1. Introduction

This study examines the association between compliance by institutional investor companies with the UK Stewardship Code (hereafter the Code) and the earnings quality of their investee companies. The Code aims to enhance the governance role of institutional investors, which is important because of their dominance among shareholders of listed companies in developed capital markets (Butler and Wong, 2011). It has been argued that institutional investors should play a more active stewardship role in their investee companies (Heineman and Davis, 2011). Perceived failure of stewardship, particularly in the wake of the global financial crisis, brought the actions of institutional investors under scrutiny (Callen and Fang, 2013; Hutchinson et al., 2015). In response, the UK was the first country to develop a voluntary code aimed at enhancing the quality of engagement between institutional investors and investee companies. The Code was published in 2010 and applies to institutional investors in UK listed companies. Following the UK lead, nine other countries [1] have released similar codes or made similar regulatory proposals (Wong, 2015).

It is timely to examine whether the UK Code is achieving its aims given international interest in this type of regulation. Researchers have expressed doubt the Code will have the desired impact on governance (Arsalidou, 2012). For example, Reisberg (2015, p.217) asserted that the Code is "absent of meaning and incapable of achieving its goal and will be 'traveling along the road to nowhere'…". Several aspects of the Code have been identified as limiting its likely success. These include the 'comply-or-explain' regulatory approach, an absence of enforcement capability, limited coverage in that the Code is only applicable to UK institutional investors, and limitations in the quality of the Code's engagement principles (Arsalidou, 2012; Cheffins, 2010; Roach, 2011; Reisberg, 2015). Along with this criticism has been calls for research to assess its effectiveness (McNulty and Nordberg, 2015; Reisberg, 2015). Motivated by this call, we examine whether investee companies with Code compliant institutional investors exhibit higher earnings quality, and we use content analysis of Code disclosures to test whether the quality of Code compliance by institutional investors is related to investee earnings quality. Understanding how Code compliance is related to the quality of

reported earnings provides a relevant test of Code effectiveness because earnings data is key information for investors, analysts and managers (Dechow et al., 2010).

While earlier studies examine the relation between institutional ownership and earnings quality (Hsu and Koh, 2005; Koh, 2003) there is, to our knowledge, no existing study that tests the role of the Code. Therefore, this research contributes as the first to examine the impact of Code compliance. It provides a reference for assessing the efficacy of the Code's regulatory approach. Research findings on the UK Code are of interest to policy makers in jurisdictions that have not yet introduced stewardship regulation.

Results from analysis of a sample of 79 large UK listed companies from 2013 show high levels of reported compliance with the Code by both UK and foreign institutional investors. However, our results do not show that Code compliance or compliance quality is positively related to investee company earnings quality.

The paper proceeds as follows. Section two provides a background to the Code. Section three reviews relevant literature and develops the hypotheses. Section four describes the research design and section five reports the results. Conclusions are presented in section six.

2. The UK Stewardship Code

UK institutional investors have traditionally acted as passive participants in investee companies (Myners, 2001). To encourage institutional investors to actively engage with investee companies, regulators made recommendations in several enquiries, such as the Cadbury Report (1992) and the Myners Report (2001). In 2002 the UK Institutional Shareholders Committee (ISC) released a code addressing institutional investor stewardship (ISC, 2002). Later, the Walker Report (2009) on suggested the ISC code should be endorsed by the Financial Reporting Council (FRC) as part of the governance framework. In response, on 2 July 2010 the FRC launched the UK Stewardship Code (FRC, 2010).

The Code consists of seven guiding principles on how institutional investors should exercise their stewardship responsibilities, and applies only to UK institutional investors. The Code operates on a 'comply or explain' basis, thereby avoiding unnecessary costs of

mandatory regulation and allowing institutional investors to adopt stewardship practices suited to their circumstances and needs (Luo and Salterio, 2014). It is important to note that the only penalty for non-compliance with the Code is non-listing on the FRC website as a compliant company.

3. Literature and hypotheses

Agency problems arising from separation of ownership and control in corporations can be reduced by the presence of strong corporate governance mechanisms (Fama and Jensen, 1983). Agency costs are high where corporate ownership is diffuse (Demsetz and Lehn, 1985). In contrast, large shareholders such as institutional investors can reduce agency costs because of informational advantages and their ability to play a governance role through monitoring (Shleifer and Vishny, 1986; Wang, 2014).

