0.01**</td>
<td>-0.01**</td>
<td>-0.02**</td>
<td>-0.01**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-2.55)</td>
<td>(-2.19)</td>
<td>(-2.16)</td>
<td>(-2.01)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volatility</td>
<td>-0.01***</td>
<td>-0.01***</td>
<td>-0.01</td>
<td></td>
<td>-0.01</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-3.92)</td>
<td>(-2.93)</td>
<td>(-1.64)</td>
<td>(-1.44)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Market to book</td>
<td>0.02**</td>
<td>0.02***</td>
<td>0.02**</td>
<td>0.02**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2.04)</td>
<td>(2.67)</td>
<td>(2.10)</td>
<td>(1.98)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Board independence</td>
<td></td>
<td></td>
<td></td>
<td>-0.01</td>
<td>-0.01</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(-1.42)</td>
<td>(-0.62)</td>
<td></td>
</tr>
<tr>
<td>CEO duality</td>
<td>-0.29</td>
<td>0.33</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-1.16)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CEO tenure</td>
<td>0.06***</td>
<td></td>
<td></td>
<td>0.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(5.27)</td>
<td></td>
<td></td>
<td>(1.52)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>7.65***</td>
<td>4.35***</td>
<td>5.57***</td>
<td>7.55***</td>
<td>3.42**</td>
<td>4.55***</td>
</tr>
<tr>
<td></td>
<td>(74.13)</td>
<td>(3.69)</td>
<td>(6.05)</td>
<td>(51.43)</td>
<td>(2.17)</td>
<td>(3.61)</td>
</tr>
<tr>
<td>Firm fixed effect</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>CEO fixed effect</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>N</td>
<td>518</td>
<td>518</td>
<td>518</td>
<td>518</td>
<td>518</td>
<td>518</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>0.55</td>
<td>0.56</td>
<td>0.60</td>
<td>0.64</td>
<td>0.65</td>
<td>0.66</td>
</tr>
</tbody>
</table>
Table 7: The impact of “single figure pay” reform on CEO pay-performance sensitivity: Subsamples based on corporate governance index

This table reports the estimation of the impact of UK “single figure pay” reform on CEO pay-performance sensitivity, by using corporate governance index as the subsampling criteria. The sample includes UK FTSE 100 non-financial and non-utility firms from 2010-2016. Total number of observations is 518 from 81 unique firms and 132 unique CEOs. The dependent variable is LN(CEO total pay). The variable PostOct2013 is a dummy that equals to one if the observation is after 1st October 2013, the date the “single figure pay” reform becomes effective, zero otherwise. High CG index group is for observations with CG index =2 and 3; while low CG index group is for observations with CG index =0 and 1. Firm fixed effect models are employed in columns (1) and (3), while CEO fixed effect models are used in columns (2) and (4). P-values are based on robust standard errors adjusted for heteroscedasticity and clustered by firm or CEO (White cross-section). T-statistics are reported in parentheses. The asterisks *, **, *** denote statistical significance at 10%, 5% and 1% levels, respectively. All variables are winsorized at the 1% level and defined in the appendix.

