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The Cadbury Code Reforms and Corporate Performance

Phillip J McKnight¹, Nikolaos T Milonas², Nickolaos G Travlos³ and Charlie Weir⁴

This paper investigates the impact of adopting the Cadbury Committee's Code of Best Practices on the corporate performance of UK firms. The findings show improved corporate performance by companies which adopted the Code. Regarding the specific recommendations of the Code, splitting the positions of the Chairman of the Board and CEO does not result in improved corporate performance. The establishment of an internal audit and/or remuneration committee is positively associated with corporate performance, while the presence of a key executive director in such committees is negatively associated with corporate performance. There is a negative relation between corporate performance and the proportion of non-executive directors, but a positive relation between corporate performance and the square of the proportion of non-executive directors.

Introduction

The separation of ownership and control gives rise to agency problems in listed companies (Jensen and Meckling, 1976). One way of reducing agency costs is to have effective corporate governance mechanisms. In the UK, Cadbury Committee's report, Cadbury (1992), laid out a model of corporate governance that was believed to be effective in reducing information asymmetry, agency costs and hence improve performance. These concerns have also been the subject of much debate in other countries, especially in the US, where recent corporate scandals have inspired new corporate governance reforms.¹

¹ Professor of Economics, Lawrence University, Wisconsin, USA; and Visiting Professor of Finance, University of St. Andrews, Scotland, UK. He is the corresponding author. E-mail: phil.mcknight@lawrence.edu

² Professor of Finance, University of Athens, Athens, Greece. E-mail: nmilonas@econ.uoa.gr

³ Kitty Kyriacopoulos Chair in Finance, ALBA Graduate Business School, Athens, Greece. E-mail: ntravlos@alba.edu.gr

⁴ Professor of Economics, Aberdeen School of Business, Robert Gordon University, Aberdeen, Scotland, UK. E-mail: c.weir@rgu.ac.uk

¹ For instance, in US the Sarbanes-Oxley Act of 2002 represents the most comprehensive corporate governance reform since the stock market crash of 1929. This sweeping bill orders several new SEC rules which include an ethical code for senior financial officers, an internal control report to be filed with annual securities filings and disclosure of analysts and broker/dealer conflicts of interest. Furthermore, this law severely penalizes dishonest management and accounting practices, introduces new corporate and accounting standards of conduct, requires faster and broader financial disclosure, creates regulatory board for the accounting industry, and provides legal recourse for defrauded investors. In summary, this law seeks to improve transparency, deter corporate wrongdoing and restore faith in US markets in the aftermath of the high profile corporate scandals of Enron, Arthur Andersen, Global Crossing, Tyco, WorldCom and others.

The governance model identified by Cadbury, and also in later UK reports such as Hampel (1998) and the Combined Code (1998), concentrated on board structures and functions. Cadbury's report recommended a number of board-related monitoring mechanisms that the listed firms should adopt. It is important to emphasize that the Code was a series of recommendations rather than a set of compulsory rules which firms had to follow. However, although made in the form of recommendations, pressure was placed on the firms to adopt them. One of the key recommendations that the listed firms had to include in their annual report was a corporate governance report which, detailed whether or not, the company had adopted the recommendations of the Code. This is referred to as 'comply or explain'. The purpose of the report is to provide shareholders with a clear statement of the expected effectiveness of the company's internal governance mechanisms. If shareholders concluded that the mechanisms were inconsistent with the Code, the board could be pressurized to adopt the Code's recommendations.

The main recommendations of the Cadbury Report were as follows. First, the posts of Chief Executive Officer (CEO) and Chairman of the Board should be separated, i.e., the Chairman CEO duality should be done away with. Second, boards should have a meaningful representation of independent non-executive directors. Third, the boards should establish audit and remuneration committees, with a minimum number of non-executive, or outside, directors. It was argued that these board-related mechanisms would improve monitoring and make managerial discretion more difficult, thereby reducing agency costs and improving performance.