The efficient monitoring hypothesis (Pound, 1988) posits that institutional investors can better constrain earnings management through monitoring because of their expertise lower monitoring costs. Investors with substantial shareholding have a greater incentive to actively monitor investee companies (Koh, 2003). The resulting decrease in information asymmetry means it is more difficult for managers to manipulate earnings (Shiller and Pound 1989). However, it is not clear that institutional shareholders will engage in beneficial monitoring (Pound 1988; Velury and Jenkins, 2006). Alternative hypotheses, suggest that institutional shareholders strategically align themselves with investee managers, which reduces the likelihood of effective monitoring. For example, Pound (1988) found that institutional investors opportunistically aligned themselves with management in a study of proxy contests. In addition, institutional investors have access to private information, which can be used opportunistically (Koh, 2003).

Competing motivations for institutional investors is arguably reflected in the mixed results of prior studies that have examined their influence on earnings management. For example, prior studies by Beasley (1996) and Peasnell et al. (2005) find institutional investors are ineffective in reducing earnings management, yet others find that institutional shareholders constrain earnings management (Chung et al., 2002; Mitra and Cready, 2005).

These prior inconclusive finding may result from treating institutional investors as a homogenous group (Jiang and Anandarajan, 2009; Wang, 2014). Analysis that treats institutional shareholders as heterogeneous has provided more consistent results. In particular, the motivation for active monitoring by institutional investors and mitigation of earnings management has been found to be related to investment duration and investment size (Hsu and Koh, 2005; Koh, 2003; Navissi and Naiker, 2006; Pound and Shiller, 1987; Shleifer and Vishny, 1986; Wang, 2014).

The Code's seven guiding principles encourage institutional investors to exercise responsible stewardship through disclosure, managing conflicts of interest, monitoring and engagement with investee companies. In addition, compliance with the Code prompts institutional investors to review their actions because disclosing information showing effective engagement increases market credibility (Gifford, 2012). Our research is concerned with linking code compliance to investee company earnings quality. Arguably, of the seven code principles, the monitoring principle (Principle 3) is central to effective stewardship.

Review of Code compliance statements from our institutional investor sample provides examples that indicate strong and direct monitoring activities are in place. Disclosure statements suggest a general commitment to maintaining strong relationships with investee company management to deepen knowledge of the company, its governance, management, operations, best practice, strategic objectives, and emerging concerns related to long-term performance. Depending on the issue, engagement is likely to involve management, executive directors, chairpersons and independent directors. Institutional investors' personnel involved in discussions range from fund managers, analysts and governance teams. Most institutional investors' report their overarching objective is to minimise potential loss of shareholder value. To this end, institutional investors generally undertake regular meetings with management and other various stakeholders on a one-to-one basis rather than attending general meetings or relying on financial reports and press releases. Larger proportionate holdings are monitored more frequently and with more intensity than small holdings. Effectiveness of monitoring processes is generally reviewed annually.

Overall, investor Code compliance statements suggest substantive engagement. However, it is uncertain that institutional investors will be motivated to engage in effective stewardship as anticipated by the Code. First, the Code's flexible 'comply-or-explain' model and no penalty for non-compliance means institutional investors could fail to regard compliance as a priority (Cheffins, 2010; Arsalidou, 2012). While it is possible non-compliance will have market-based consequences consequences, it is not clear that the comply or explain approach provides sufficient motivation for institutional investors (Koh, 2003; Pound, 1988). Second, the Code is only applicable to UK institutional investors and therefore lacks comprehensive coverage (Cheffins, 2010; Roach, 2011; Arsalidou, 2012). Third, Roach (2011, p.493) argues that the Code fails to meet the criteria of establishing "a set of high quality and forward-looking engagement principles". Fourth, the FRC has also commented that Code disclosures could be improved (FRC, 2014), which suggests a token response to the Code by institutional investors. In summary, while the Code encourages institutional investors to actively engage in the governance of investee companies, the incentives for responsible stewardship are weak.

If the Code motivates institutional investors to play an active and responsible stewardship role, investee companies with Code compliant investors are less likely to engage in earnings management (Lin, 2016; Velury and Jenkins, 2006). However, given the Code's minimal enforcement and penalty provisions, compliant companies may signal they have satisfied the regulation while not substantively monitoring or otherwise engaging with investee companies. It is therefore an empirical question as to whether compliance with the Code improves investee earnings quality. Our first hypothesis is concerned with the direct relation between code compliance and investee company reported earnings quality:

H1: Investee company reported earnings quality is higher if their institutional investors comply with the UK Stewardship Code.

Prior studies reviewed above show the governance role of institutional investors with is positively related to their categorization on investment duration and investment size. This is relevant to the current study in that, regardless of Code compliance, institutional investors will be more likely to engage in active monitoring when they have substantial or long-term

shareholding. Code compliance and disclosure is not investee company specific, but is a general statement of policy. In this context and with the Code's weak enforcement provisions it is likely that Code compliance will be differentially applied across investee companies, with more attention given to larger and longer-term investments. Therefore, the following hypotheses are also tested:

H2: Any positive association between institutional investor investment duration and investee company reported earnings quality is stronger if institutional investors comply with the UK Stewardship Code.