<table>
<thead>
<tr>
<th>Variable</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PostOct2013</strong></td>
<td>0.10</td>
<td>0.23</td>
<td>0.44***</td>
<td>0.47***</td>
</tr>
<tr>
<td></td>
<td>(0.70)</td>
<td>(1.31)</td>
<td>(1.99)</td>
<td>(2.21)</td>
</tr>
<tr>
<td><strong>ROA</strong></td>
<td>0.03***</td>
<td>0.03***</td>
<td>0.03</td>
<td>0.03</td>
</tr>
<tr>
<td></td>
<td>(4.47)</td>
<td>(2.59)</td>
<td>(1.13)</td>
<td>(1.01)</td>
</tr>
<tr>
<td><strong>PostOct2013 * ROA</strong></td>
<td>-0.01</td>
<td>-0.01</td>
<td>-0.04*</td>
<td>-0.04*</td>
</tr>
<tr>
<td></td>
<td>(-1.49)</td>
<td>(-0.83)</td>
<td>(-1.84)</td>
<td>(-1.91)</td>
</tr>
<tr>
<td><strong>Firm size</strong></td>
<td>0.42***</td>
<td>0.65***</td>
<td>0.08</td>
<td>0.08</td>
</tr>
<tr>
<td></td>
<td>(3.41)</td>
<td>(3.67)</td>
<td>(0.16)</td>
<td>(0.15)</td>
</tr>
<tr>
<td><strong>Leverage</strong></td>
<td>-0.01</td>
<td>-0.02*</td>
<td>-0.02</td>
<td>-0.02</td>
</tr>
<tr>
<td></td>
<td>(-1.19)</td>
<td>(-1.74)</td>
<td>(-1.21)</td>
<td>(-1.36)</td>
</tr>
<tr>
<td><strong>Volatility</strong></td>
<td>-0.01*</td>
<td>-0.01</td>
<td>-0.01</td>
<td>-0.01</td>
</tr>
<tr>
<td></td>
<td>(-1.77)</td>
<td>(-0.72)</td>
<td>(-1.18)</td>
<td>(-1.28)</td>
</tr>
<tr>
<td><strong>Market to book</strong></td>
<td>0.01</td>
<td>0.01</td>
<td>0.12***</td>
<td>0.12***</td>
</tr>
<tr>
<td></td>
<td>(0.60)</td>
<td>(0.54)</td>
<td>(2.65)</td>
<td>(2.73)</td>
</tr>
<tr>
<td><strong>Constant</strong></td>
<td>4.30***</td>
<td>2.15</td>
<td>7.09*</td>
<td>7.20*</td>
</tr>
<tr>
<td></td>
<td>(3.59)</td>
<td>(1.25)</td>
<td>(1.69)</td>
<td>(1.68)</td>
</tr>
<tr>
<td>Firm fixed effect</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>CEO fixed effect</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>N</td>
<td>365</td>
<td>365</td>
<td>153</td>
<td>153</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>0.59</td>
<td>0.68</td>
<td>0.65</td>
<td>0.65</td>
</tr>
</tbody>
</table>
Table 8: The impact of “single figure pay” reform on CEO to non-CEO pay ratio

This table reports the estimation of the impact of UK “single figure pay” reform on CEO to non-CEO pay ratio. The sample includes UK FTSE 100 non-financial and non-utility firms from 2010-2016. Total number of observations is 488 from 80 unique firms and 128 unique CEOs. The sample size is smaller due to data availability for Non-CEO pay. The dependent variable is CEO to non-CEO Pay ratio (times). The variable PostOct2013 is a dummy that equals to one if the observation is after 1st October 2013, the date the “single figure pay” reform becomes effective, zero otherwise. Firm fixed effect and CEO fixed effect are employed in columns (1) to (3) and (4) to (6) respectively. P-values are based on robust standard errors adjusted for heteroscedasticity and clustered by firm or CEO (White cross-section). T-statistics are reported in parentheses. The asterisks *, **, *** denote statistical significance at 10%, 5% and 1% levels, respectively. All variables are winsorized at the 1% level and defined in the appendix.