This paper makes a number of contributions to the research debate on the relationship between corporate governance mechanisms and company performance. First, we use panel data, rather than cross section data, which enables us to take account of both time series and cross section effects. Second, the use of a panel permits us to assess the impact of the adoption of governance mechanisms on performance. Third, we provide a rationale for differentiating fixed and random effects models. Fourth, the study offers broader insights into the effects of the introduction of a system of corporate governance which firms are pressured to adopt.

The main findings are as follows: First, there is a positive association between corporate performance and the adoption of the Code of Best Practices. Second, assigning the positions of the Chairman of the Board and the CEO to two different individuals has not had any impact on corporate performance. Third, the establishment of an audit committee and/or remuneration committee is positively associated with corporate performance. Fourth, the presence of a key executive director in the audit and/or remuneration committee is negatively associated with corporate performance. Fifth, there is a negative association between corporate performance and the proportion of non-executive directors, but a positive association between corporate performance and the square of the proportion of non-executive directors. This suggests that there is a nonlinear association between these two variables. Sixth, contrary to prior evidences, there is no strong positive association between company performance and the proportion of shares owned by directors, nor is there a negative association between performance and the square of the proportion of shares owned by directors.

Our findings are important for several reasons. First, to the best of our knowledge, they represent the first direct and comprehensive empirical evidence of the impact of the adoption

of the Code of Best Practices on the corporate performance of UK firms. Second, they show that the relationship between corporate performance and the proportion of non-executive directors is nonlinear, probably explaining the lack of unanimous findings in earlier studies that have assumed linear relationships. Third, our findings demonstrate that those UK firms which adopted the Code of Best Practices are associated with better corporate performance when compared to firms that did not adopt the various recommendations of the Code. Since the publication of the Cadbury Code triggered a worldwide wave of reforms in corporate governance, our findings can motivate the pursuance of similar studies, especially in other countries with different institutional settings.

Review of the Literature and Predictable Hypotheses

Within the context of the agency model, Jensen and Meckling (1976) argue that corporate performance is enhanced by employing internal monitoring mechanisms to resolve agency problems. Consistent with this, the mechanisms identified in the Code are expected to reduce agency costs, leading to better performance (Almazan *et al.*, 2005). The various mechanisms are discussed below.

Fama (1980) argues that boards consisting only of executive directors would be ineffective monitors of their own actions. Therefore, it was necessary to have another set of directors (non-executive, or outside directors) who would be able to undertake this monitoring role. To be effective monitors of the executive directors, they had to be independent and of high quality (Cadbury, 1992). Thus, the key function of non-executive directors is their monitoring role. To be objective in their judgments, it is therefore essential that they do not have links with the executive directors. Cadbury Code originally recommended that there should be at least three non-executive directors on the board. This was later changed to at least one third in the Combined Code. The importance of a significant representation is that it gives the non-executive directors a meaningful input into board decisions. Quality is also important because it will not serve the shareholders' interests to appoint an ineffective non-executive director. The evidence relating to the impact of non-executive directors is, however, mixed and inconsistent with prior theories on board structures (Cheng, 2007 and Harris and Raviv, 2007).

The positive impact of non-executive directors has been identified in research works adopting 'event study' methodology. Rosenstein and Wyatt (1990) and Shivdasani and Yermack (1999) found that the market reacts positively when non-executive directors are appointed. However, accounting-based studies find little evidence of a positive relationship. For example, Yermack (1996) and Agrawal and Knoeber (1996) found evidence that an increase in the proportion of non-executive directors reduces performance. This suggests that poor appointments had been made and the important issue was perhaps not the quantity of non-executive directors, but their ability.

Other studies find no significant relationship between the non-executive director representation and company performance. For example, Hermalin and Weisbach (1991) use Tobin's "Q" as a proxy for corporate performance and find no relation between board structure and firm performance. A similar finding is reported by Baysinger and Hoskisson (1990). Weir *et al.* (2002)

also found a non-significant relationship between the percentage of non-executive directors and performance in the post-Cadbury period in the UK. These findings are against their hypothesis that the presence of inside directors on the board of directors is beneficial because of their valuable knowledge and advice on day-to-day operations of the company. The absence of any relationship between board composition and corporate performance is raising questions on not only the ability of the board of directors to act as an effective monitoring mechanism, but also on the appropriateness of the empirical tests (Lu *et al.*, 2007).