H3: Any positive association between institutional investor shareholding size and investee company reported earnings quality is stronger if institutional investors comply with the UK Stewardship Code.

4. Research method

4.1 Sample and data

This study uses a sample of 79 investee companies listed in 2013 on the London Stock Exchange, which allows time for the Code to become embedded into business practice after its introduction in 2010. The initial sample comprised companies in the Financial Times Stock Exchange (FTSE) Top 100. We excluded 19 companies in the financial industry group because of their different financial characteristics and governance practices. Two other companies were excluded due to bankruptcy and merger proceedings.

The top five investors for each of the 79 investee companies were identified using the S & P Capital IQ database. Shareholding data for each institutional investor was manually collected from annual reports. In total, 103 different institutional investors were identified for the 79 investee companies. Each institutional investor's website was searched for a Code compliance statement, and 51 were located.

4.2 Dependent variable

This study measures investee earnings quality by estimating accrual errors and then identifying the component of accruals error that is discretionary or managed. We first use

Equation (1) below as developed by Dechow and Dichev (2002) and McNichols (2002) to measure overall accruals quality.

$$\Delta WC = \beta_0 + \beta_1 CFO_{t-1} + \beta_2 CFO_t + \beta_3 CFO_{t+1} + \beta_4 \Delta REV_t + \beta_5 PPE_t + \varepsilon \qquad (1)$$

The absolute value of the regression residual measures accruals quality (AQ). It indicates how well working capital accruals are related to past, present and future operating cash flows, and greater accruals estimation error will be evidenced by a larger value. ΔWC_t is the change in accounts receivable, accounts payable, taxes payable, inventory and other current assets, CFO_{t-1} is the cash flows from operating activities in 2012, CFO_t in 2013 and CFO_{t+1} in 2014. ΔREV_t is the change in sales revenue, measured as sales revenue in 2013 minus sales revenue in 2012 and PPE_t is reported property, plant and equipment in 2013. Each of the variables is scaled by average total assets for 2012 and 2103, and winsorised at the 1 and 99 percentiles to mitigate the influence of outliers.

The method suggested by Francis et al. (2005) is then applied to estimate the discretionary or managed component of the accruals estimation error (AQ). Calculating the discretionary component involves regressing the residual form Equation 1 on innate company characteristics as shown below in Equation (2).

$$AQ = \beta_0 + \beta_1 SIZE + \beta_2 LOSS + \beta_3 OPCYC + \beta_4 SDOR + \varepsilon \qquad (2)$$

AQ is the regression residual from Equation (1), SIZE is the natural log of total assets for 2013, LOSS is negative earnings measured as a dummy variable coded 1 if negative net profit after tax reported in 2013, otherwise zero. OPCYC is the natural log of average age of inventory plus the average age of receivables (in days) after winsorizing at 365 days for 2013 and SDOR is the standard deviation of operating revenue divided by total assets for 2012 to 2014. The regression residual estimates the discretionary component of the accruals error as it is the component not explained by innate company characteristics. The absolute value of the residual from Equation (2) is used in our empirical analysis, which we refer to as discretionary accruals (DA). A larger value for DA indicates more earnings management, and therefore lower earnings quality.

4.3 Code compliance and Code quality variables

Two measures of code compliance by the top five institutional investors for each investee are used. First, we determine CODECOMP, which is a dummy variable, coded 1 if the number of Code compliant institutional investors in the investee company exceeds the median number of compliant institutional investors across all investee companies. Second, a measure of Code compliance disclosure quality is developed using content analysis, which has been successfully used in prior governance studies to assess disclosure quality (Eng and Mak, 2003).

Institutional investor disclosures on the seven Code principles are examined. We determine whether investors comment on each Code principle and whether the information is a 'hard' or 'soft' disclosure. Disclosures that can be objectively measured are classified as 'hard' disclosures. Examples are: frequency of meetings between investor representatives and fund managers; whether investors have regular meetings with investee company managers; and, disclosures of voting history, process and method. In contrast, 'soft' disclosures are subjective, less capable of verification and lack evidence. More 'hard' disclosures indicate greater substantive engagement, and our measure is designed to indicate whether Code compliance is tokenistic or represents high quality engagement.

For the measure, a 'hard' disclosure on any of the Code principles receives a score of one, and a total 'hard' disclosure score ranging from zero to seven is determined for each institutional investor. The variable code compliance quality (CODEQUAL) is coded one if the total 'hard' disclosure score for an investee company is larger than the median score across all investee companies.