<table>
<thead>
<tr>
<th>Variables</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PostOct2013</td>
<td>9.87</td>
<td>7.82</td>
<td>14.56</td>
<td>31.26**</td>
<td>27.16*</td>
<td>9.10</td>
</tr>
<tr>
<td></td>
<td>(0.89)</td>
<td>(0.71)</td>
<td>(1.12)</td>
<td>(2.17)</td>
<td>(1.88)</td>
<td>(0.48)</td>
</tr>
<tr>
<td>ROA</td>
<td>2.82***</td>
<td>2.44***</td>
<td>3.69***</td>
<td>3.65***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(7.13)</td>
<td>(6.11)</td>
<td>(5.73)</td>
<td>(6.01)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm size</td>
<td>17.33</td>
<td>1.76</td>
<td>17.02</td>
<td>-5.45</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.84)</td>
<td>(0.09)</td>
<td>(0.92)</td>
<td>(-0.38)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leverage</td>
<td>0.01</td>
<td>0.09</td>
<td>-0.25</td>
<td>-0.08</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.02)</td>
<td>(0.18)</td>
<td>(-0.41)</td>
<td>(-0.15)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volatility</td>
<td>-0.70***</td>
<td>-0.60***</td>
<td>-0.36</td>
<td>-0.51</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-3.62)</td>
<td>(-3.24)</td>
<td>(-1.22)</td>
<td>(-1.41)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Market to book</td>
<td>1.34</td>
<td>1.23</td>
<td>1.42</td>
<td>1.15</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.24)</td>
<td>(1.26)</td>
<td>(1.26)</td>
<td>(1.07)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Board independence</td>
<td>-0.82</td>
<td></td>
<td>-0.20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-0.91)</td>
<td></td>
<td>(-0.25)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CEO duality</td>
<td>58.11</td>
<td>106.15</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.99)</td>
<td></td>
<td>(1.08)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CEO tenure</td>
<td>5.80***</td>
<td></td>
<td>6.83</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(3.79)</td>
<td></td>
<td>(1.53)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>107.06***</td>
<td>-55.25</td>
<td>106.30</td>
<td>95.56***</td>
<td>-74.05</td>
<td>115.00</td>
</tr>
<tr>
<td></td>
<td>(20.97)</td>
<td>(-0.30)</td>
<td>(0.54)</td>
<td>(12.02)</td>
<td>(-0.43)</td>
<td>(0.69)</td>
</tr>
<tr>
<td>Firm fixed effect</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>CEO fixed effect</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>N</td>
<td>488</td>
<td>488</td>
<td>488</td>
<td>488</td>
<td>488</td>
<td>488</td>
</tr>
<tr>
<td>Adjusted R^2</td>
<td>0.59</td>
<td>0.61</td>
<td>0.63</td>
<td>0.65</td>
<td>0.66</td>
<td>0.67</td>
</tr>
</tbody>
</table>
Table 9: The determinants of early compliance

This table reports the estimation of the determinants of early compliance of “single figure pay” policy. The sample includes UK FTSE 100 non-financial and non-utility firms from 2010-2016. Total number of observations is 518 from 81 unique firms and 132 unique CEOs. The dependent variable is Early compliance which equals to one if firms adopted “single figure pay” policy before October 2013, zero otherwise. Logit regression is employed. Z-statistics are reported in parentheses. The asterisks *, **, *** denote statistical significance at 10%, 5% and 1% levels, respectively. All variables are winsorized at the 1% level and defined in the appendix.

<table>
<thead>
<tr>
<th>Variable</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LN (CEO total pay)</td>
<td>0.37***</td>
<td>0.24*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2.66)</td>