The evidence relating to the impact of non-executive directors is mixed. However, to be consistent with Cadbury, we propose:

H_{1a}: An increase in the percentage of non-executive directors will be associated with better performance.

We further argue, as Bhagat and Black (2002), that with low non-executive director representation, the relationship is negative because the company does not have an adequately independent board. As the fraction of the non-executive directors increases, the board gains independence, which in turn, maximizes the value of the firm. Consequently, the relationship between corporate performance and the fraction of non-executive directors is negative for small fractions and positive for large fractions. Accordingly, the following testable hypothesis is derived:

H_{1b}: There will be a nonlinear relationship between the proportion of non-executive directors and corporate performance.

Chairman-CEO Duality offers the possibility of significant power being concentrated in the hands of one person. If one person holds responsibility for both strategic issues and operational matters, the ability to monitor and check that person's actions is reduced. In the UK, duality is less common than in the US because the perception of excessive power is more persuasive than the alternative that, combining the posts offers the advantage of a greater understanding of the company's objectives and direction. It also enables quicker decisions which helps a company to respond to the changing conditions more quickly.

The evidence concerning the impact of duality is also mixed. Boyd (1995) reported a positive relationship between duality and performance. In contrast, Rechner and Dalton (1991) found that duality reduced performance. Most studies, however, have found an insignificant relationship. For example, Baliga *et al.* (1996), Brickley *et al.* (1997), Vafeas and Theodorou (1998) and Weir *et al.* (2002), all report that duality has no effect (harmful or otherwise) on performance. These results suggest that the concerns about the concentration of too much power in the hands of one person are unfounded. However, to be consistent with the Code, we hypothesize:

H₂: Firms that split the posts of CEO and chairman should be associated with better performance than those which maintain dual status.

Board committees also form an integral part of the Code of Best Practices. Audit committees ensure shareholders protection from financial mismanagement by verifying the quality of a company's financial reporting. Cadbury Code recommended that firms should have audit committees. It also recommended that the committee should consist of non-executive directors, something that would facilitate independent financial monitoring. Effective and independent audit committees will improve performance by ensuring better monitoring of the financial decisions of the board.

There is limited evidence about the impact of committees, or their structure, on performance. Klein (1998), Vafeas and Theodorou (1998), and Weir *et al.* (2002) find no evidence that the audit committee affects performance. On the other hand, Wild (1994) reported that the market reacted positively to earnings reporting after an audit committee had been set up. Consistent with the Code, we hypothesize

H_{3a}: Firms that have established an audit committee should be associated with higher performance than those which do not have such a committee.

H_{3b}: The presence of a key executive director in an audit committee will be associated with lower corporate performance compared to the case where no executive director sits on such a committee.

Cadbury also recommended the setting up of a remuneration committee to deal with the directors' compensation. It should promote openness and transparency in the setting of pay and far more information should be made available to the shareholders in relation to the details of pay packages. The independence of the committee was again a key element of the Code of Best Practices, which stated that its membership should be wholly or mainly non-executive directors. An effective, independent remuneration committee will help to improve performance by ensuring that executive directors are given remuneration packages driven by incentives linked to performance.

In terms of the impact of a remuneration committee, the limited evidence suggests that it has a positive impact on performance, for example, Main and Johnston (1993) and Klein (1998). Therefore, we propose in line with the Code:

H_{4a}: Firms that have established a remuneration committee should be associated with higher performance than those that do not have such a committee.

H_{4b}: The presence of a key executive director in the remuneration committee will be associated with lower corporate performance when compared to the case where no key executive director sits on such a committee.

Sample, Methodology and Variable Descriptions

Sample

Data were gathered from two sources: 1) DataStream and 2) LexisNexis. We first collected financial data from DataStream for the Financial Times Stock Exchange (FTSE) All-share index.