Two independent coders with backgrounds in accounting and finance performed the content analysis. When content analysis involves human coding it is important to validate the coding scheme (Neuendorf, 2002) for reproducibility which involves 'inter-coder reliability' and 'intersubjective agreement' (Krippendorff, 2004, p. 215) which signify the degree to which the independent judges make the same coding decisions. To confirm coding agreement, the Krippendorf (2004) alpha agreement coefficient was estimated. An alpha value of 0.851 was determined, which is within the minimum acceptable level (Neuendorf, 2002).

4.4 Investment duration and size variables

Investment duration (INVDUR) is measured as the sum of the number of years the five largest institutional investors have owned shares in the investee company. Size of institutional investment (INVSIZE) is calculated by dividing the number of shares held by the top five institutional investors by the total shares issued by the company.

4.5 Control variables

Prior studies suggest board independence and company size are negatively related to earnings management because independent and larger boards are more effective monitors (Beasley, 1996; Dalton et al., 1999; Dechow et al., 1996). Controls for board independence (BDIND) and board size (BDSIZE) are included in the models. Companies experiencing higher growth are more inclined to manage earnings since it is difficult to monitor their business activities and they are more likely to experience internal control issues (Larcker and Richardson, 2004). The book to market value ratio is included as a proxy for company growth (GROWTH). Company age has been found to be negatively related to earnings management (Bergstresser et al., 2006), therefore include a control (AGE) measured as the number of years since the company was founded.

Controls for financial variables are also included as controls. Company size (SIZE) is included because larger companies tend to have better corporate governance structures and less information asymmetry (Noe and Rebello, 1996; Smith and Watts, 1992). Leverage (LEV) is included as it can influence accruals manipulation as managers attempt to avoid the violation of debt covenants (Sweeney, 1994). A control for performance is included (ROA) because managers of companies with poor performance are more likely to manage earnings (Kothari et al., 2005).

Finally, earnings management is likely to vary across industries. Therefore, industry dummy variables (IND) are included as fixed effects in the models. Table 1 summarises all variables included in the models.

Table 1 about here

4.6 Model specification

Ordinary least squares regression is used to test to test the direct effect of code compliance (CODECOMP) and compliance quality (CODEQUAL) as shown in Equations (3) and (4) below.

$$DA = \alpha_1 CODECOMP + \alpha_2 INVDUR + \alpha_3 INVSIZE + + \alpha_4 BDSIZE + \alpha_5 BDIND + \alpha_6 GROWTH + \alpha_7 AGE + \alpha_8 SIZE + \alpha_9 LEV + \alpha_{10} ROA + \alpha_{11} IND + \varepsilon \quad (3)$$

$$DA = \alpha_1 CODEQUAL + \alpha_2 INVDUR + \alpha_3 INVSIZE + \alpha_4 BDSIZE + \alpha_5 BDIND + \alpha_6 GROWTH + \alpha_7 AGE + \alpha_8 SIZE + \alpha_9 LEV + \alpha_{10} ROA + \alpha_{11} IND + \varepsilon \quad (4)$$

The models to test interaction effects between the variables, CODECOMP and CODEQUAL and investment duration and investment size are shown in Equations (5) and (6) below.

$$DA = \alpha_1 CODECOMP + \alpha_2 INVDUR \text{x} CODECOMP + \alpha_3 INVSIZE \text{x} CODECOMP + \alpha_4 INVDUR + \alpha_5 INVSIZE + \alpha_6 BDSIZE + \alpha_7 BDIND + \alpha_8 GROWTH + \alpha_9 AGE + \alpha_{10} SIZE + \alpha_{11} LEV + \alpha_{12} ROA + \alpha_{13} IND + \varepsilon \quad (5)$$

$$DA = \alpha_1 CODEQUAL + \alpha_2 INVDUR \text{x} CODEQUAL + \alpha_3 INVSIZE \text{x} CODEQUAL + \alpha_4 INVDUR + \alpha_5 INVSIZE + \alpha_6 BDSIZE + \alpha_7 BDIND + \alpha_8 GROWTH + \alpha_9 AGE + \alpha_{10} SIZE + \alpha_{11} LEV + \alpha_{12} ROA + \alpha_{13} IND + \varepsilon \quad (6)$$

5. Results

5.1 Descriptive statistics

Table 2 reports the descriptive statistics. Investment duration (INVDUR), has a mean of 17.582 years. Investment size (INVSIZE) has a mean of 22.153 per cent and a range of 6.091 to 54.651 per cent. This shows investments are held for substantial durations and that investment size varies substantially for the sample. In relation to Code compliance, a median of four of the top five institutional investors for each investee is Code compliant. The minimum value for Code compliance is zero, however only one investee company had no compliant institutional investors. As shown in Panel B of Table 2, of the investee companies 44 have four or more institutional investors that are Code compliant (CODECOMP).