<td>(1.66)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CEO to non-CEO pay ratio</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.01***</td>
<td>0.01***</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(3.50)</td>
<td>(2.79)</td>
<td></td>
</tr>
<tr>
<td>ROA</td>
<td>-0.01</td>
<td>-0.01</td>
<td>-0.02</td>
<td>-0.01</td>
<td>-0.01</td>
<td>-0.01</td>
</tr>
<tr>
<td></td>
<td>(-0.41)</td>
<td>(-0.21)</td>
<td>(-0.90)</td>
<td>(-0.55)</td>
<td>(-0.42)</td>
<td>(-0.31)</td>
</tr>
<tr>
<td>Firm size</td>
<td>0.11</td>
<td>0.11</td>
<td>0.01</td>
<td>0.05</td>
<td>0.09</td>
<td>0.08</td>
</tr>
<tr>
<td></td>
<td>(1.25)</td>
<td>(1.15)</td>
<td>(0.14)</td>
<td>(0.47)</td>
<td>(0.93)</td>
<td>(0.76)</td>
</tr>
<tr>
<td>Leverage</td>
<td>-0.01</td>
<td>-0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td>(-0.07)</td>
<td>(-0.09)</td>
<td>(0.23)</td>
<td>(0.09)</td>
<td>(0.76)</td>
<td>(0.61)</td>
</tr>
<tr>
<td>Volatility</td>
<td>-0.04***</td>
<td>-0.03***</td>
<td>-0.03**</td>
<td>-0.03**</td>
<td>-0.03**</td>
<td>-0.03**</td>
</tr>
<tr>
<td></td>
<td>(-3.04)</td>
<td>(-2.88)</td>
<td>(-2.57)</td>
<td>(-2.57)</td>
<td>(-2.20)</td>
<td>(-2.14)</td>
</tr>
<tr>
<td>Market to book</td>
<td>0.05</td>
<td>0.04</td>
<td>0.04</td>
<td>0.03</td>
<td>0.03</td>
<td>0.03</td>
</tr>
<tr>
<td></td>
<td>(1.62)</td>
<td>(1.27)</td>
<td>(1.24)</td>
<td>(1.07)</td>
<td>(0.99)</td>
<td>(0.83)</td>
</tr>
<tr>
<td>Board independence</td>
<td>0.02</td>
<td>0.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.36)</td>
<td>(1.06)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CEO duality</td>
<td>-0.85</td>
<td>-0.84</td>
<td></td>
<td></td>
<td></td>
<td>-1.90***</td>
</tr>
<tr>
<td></td>
<td>(-1.43)</td>
<td>(-1.41)</td>
<td></td>
<td></td>
<td></td>
<td>(-2.71)</td>
</tr>
<tr>
<td>CEO tenure</td>
<td>0.07***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.05**</td>
</tr>
<tr>
<td></td>
<td>(3.47)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(2.04)</td>
</tr>
<tr>
<td>Constant</td>
<td>1.02</td>
<td>-0.44</td>
<td>-1.07</td>
<td>-1.60</td>
<td>0.91</td>
<td>0.14</td>
</tr>
<tr>
<td></td>
<td>(0.90)</td>
<td>(-0.34)</td>
<td>(-0.77)</td>
<td>(-1.09)</td>
<td>(0.77)</td>
<td>(0.10)</td>
</tr>
<tr>
<td>Industry effect</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>N</td>
<td>518</td>
<td>518</td>
<td>518</td>
<td>518</td>
<td>518</td>
<td>518</td>
</tr>
<tr>
<td>McFadden R²</td>
<td>0.10</td>
<td>0.12</td>
<td>0.11</td>
<td>0.12</td>
<td>0.13</td>
<td>0.15</td>
</tr>
</tbody>
</table>
Table 10: The impact of early compliance on CEO annual pay

This table reports the estimation of the joint impact of UK “single figure pay” reform and early compliance on CEO annual pay. The sample includes UK FTSE 100 non-financial and non-utility firms from 2010-2016. Total number of observation is 518 from 81 unique firms and 132 unique CEOs. The dependent variable is $\ln(\text{CEO total pay})$. The variable $PostOct2013$ is a dummy that equals to one if the observation is after 1st October 2013, the date the “single figure pay” reform becomes effective, zero otherwise. “Early compliance” equals to one if firms adopted “single figure pay” policy before October 2013, zero otherwise. Firm fixed effect and CEO fixed effect are employed in columns (1) to (3) and (4) to (6) respectively. P-values are based on robust standard errors adjusted for heteroscedasticity and clustered by firm or CEO (White cross-section). T-statistics are reported in parentheses. The asterisks *, **, *** denote statistical significance at 10%, 5% and 1% levels, respectively. All variables are winsorized at the 1% level and defined in the appendix.