Given that the Cadbury Code became public in 1992 and not knowing when firms started actually complying with the recommendations of the Code, we collected financial data from DataStream for the years 1988-2001. This was to ensure that enough years of data were available to adequately measure the change in a company's performance surrounding the Cadbury Code; i.e., at least three years prior to and three years succeeding the submission of Cadbury Code.² This provided a sample of 275 companies. We excluded financial service firms from the DataStream dataset because they are subjected to externally imposed scrutiny from Financial Securities Agency also. As such, we believe that the relationship between governance mechanisms and firm value is more ambiguous for companies in the financial service sector. Finally, this provided a usable sample of 221 companies.

Next, we used LexisNexis to gather governance data. LexisNexis is a database which provides full-text annual report information on many UK quoted companies. Given that LexisNexis requires a company name, we used the company names relating to the DataStream dataset to form the basis of our company search. However, not all annual reports were available from LexisNexis. This resulted in a net sample of 148 firms yielding 1,116 total observations providing an unbalanced panel.³

Methodology and Variable Descriptions

We utilize two measures of corporate performance, IAROA and Excess-Q. IAROA stands for Industry-Adjusted Return On Assets, where return on assets is defined as the ratio of EBITDA to Average Assets. EBITDA is Earnings Before Interest, Taxes, Depreciation and Amortization. The variable Average Assets is defined as the average of the book value of total assets at the beginning of the year and the book value of the assets at the end of the year. To obtain an industry adjusted figure, we subtract the corresponding median value from the raw value of the return on assets of each company for each year, the median being calculated by using a two digit SIC Code for all firms in the FTSE All-share index. Excess-Q is defined as market capitalization of equity plus the book value of the total debt divided by total assets, net of the industry median. In particular, for each year we calculate the median Tobin's-Q based on a two digit SIC Code, using all firms in the FTSE All-share index, and subtract this from the raw Tobin's-Q, creating the variable Excess-Q. In short, this variable measures the discounted expected future cash flows of the firm relatively to its asset base.

The independent variables, most of which capture the recommendations of the Cadbury Code, are defined as follows: CADBURY4 is a dummy variable taking the value of 1, if the firm adopts the Code of Best Practices, and is defined as: a minimum of three non-executive directors on the board; no presence of duality; the presence of an audit committee; and the presence of a remuneration committee, and 0 otherwise. CADBURY6 is a dummy variable taking the value of one, if the firm adopts the Code of Best Practice, and is defined as: a minimum of three

² We use the Cadbury Code synonymously with The Code of Best Practices because our data relate to the time when it was in operation. The Code of Best Practices was updated to take account of the other governance reports, Greenbury (1995) and Hampel (1998), and is also referred to as the Combined Code (Committee on Corporate Governance, 1998).

³ One of the primary advantages of an unbalanced panel is that it provides more efficient estimates.

non-executive directors on the board; no presence of duality; the presence of an audit committee; the presence of a remuneration committee; a executive director who does not sit on the audit and remuneration committees, and zero otherwise. This variable captures the same effect as CADBURY4 but is considered as a stronger test of the impact of the Cadbury Code adoption on corporate performance. CEODUAL is a dummy variable taking the value of one, if the positions of CEO and Chairman of the Board are undertaken by the same person; zero, otherwise. COMDUM is a dummy variable that takes the value of one, if the company has either an audit committee or remuneration committee, or zero if it does not. AUDCOMM is a dummy variable which has the value one, if the firm has an audit committee and zero if not. REMCOMM is a dummy variable which has the value one, if a firm has a remuneration committee and zero if not. COMKEY is a dummy variable taking the value of one, if a key executive director sits on the audit committee or on the remuneration committee, in which case the variable becomes AUDKEY or REMKEY, respectively. Otherwise, the variable takes the value of zero. AUDKEY is a dummy variable which takes the value one, if an executive director sits on the audit committee and zero if not. REMKEY is a dummy variable which takes the value one, if an executive director sits on the remuneration committee and zero if not. NXRATIO is the fraction of non-executive directors on the board. NXRATIO2 is the square of NXRATIO.