Code quality reported in Panel A of Table 2 is the total number of 'hard' disclosures from the top five institutional investors. The mean of 'hard' disclosures is 16.595 and the median is 17. The variable CODEQUAL reported in Panel B of Table 2 shows that 46 investee companies had an above-media Code quality score for their top 5 institutional investors.

We checked the range of each continuous variable for evidence of univariate outliers. There was no evidence of outlier values as all variables were within a plausible range.

Unreported descriptive statistics show majority of institutional investors were foreign (72.8 per cent) and they provided 62.7 per cent (32 out of 51) of the Code compliance statements. Of the 103 institutional investors, 51 provided Code compliance reports (19 UK and 32 foreign).

Table 2 about here

The correlation matrix is reported in Table 3 and shows that none of the correlations are of a magnitude that suggests concerns with multicollinearity.

Table 3 about here

5.2 Multivariate results

Table 4 reports results of regressions conducted to measure the dependent variable discretionary accruals (DA). First, accruals quality (AQ) is estimated using the model in Equation (1) as reported in Panel A. Second, the accruals quality measure (AQ) is regressed against innate company characteristics (see Equation 2), and the residual from this regression is the measure of discretionary accruals (DA) as reported in Panel B.

Table 4 about here

Table 5 reports results of the regression of CODECOMP (Panel A) and CODEQUAL (Panel B) on discretionary accruals (DA). Both models are significant, however, CODECOMP and CODEQUAL are not significant. The results do not support H1 that Code compliance is associated with higher earnings quality. The variables investment duration (INVDUR) and investment size (INVSIZE) are significant ($p<0.01$ and $p<0.05$ respectively).

and the coefficients are negative which means longer duration and greater investment size are negatively related to discretionary accruals (DA).

Table 5 about here

Regressions with interaction terms for Code compliance (CODECOMP) and Code compliance quality (CODEQUAL) are presented in Table 6. Both models are significant and the overall results are substantively the same as those reported in Table 5. None of the interaction variables are significant. Therefore, the results do not support H2 and H3 that the positive association between investment duration and size and investee earnings quality is strengthened by Code compliance.

Table 6 about here

The results for the control variables show only the proportion of independent directors (BDIND) is significantly negatively related to DA. This relation between board independence and earnings management is consistent with previous studies showing that larger number of outside directors is linked to more effective board monitoring.

5.3 Additional Analysis

Analysis is conducted for Code compliance (CODECOMP) using sub-samples of 48 investee companies with a negative DA value and 31 companies with a positive DA value. A negative DA value means the suggests management discretion that increases accruals quality (related to a lower AQ value from Equation (2)), whereas a positive value suggests management discretion that reduces accruals quality. Absolute values of DA were used in this analysis, which is reported in Table 7.

Table 7 about here

For the negative DA sample, the coefficient for the interaction variable INVDURxCODECOMP is significant (p=0.029) and negative. Therefore, when CODECOMP equals one a longer investment duration (INVDUR) is associated with a smaller negative DA value. This result indicates that for the negative DA sub-sample, management discretion in accruals quality is reducing with investment duration, however, the

reduction is of management discretion that might otherwise have increased overall accruals quality. The result suggests institutional investor engagement with investee companies is decreasing with investment duration for Code compliant investors. Long-term investments are likely mean the investor and investee relationship is well-established, leading institutional investors to regard the investment to be low-risk. It is possible that Code compliance signals effective stewardship by investors, but results in complacency and therefore less monitoring of investee companies that are considered low risk.

It is possible that institutional investors that take monitoring seriously will produce better compliance statements and will also be more likely to invest in companies with higher earnings quality. If this is the case, our results may be biased due to reverse causality. If earnings quality influences investment decisions of institutions in this way, we should observe that investee companies with better earnings quality have more Code compliant investors and more investors with better quality Code disclosures. Correlation analysis of DA and AQ with the number of Code compliant companies and the content analysis score for each investee company did not show any significant correlations. This suggests that, for our sample, earnings quality does not result in greater levels of investment by Code compliant companies in investee companies with higher earnings quality.

A further test was conducted by estimating an instrumental variable using the procedure suggested by Frankel et al. (2006) and Sun and Cahan (2012). This involves ordering the endogenous variable and then assigning cases to three ranked portfolios. The predicted values from a regression of the ranked portfolio variable on the endogenous variable are an estimated instrument variable. We follow this procedure using the Code quality score for investee companies, and also include in the first-stage regression BDIND, BDSIZE, GROWTH and SIZE, which are potential predictors of compliance quality. For the portfolio ranked variables, it is assumed that only the exogenous part of the regressor determines the rank portfolio assignment (Larcker and Rusticus, 2010). Using this instrumental variable in the direct and interaction regressions (See Tables 5 and 6) showed no significance for the instrument variable, which is consistent with the main results.