<table>
<thead>
<tr>
<th>Variable</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$PostOct2013$</td>
<td>0.05</td>
<td>-0.04</td>
<td>-0.01</td>
<td>0.23*</td>
<td>0.12</td>
<td>0.02</td>
</tr>
<tr>
<td></td>
<td>(0.38)</td>
<td>(-0.42)</td>
<td>(-0.05)</td>
<td>(1.77)</td>
<td>(1.34)</td>
<td>(0.20)</td>
</tr>
<tr>
<td>Early compliance</td>
<td>-0.75</td>
<td>-0.59</td>
<td>-0.53</td>
<td>-0.66</td>
<td>-0.52</td>
<td>-0.50</td>
</tr>
<tr>
<td></td>
<td>(-1.56)</td>
<td>(-1.29)</td>
<td>(-1.26)</td>
<td>(-1.44)</td>
<td>(-1.16)</td>
<td>(-1.01)</td>
</tr>
<tr>
<td>$PostOct2013*Early compliance$</td>
<td>0.01</td>
<td>0.03</td>
<td>0.09</td>
<td>0.10</td>
<td>0.10</td>
<td>0.06</td>
</tr>
<tr>
<td></td>
<td>(0.05)</td>
<td>(0.34)</td>
<td>(1.51)</td>
<td>(1.14)</td>
<td>(1.09)</td>
<td>(0.83)</td>
</tr>
<tr>
<td>$ROA$</td>
<td>0.03***</td>
<td>0.02***</td>
<td>0.02***</td>
<td>0.02***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(3.67)</td>
<td>(3.74)</td>
<td>(3.65)</td>
<td>(3.81)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm size</td>
<td>0.41***</td>
<td>0.32***</td>
<td>0.51***</td>
<td>0.40**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(3.84)</td>
<td>(3.11)</td>
<td>(2.98)</td>
<td>(2.41)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leverage</td>
<td>-0.01***</td>
<td>-0.01***</td>
<td>-0.02**</td>
<td>-0.02**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-2.92)</td>
<td>(-2.62)</td>
<td>(-2.28)</td>
<td>(-2.12)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volatility</td>
<td>-0.01***</td>
<td>-0.01**</td>
<td>-0.01*</td>
<td>-0.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-3.16)</td>
<td>(-2.52)</td>
<td>(-1.78)</td>
<td>(-1.52)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Market to book</td>
<td>0.02**</td>
<td>0.02***</td>
<td>0.02*</td>
<td>0.02*</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2.08)</td>
<td>(2.66)</td>
<td>(1.81)</td>
<td>(1.74)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Board independence</td>
<td>-0.01</td>
<td></td>
<td>-0.01</td>
<td></td>
<td>-0.01</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-1.35)</td>
<td></td>
<td>(-0.74)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CEO duality</td>
<td>-0.30</td>
<td></td>
<td>0.31</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-1.24)</td>
<td></td>
<td>(0.87)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CEO tenure</td>
<td>0.06***</td>
<td></td>
<td>0.05</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(5.33)</td>
<td></td>
<td>(1.51)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>8.44***</td>
<td>4.94***</td>
<td>6.06***</td>
<td>8.25***</td>
<td>3.99**</td>
<td>5.06***</td>
</tr>
<tr>
<td></td>
<td>(32.84)</td>
<td>(4.13)</td>
<td>(6.29)</td>
<td>(32.40)</td>
<td>(2.23)</td>
<td>(3.32)</td>
</tr>
<tr>
<td>Firm fixed effect</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>CEO fixed effect</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>N</td>
<td>518</td>
<td>518</td>
<td>518</td>
<td>518</td>
<td>518</td>
<td>518</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>0.51</td>
<td>0.56</td>
<td>0.60</td>
<td>0.62</td>
<td>0.65</td>
<td>0.65</td>
</tr>
</tbody>
</table>
Table 11: The impact of early compliance on CEO pay-performance sensitivity

This table reports the estimation of the joint impact of UK “single figure pay” reform and early compliance on CEO pay-performance sensitivity. The sample includes UK FTSE 100 non-financial and non-utility firms from 2010-2016. Total number of observations is 511. The dependent variable is $\ln(\text{CEO total pay})$. The variable PostOct2013 is a dummy that equals to one if the observation is after 1st October 2013, the date the “single figure pay” reform became effective, zero otherwise. Columns (1) and (2) are for the ‘Early compliance group’ of firms which adopted the “single figure pay” policy before October 2013. Columns (3) and (4) are for the ‘Non-early compliance group’ of firms which did not adopt the “single figure pay” policy before October 2013. Firm fixed effect models are employed. P-values are based on robust standard errors adjusted for heteroscedasticity and clustered by firm or CEO (White cross-section). T-statistics are reported in parentheses. The asterisks *, **, *** denote statistical significance at 10%, 5% and 1% levels, respectively. All variables are winsorized at the 1% level and defined in the appendix.