In addition to the above variables that are related to the adoption of the Code, we also control for board ownership (Morck *et al.*, 1988; McConnell and Servaes, 1990 and Weir *et al.* 2002) and company size (Fama and French, 1992). DIROWN is the total executive director ownership as a proportion of ordinary shares of the company. DIROWN2 is the square of DIROWN. Consistent with earlier literature, these two variables test the managerial entrenchment hypothesis. LNSIZE is the natural log of total assets.

The general panel models may be written as:

$$y_{it} = \beta_0 + \beta_1 \text{CADBURY4}_{it} + \beta_8 \text{DIROWN}_{it} + \beta_9 \text{DIROWN2}_{it} + \beta_{10} \text{LNSIZE}_{it} + \varepsilon_{it} + u_i \quad \dots(1)$$

$$y_{it} = \beta_0 + \beta_2 \text{CADBURY6}_{it} + \beta_8 \text{DIROWN}_{it} + \beta_9 \text{DIROWN2}_{it} + \beta_{10} \text{LNSIZE}_{it} + \varepsilon_{it} + u_i \quad \dots(2)$$

$$y_{it} = \beta_0 + \beta_3 \text{CEODUAL}_{it} + \beta_4 \text{COMDUM}_{it} + \beta_5 \text{COMKEY}_{it} + \beta_6 \text{NXRATIO}_{it} + \beta_7 \text{NXRATIO2}_{it} + \beta_8 \text{DIROWN}_{it} + \beta_9 \text{DIROWN2}_{it} + \beta_{10} \text{LNSIZE}_{it} + \varepsilon_{it} + u_i \quad \dots(3)$$

We expect $\beta_1, \beta_2, \beta_4$ and $\beta_6 > 0$; β_3, β_5 and $\beta_7 < 0$. No *a priori* expectation is made for the control variables, where i refer to the firms and t refers to time. y_{it} represents the dependent variable, IAROA or Excess-Q, and ε_{it} is the normal homoscedastic error term. The model assumes that autocorrelation over time occurs only between the residuals of the same firm. The term u_i represents any firm-specific individual heterogeneity, such as the quality of management, which is unobserved and does not vary over time. It has a zero conditional mean. As discussed below, the manner in which u_i is treated determines the method of estimation of the panel.

A panel equation may be estimated by pooled Ordinary Least Squares (OLS), random effects or fixed effects. Pooled OLS assumes constant coefficients, that is homogeneity of the constant

and slopes. Therefore, there are no individual firm-specific effects. A random effects model assumes heterogeneity in the sense that the firm-specific effects, u_i , are treated as random variables. This assumes that u_i is uncorrelated with X_{it} 's, the right hand side variables. A fixed effects model also assumes heterogeneity but allows differences between firms to be explained by shifts in the intercept. Thus, u_i 's become firm-specific constants that can be estimated for each individual firm. The fixed effects model assumes that u_i is correlated with X_{it} 's, the right hand side variables.

The choice between pooled OLS or random/fixed effects models, that is, whether or not there is heterogeneity, is determined by means of a Breusch-Pagan Lagrange Multiplier test. If heterogeneity is found, the choice between random effects or fixed effects is done by the Hausman test. The tests differentiate the efficiency and consistency of the estimators. Consistency occurs when plim and $\hat{\beta}$ is an efficient unbiased estimator, if it has a smaller variance than other unbiased estimators. If we use pooled OLS model when the random effects model is appropriate, the OLS estimator will be consistent but not efficient, whereas the random effects estimator will be both consistent and efficient.⁴ If the choice is between random and fixed effects models, using random effects, when it should be fixed effects, it means that the estimator is inconsistent.

First, we apply the Breusch-Pagan Lagrange Multiplier test for which the hypothesis are:

$$H_0: E(u_i^2) = \sigma_u^2 = 0 \text{ under which the pooled OLS model is appropriate}$$

$$H_A: E(u_i^2) = \sigma_u^2 \neq 0 \text{ under which the random effects model is appropriate.}$$

In relation to the IAROA measure of performance, the Breusch-Pagan Lagrange tests produced a chi-square of 1,351.09 ($p=0.00$), while the tests for the Excess-Q variable gave a chi-square of 1,394.12 ($p=0.000$). We therefore reject the null hypothesis and conclude that the random/fixed effects model, rather than pooled OLS, is appropriate.