6. Conclusions

This study examines the relation between compliance with the UK Stewardship Code by institutional investors and the earnings quality of their investee companies. We do not find any direct effect between Code compliance and earnings quality. Consistent with prior studies, we find a positive association between investment duration and investment size and investee company earnings quality. However, we do not find evidence that this association is strengthened by investor Code compliance. This suggests that, while most institutional investors are Code compliant, this does not translate into improved earnings quality by investee companies. The motivation to take an active stewardship role seems more dependent on investment characteristics. Our results indicate that substantial or long-term investments are more likely to result in active stewardship regardless of Code compliance.

Our findings support the view that the Code in its current form is unlikely to have a transformative impact on institutional investors' corporate governance (Arsalidou, 2012; Cheffins, 2010; Roach, 2011; Reisberg, 2015). The results have implications for policymakers because they raise questions about the effectiveness of the Code's regulatory approach. The Code is 'an important attempt to redress the balance in the corporate governance matrix' (Arsalidou, 2012, p. 342) however, it is not clear whether a more systematic and continuous relationship between institutional investors and managers will evolve from the regulatory approach embodied in the Code. However, the extent to which the Code will over time transform traditional passive shareholders into active participants and foster good governance remains an open question (Cheffins, 2010). This is an important consideration for the many jurisdictions that have not implemented investor stewardship regulation.

One interesting aspect of our study is that we find that among the many foreign institutional investors most were Code compliant and often made 'hard' disclosures relating to compliance. This mitigates the previously expressed concern that the scope of the Code's coverage to domestic companies is a limiting factor (Arsalidou, 2012)

There are several limitations of this study. First, earnings quality is only one measure of corporate performance that could be influenced by the Code and other measures should be considered. Second, the sample size is small considering the population of approximately 300

institutional investors that the FRC have identified as having disclosed Code compliance (FRC, 2016). There is opportunity to extend the sample to FTSE 200 or 300 companies. In addition, an extended sample period would allow assessment of the Code's operation in the context of deeper integration into investor company practice. Third, our sample is limited to companies in the FTSE 100, which introduces a large company bias. Larger companies tend to have better governance and financial reporting quality (Noe and Rebello, 1996; Smith and Watts, 1992) which means our results lack generalisability. Consideration of smaller companies is worthwhile, where monitoring by institutional investors is likely to be of greater importance in the make-up of their overall governance arrangements. Lastly, institutional investors are a complex group and classification by investment type could be considered.

Notes

1. The countries identified include Canada (2010); Netherlands and South Africa (2011); Italy and Switzerland (2013); Malaysia and Japan (2014); Hong Kong and Taiwan (2015).

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Table 1: Description of Variables

DA	Discretionary accruals determined as the absolute value of the residual from Equation (2)
CODECOMP	Dummy variable, coded 1 if greater than the median value for code compliance for the sample, and 0 otherwise.
CODEQUAL	Dummy variable, coded 1 if greater than the median value for code quality for the sample, and 0 otherwise.
INVDUR	Institutional investment duration as the total number of years the five largest institutional investors in 2013 have held their ownership in the investee company.
INVSIZE	Institutional investment size as the total size of share ownership of the five largest institutional investors in 2013 divided by the total shares issued by the company.
BDSIZE	Number of directors on the board.
BDIND	Number of non-executive directors on the board divided by number of board members.
GROWTH	Book to market ratio, calculated as total assets minus total liabilities divided by market capitalisation.
AGE	Number of years since the company was founded.
SIZE	Natural log of total assets.
LEV	Total liabilities divided by total assets.
ROA	Net income divided by total assets.
IND	Dummy variables for the industry sectors; materials, consumer staples, industrials, energy, information technology, healthcare, consumer discretionary, telecommunication services and utilities.

Notes:

All variables are measured at reporting date in the 2013 financial year unless noted otherwise.

Table 2: Descriptive Statistics (*n*=79)

Variable	Mean	Std. Dev.	Minimum	Median	Maximum
Panel A: Continuous variables					
Code Compliant*	3.443	1.035	0.000	4.000	5.000
Code Quality**	16.595	5.464	0.000	17.000	28.000
DA	0.030	0.033	0.000	0.020	0.184
INVDUR	17.582	3.350	7.000	18.000	24.000
INVSIZE	22.153	7.770	6.091	21.470	54.651
BDSIZE	11.038	3.535	6.000	10.000	28.000
BDIND	0.643	0.158	0.214	0.636	1.000
GROWTH	0.492	0.530	-0.014	0.347	3.875
AGE	81.013	58.812	1.000	77.000	196.000
SIZE	9.994	0.585	9.102	9.881	11.553
LEV	0.589	0.187	0.002	0.592	1.024
ROA	0.117	0.059	-0.002	0.109	0.350
Panel B: Dummy variables					
	Coded 1	Coded 0			
CODECOMP	44	35			
CODEQUAL	46	33			
Consumer Discretionary	17	62			
Consumer Staples	12	67			
Energy	6	73			
Healthcare	4	75			
Industrials	20	59			
Information Technology	2	77			
Materials	11	68			
Telecommunications	2	77			
Utilities	5	74			