<table>
<thead>
<tr>
<th>Variables</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Early compliance group</td>
<td>Non early compliance group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PostOct2013</td>
<td>0.19</td>
<td>0.28**</td>
<td>0.13</td>
<td>0.18**</td>
</tr>
<tr>
<td></td>
<td>(1.19)</td>
<td>(1.98)</td>
<td>(1.33)</td>
<td>(2.06)</td>
</tr>
<tr>
<td>ROA</td>
<td>0.05***</td>
<td>0.05***</td>
<td>0.04***</td>
<td>0.04***</td>
</tr>
<tr>
<td></td>
<td>(4.52)</td>
<td>(4.36)</td>
<td>(6.43)</td>
<td>(5.82)</td>
</tr>
<tr>
<td>PostOct2013 * ROA</td>
<td>-0.04***</td>
<td>-0.03***</td>
<td>-0.02***</td>
<td>-0.02***</td>
</tr>
<tr>
<td></td>
<td>(-3.32)</td>
<td>(-3.51)</td>
<td>(-2.06)</td>
<td>(-2.05)</td>
</tr>
<tr>
<td>Firm size</td>
<td>0.55***</td>
<td>0.47***</td>
<td>0.39*</td>
<td>0.31</td>
</tr>
<tr>
<td></td>
<td>(6.34)</td>
<td>(6.15)</td>
<td>(1.80)</td>
<td>(1.49)</td>
</tr>
<tr>
<td>Leverage</td>
<td>-0.01</td>
<td>-0.01</td>
<td>-0.02***</td>
<td>-0.02***</td>
</tr>
<tr>
<td></td>
<td>(-0.95)</td>
<td>(-1.15)</td>
<td>(-3.52)</td>
<td>(-2.80)</td>
</tr>
<tr>
<td>Volatility</td>
<td>-0.02**</td>
<td>-0.02**</td>
<td>-0.01</td>
<td>-0.01</td>
</tr>
<tr>
<td></td>
<td>(-2.82)</td>
<td>(-2.37)</td>
<td>(-0.94)</td>
<td>(-0.89)</td>
</tr>
<tr>
<td>Market to book</td>
<td>0.04**</td>
<td>0.04</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td>(2.51)</td>
<td>(2.28)</td>
<td>(0.56)</td>
<td>(0.72)</td>
</tr>
<tr>
<td>Board independence</td>
<td>-0.01</td>
<td>-0.01</td>
<td>-0.01</td>
<td>-0.01</td>
</tr>
<tr>
<td></td>
<td>(-1.48)</td>
<td>(-1.48)</td>
<td>(-0.80)</td>
<td>(-0.80)</td>
</tr>
<tr>
<td>CEO duality</td>
<td>-0.42**</td>
<td>0.37**</td>
<td>0.37</td>
<td>0.37</td>
</tr>
<tr>
<td></td>
<td>(-2.43)</td>
<td>(2.28)</td>
<td>(2.28)</td>
<td>(2.28)</td>
</tr>
<tr>
<td>CEO tenure</td>
<td>0.05***</td>
<td>0.06***</td>
<td>0.06**</td>
<td>0.06**</td>
</tr>
<tr>
<td></td>
<td>(6.43)</td>
<td>(3.58)</td>
<td>(3.58)</td>
<td>(3.58)</td>
</tr>
<tr>
<td>Constant</td>
<td>3.27***</td>
<td>4.38***</td>
<td>4.58**</td>
<td>5.46</td>
</tr>
<tr>
<td></td>
<td>(4.36)</td>
<td>(4.49)</td>
<td>(2.23)</td>
<td>(3.36)</td>
</tr>
<tr>
<td>Firm fixed effect</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>N</td>
<td>259</td>
<td>259</td>
<td>252</td>
<td>252</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>0.53</td>
<td>0.58</td>
<td>0.63</td>
<td>0.58</td>
</tr>
</tbody>
</table>
This table reports the estimation of the joint impact of UK “single figure pay” reform and early compliance on CEO to non-CEO pay ratio. The sample includes UK FTSE 100 non-financial and non-utility firms from 2010-2016. Total number of observation is 488 from 80 unique firms and 128 unique CEOs. The sample size is smaller due to data availability of non-CEO pay. The dependent variable is \( \text{CEO to non-CEO Pay ratio (times)} \). The variable PostOct2013 is a dummy that equals to one if the observation is after 1st October 2013, the date the “single figure pay” reform became effective, zero otherwise. “Early compliance” equals to one if firms adopted “single figure pay” policy before October 2013, zero otherwise. Firm fixed effect and CEO fixed effect are employed in columns (1) to (3) and (4) to (6) respectively. P-values are based on robust standard errors adjusted for heteroscedasticity and clustered by firm or CEO (White cross-section). T-statistics are reported in parentheses. The asterisks *, **, *** denote statistical significance at 10%, 5% and 1% levels, respectively. All variables are winsorized at the 1% level and defined in the appendix.