Notes:

*Code Compliant is the number of Code compliant companies that are observed for each investee company, and the median value of 4 is the benchmark for determining the dummy variable CODECOMP.

**Code Quality is the content analysis score for each investee company. The median value of 17 is used to determine the dummy variable CODEQUAL.

Table 3: Correlation matrix (*n*=79)

	CODE COMP	CODE QUAL	INVSIZE	INVDUR	BDSIZE	BDIND	GROWTH	AGE	SIZE	LEV
CODECOMP	1									
CODEQUAL	0.617	1								
INVSIZE	0.013	-0.035	1							
INVDUR	-0.123	0.056	-0.126	1						
BDSIZE	-0.019	0.017	*-0.205	***0.313	1					
BDIND	-0.053	-0.007	-0.153	0.030	***-0.292	1				
GROWTH	-0.002	0.028	-0.005	-0.087	-0.007	-0.003	1			
AGE	-0.127	-0.139	0.017	0.090	0.053	0.107	-0.134	1		
SIZE	-0.024	0.080	***-0.421	***0.351	***0.362	0.142	***0.331	-0.136	1	
LEV	0.186	**0.229	-0.147	0.053	0.068	-0.152	**-0.237	-0.158	0.149	1
ROA	-0.009	-0.146	0.091	0.108	-0.134	0.045	***-0.389	0.170	***-0.352	0.151

Notes: * denotes significant at $p<0.1$, ** significant at $p< 0.05$, and *** significant at $p<0.01$.

Table 4: Regressions for Discretionary Accruals (*n*=79)

	Coefficient	*t*-statistic	*p*-value
Panel A			
CFO_{t-1}	-0.016	-0.09	0.927
CFO_t	0.245	1.30	0.198
CFO_{t+1}	-0.137	-1.39	0.170
ΔREV	0.019	0.28	0.783
PPE	0.001	0.08	0.937
Constant	-0.004	-0.29	0.773
Model Statistics	*F*=0.89		
Adj. R square	-0.194		
Panel B			
SIZE	0.010	0.748	0.457
LOSS	0.055	2.240	*0.028
OPCYC	-0.021	-1.622	0.109
SDOR	0.000	-0.411	0.683
Constant	0.005	0.089	0.929
Model Statistics	*F*=2.44		
Adj. R square	0.068		

Notes: * denotes significant at $p<0.1$, ** significant at $p< 0.05$, and *** significant at $p<0.01$.
Where:
ΔWC= Change in accounts receivable, the change in accounts payable, the change in taxes payable, the change in inventory and change in other assets.
CFO_{t-1}, CFO_t and CFO_{t+1} = Reported cash flows from operations in year 2012, 2013 and 2014.
ΔREV = Change in sales revenue from 2012 to 2013,
PPE = Peported property, plant and equipment in 2013.
SIZE = Natural log of total assets for 2013.
LOSS = Dummy variable, coded 1 if negative net profit after tax is reported in 2013, and 0 otherwise.
OPCYC = Natural log of average age of inventory plus the average age of receivables (in days) after winsorizing at 365 days, in 2013.
SDOR = Standard deviation of operating revenue divided by total assets for 2012 to 2014.

Table 5: Regression Results - Direct Effects (*n*=79)

Panel A: Code Compliance				
Variable	Predicted Sign	Coefficient	t-statistic	*p* value
Constant		0.024	2.708	***0.009
CODECOMP	-	-0.008	-1.09	0.280
INVDUR	-	-0.003	-2.515	***0.008
INVSIZE	-	-0.001	-1.761	**0.042
BDSIZE	-	0.001	0.394	0.695
BDIND	-	-0.050	-1.763	**0.043
GROWTH	+	0.005	0.603	0.549
AGE	-	0.000	0.613	0.542
SIZE	-	-0.009	-0.861	0.393
LEV	+	0.014	0.601	0.550
ROA	-	0.048	0.574	0.568
IND (included)				
Model Statistics	*F*=1.448			
Adj. R-Squared	0.094			

Panel B: Code Compliance Quality				
Variable	Predicted Sign	Coefficient	t-statistic	*p* value
Constant		0.024	2.544	**0.014
CODEQUAL	-	-0.007	-0.804	0.425
INVDUR	-	-0.003	-2.285	**0.013
INVSIZE	-	-0.001	-1.795	**0.039
BDSIZE	-	0.001	0.381	0.705
BDIND	-	-0.048	-1.694	**0.049
GROWTH	+	0.005	0.565	0.574
AGE	-	0.000	0.59	0.558
SIZE	-	-0.009	-0.817	0.417
LEV	+	0.012	0.487	0.628
ROA	-	0.051	0.606	0.547
IND (included)				
Model Statistics	*F*=1.406			
Adj. R-Squared	0.086			

Notes: * denotes significant at $p<0.1$, ** significant at $p< 0.05$, and *** significant at $p<0.01$.

Table 6: Regression Results - Interaction Effects (*n*=79)

Panel A: Code Compliance				
Variable	Predicted Sign	Coefficient	*t*-statistic	*p* value
Constant		0.020	2.137	0.037
CODECOMP	-	-0.008	-1.088	0.281
INVDUR*CODECOMP	-	0.000	0.11	0.913
INVSIZE*CODECOMP	-	0.002	1.417	0.162
INVDUR	-	-0.004	-2.16	**0.018
INVSIZE	-	-0.001	-2.168	**0.017
BDSIZE	-	0.001	0.731	0.468
BDIND	-	-0.045	-1.561	*0.062
GROWTH	+	0.000	0.257	0.798
AGE	-	0.000	0.589	0.558
SIZE	-	-0.008	-0.769	0.445
LEV	+	0.011	0.436	0.665
ROA	-	0.079	0.916	0.363
IND (included)				
Model Statistics	*F*=1.404			
Adj. R-Squared	0.094			
Panel B: Code Compliance Quality				
Variable	Expected Sign	Coefficient	*t*-statistic	*p* value
Constant		0.024	2.500	0.015
CODEQUAL	-	-0.006	-0.787	0.435
INVDUR*CODEQUAL	-	-0.001	-0.35	0.728
INVSIZE*CODEQUAL	-	0.002	1.343	0.184
INVDUR	-	-0.003	-1.755	**0.043
INVSIZE	-	-0.001	-2.234	**0.015
BDSIZE	-	0.001	0.555	0.581
BDIND	-	-0.037	-1.242	0.105
GROWTH	+	0.000	0.221	0.826
AGE	-	0.000	0.445	0.658
SIZE	-	-0.005	-0.426	0.672
LEV	+	0.005	0.184	0.854
ROA	-	0.095	1.065	0.291
IND (included)				
Model Statistics	*F*=1.373			
Adj. R-Squared	0.087			

Notes: * denotes significant at $p<0.1$, ** significant at $p< 0.05$, and *** significant at $p<0.01$.

Table 7: Regression Results - Interaction Effects Positive and Negative DA

Panel A: Code Compliance Negative DA (*n*=48)				
Variable	Predicted Sign	Coefficient	*t*-statistic	*p* value
Constant		0.009	1.267	0.108
CODECOMP	-	0.001	0.233	0.406
INVDUR*CODECOMP	-	-0.003	-1.979	**0.029
INVSIZE*CODECOMP	-	0.002	1.229	0.114
INVDUR	-	-0.002	-0.978	0.168
INVSIZE	-	-0.001	-1.605	*0.060
BDSIZE	-	0.004	2.406	**0.012
BDIND	-	-0.004	-0.192	0.424
GROWTH	+	0.017	1.449	*0.079
AGE	-	0.000	0.289	0.388
SIZE	-	-0.028	-2.583	0.008
LEV	+	0.004	0.242	0.406
ROA	-	0.110	1.270	0.108
IND (included)				
Model Statistics	*F*=1.939**			
Adj. R-Squared	0.277			
Panel B: Code Compliance Positive DA (*n*=31)				
Variable	Predicted Sign	Coefficient	*t*-statistic	*p* value
Constant		0.064	2.262	**0.023
CODECOMP	-	-0.029	-1.403	*0.094
INVDUR*CODECOMP	-	0.009	1.041	0.160
INVSIZE*CODECOMP	-	0.003	0.739	0.238
INVDUR	-	-0.006	-0.938	0.184
INVSIZE	-	-0.007	-2.457	**0.016
BDSIZE	-	-0.008	-1.728	*0.056
BDIND	-	-0.134	-1.607	*0.068
GROWTH	+	0.021	1.147	0.138
AGE	-	0.000	1.739	*0.056
SIZE	-	-0.015	-0.664	0.261
LEV	+	0.135	1.688	*0.060
ROA	-	-0.405	-1.631	*0.066
IND (included)				
Model Statistics	*F*=1.059			
Adj. R-Squared	0.039			