<table>
<thead>
<tr>
<th>Variables</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \text{PostOct2013} )</td>
<td>-2.72</td>
<td>-4.92</td>
<td>-0.96</td>
<td>20.31***</td>
<td>19.86</td>
<td>4.70</td>
</tr>
<tr>
<td>( \text{(0.45)} )</td>
<td>(-0.70)</td>
<td>(-0.11)</td>
<td>2.78</td>
<td>(-0.49)</td>
<td>(0.36)</td>
<td></td>
</tr>
<tr>
<td>( \text{Early compliance} )</td>
<td>-37.85**</td>
<td>-15.08</td>
<td>-7.08</td>
<td>-21.78</td>
<td>6.53</td>
<td>12.52</td>
</tr>
<tr>
<td>( \text{(2.15)} )</td>
<td>(-0.73)</td>
<td>(-0.28)</td>
<td>(-1.09)</td>
<td>(0.24)</td>
<td>(0.35)</td>
<td></td>
</tr>
<tr>
<td>( \text{PostOct2013*Early compliance} )</td>
<td>24.81*</td>
<td>24.28</td>
<td>29.03***</td>
<td>22.66</td>
<td>15.65</td>
<td>9.13</td>
</tr>
<tr>
<td>( \text{(1.74)} )</td>
<td>(1.51)</td>
<td>(1.98)</td>
<td>(1.07)</td>
<td>(0.67)</td>
<td>(0.45)</td>
<td></td>
</tr>
<tr>
<td>( \text{ROA} )</td>
<td>3.09***</td>
<td>2.68***</td>
<td>3.68***</td>
<td>3.70***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \text{(5.67)} )</td>
<td>(4.80)</td>
<td>(4.64)</td>
<td>(4.70)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \text{Firm size} )</td>
<td>20.61</td>
<td>5.89</td>
<td>18.06</td>
<td>-4.30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \text{(1.04)} )</td>
<td>(0.32)</td>
<td>(0.99)</td>
<td>(-0.32)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \text{Leverage} )</td>
<td>-0.31</td>
<td>-0.25</td>
<td>-0.34</td>
<td>-0.13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \text{Volatility} )</td>
<td>-0.63***</td>
<td>-0.55**</td>
<td>-0.37</td>
<td>-0.51</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \text{(2.98)} )</td>
<td>(-2.47)</td>
<td>(-1.30)</td>
<td>(-1.42)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \text{Market to book} )</td>
<td>1.30</td>
<td>1.61</td>
<td>1.31</td>
<td>1.07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \text{(1.13)} )</td>
<td>(1.09)</td>
<td>(1.08)</td>
<td>(0.94)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \text{Board independence} )</td>
<td>-0.66</td>
<td>-0.75</td>
<td>-0.66</td>
<td>-0.18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \text{(0.97)} )</td>
<td>(-0.21)</td>
<td>(1.11)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \text{CEO duality} )</td>
<td>52.34</td>
<td>102.89</td>
<td>52.34</td>
<td>102.89</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \text{(3.86)} )</td>
<td>(1.49)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \text{CEO tenure} )</td>
<td>6.13***</td>
<td>6.92</td>
<td>6.13***</td>
<td>6.92</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \text{(3.86)} )</td>
<td>(1.49)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \text{Constant} )</td>
<td>126.52***</td>
<td>-73.86</td>
<td>63.38</td>
<td>106.74***</td>
<td>-83.63</td>
<td>97.71</td>
</tr>
<tr>
<td>( \text{(15.54)} )</td>
<td>(-0.41)</td>
<td>(0.35)</td>
<td>(9.78)</td>
<td>(-0.49)</td>
<td>(0.56)</td>
<td></td>
</tr>
</tbody>
</table>

| Firm fixed effect | Yes | Yes | Yes | No | No | No |
| CEO fixed effect  | No  | No  | No  | Yes| Yes| Yes|
| \( \text{N} \)     | 488 | 488 | 488 | 488| 488| 488|
| Adjusted R\(^2\)   | 0.59| 0.61| 0.64| 0.65| 0.66| 0.67|
### Appendix: Variable Definitions

<table>
<thead>
<tr>
<th>Variable</th>
<th>Definition</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PostOct2013</strong></td>
<td>Dummy variable equal to 1 if the observation is on or after 1\textsuperscript{st} October 2013, 0 otherwise.</td>
<td>Annual report</td>
</tr>
<tr>
<td><strong>Early compliance</strong></td>
<td>Dummy variable equal to 1 if the observation belongs to a firm that adopted the single figure reporting before 1\textsuperscript{st} October 2013, 0 otherwise.</td>
<td>Annual report</td>
</tr>
<tr>
<td><strong>CEO total pay</strong></td>
<td>Sum of salary, benefits, pension, bonus and LTIPs (long-term incentives plans).</td>
<td>Annual report</td>
</tr>
<tr>
<td><strong>LN (CEO total pay)</strong></td>
<td>The natural logarithm of CEO total pay which is the sum of salary, benefits, pension, bonus and LTIPs (long-term incentives plans).</td>
<td>Annual report</td>
</tr>
<tr>
<td><strong>CEO to non-CEO pay ratio</strong></td>
<td>CEO annual pay / average non-CEO pay. Average non-CEO pay = (Total personal expenses) / (No. of employee -1)</td>
<td>Annual report</td>
</tr>
<tr>
<td><strong>Firm size</strong></td>
<td>Natural logarithm of a firm’s total assets.</td>
<td>Bloomberg</td>
</tr>
<tr>
<td><strong>ROA</strong></td>
<td>Net profit scaled by total assets.</td>
<td>Bloomberg</td>
</tr>
<tr>
<td><strong>Stock return</strong></td>
<td>Annual stock return</td>
<td>DataStream</td>
</tr>
<tr>
<td><strong>Leverage</strong></td>
<td>A firm’s long-term debt scaled by its total assets.</td>
<td>Bloomberg</td>
</tr>
<tr>
<td><strong>Volatility</strong></td>
<td>The standard deviation of a firm’s daily stock return during a particular fiscal year.</td>
<td>Bloomberg</td>
</tr>
<tr>
<td><strong>Market to book</strong></td>
<td>A firm’s market value of equity scaled by its book value of equity.</td>
<td>Bloomberg</td>
</tr>
<tr>
<td><strong>Board independence</strong></td>
<td>The number of non-executive directors divided by the total number of directors.</td>
<td>BoardEx</td>
</tr>
<tr>
<td><strong>CEO duality</strong></td>
<td>Dummy variable which equals 1 if the CEO also holds the position of Chairman or Chairwoman, 0 otherwise.</td>
<td>BoardEx</td>
</tr>
<tr>
<td><strong>CEO tenure</strong></td>
<td>Natural logarithm of CEO’s years in the job.</td>
<td>BoardEx</td>
</tr>
<tr>
<td><strong>CG Index</strong></td>
<td>Corporate governance index measured as the sum of the score for Board independence, the score for CEO duality and the score for CEO tenure.</td>
<td>BoardEx</td>
</tr>
<tr>
<td></td>
<td>CG index has four possible values, 0, 1, 2 and 3. A higher CG index indicates a more independent board, separation role for CEO and chairman/chairwoman and shorter CEO tenure. The score for Board independence =1 if board independence is more than 75% (sample median), 0 zero.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The score for CEO duality =1 if CEO is not chairman/chairwoman, 0 otherwise.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The score for CEO tenure =1 if CEO tenure is less than 4.4 years (sample median), 0 otherwise.</td>
<td></td>
</tr>
</tbody>
</table>