Second, the Hausman specification test allows us to decide which model is appropriate by testing for correlation between the X_{it} variables and the individual firm-specific effects. If there is no correlation, a random-effects model should be used but if correlation exists, fixed-effects model may be more appropriate. Thus,

$$H_0: E(x_{it} | u_i) = 0 \text{ under which the random effects model is appropriate.}$$

$$H_A: E(x_{it} | u_i) \neq 0 \text{ under which the fixed effects model is appropriate.}$$

A Hausman test was performed on model 1 in Table 3 and on model 1 in Table 4, for IAROA. It gave a chi-square of 2.98 ($p=0.5618$) and 4.58 ($p=0.200$), respectively, meaning that we

⁴ It is worth noting that, if a pooled OLS model is used when a fixed-effects model is appropriate, the OLS estimator will be inconsistent whereas, the fixed effects estimator will be consistent.

cannot reject the null hypothesis of no correlation. The random effects model is, therefore, the appropriate estimator to use with this dependent variable. On the other hand, with respect to the left hand side variable, Excess-Q, for model 3 in Table 3 and model 1 in Table 5, the Hausman test gave a chi-square of 15.10 ($p=0.001$) and 14.60 ($p=0.042$), respectively, showing that we can reject the null hypothesis of no correlation. Thus, the fixed-effects model should be used with Excess-Q.

Recent literature has suggested that there is a potential endogeneity problem related to certain governance characteristics (Hermalin and Weisbach, 1991). However, given the prescriptive nature of the Cadbury Code, we argue that the governance mechanisms chosen in the analysis are exogenous rather than endogenous. This is because the changes around the time of the policy change were imposed by the authorities in the form of the Code of Best Practices. The fact that the Code was not compulsory is not relevant because the inclusion of a governance report became a condition of being quoted on the London Stock Exchange. In addition, the publication of the Cadbury Report led to an increased awareness of governance issues. Hence, there were external pressures to adopt the Code's provisions and change the internal governance characteristics. As a result, the governance characteristics within this study are exogenous rather than endogenous. However, as a robustness check we also used instrumental variables to address the issue of potential endogeneity. The instruments chosen were governance variables which lagged one period. Interestingly, we found that the coefficients generally did not change—a finding which supports our assumption regarding the policy change.

Summary Statistics

Table 1 presents summary statistics and mean differences for our governance variables, respectively. In this table, we first sort by the CADBURY4 variable and then perform a means difference test for each governance variable, for those firms which adopted the Cadbury Code and for those which did not. The mean (median) of IAROA increased from 0.016 (0.008) in the pre-adoption period to 0.027 (0.008) in the post-adoption period, the difference being statistically significant at 10% level. The mean (median) of the Excess-Q increased from 0.313 (0.104) in the pre-adoption period to 0.480 (0.148) in the post-adoption period. The difference is statistically significant at 1% level of significance. The mean of the dummy variable CEODUAL decreased from 0.330 to 0.000, the difference being statistically significant at 1% level of significance. The decrease in this variable is consistent with the trend of firms in the post-adoption period to assign the positions of CEO and Chairman of the Board to separate individuals. The mean (median) value of the dummy variable AUDCOMM increased from 0.293 (0.000) in the pre-adoption period to 1.000 (1.000) in the post-adoption period. The increase in this variable is statistically significant at 1% level of significance, indicating that all the companies had established an audit committee by the end of the period. Similar conclusions can be drawn about the establishment of a remuneration committee by comparing the mean (median) values of the variable REMCOMM between the two periods. Also, consistent with the Cadbury reforms, the mean (median) value of the variable AUDKEY

Table 1: Summary Statistics and Mean Differences for Adoption and Non-Adoption of the Cadbury Code							
	Non-Adopt Firms			Adopt Firms			Mean Diff (<i>t</i> -stat)
	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.	
IAROA	0.016	0.008	0.087	0.027	0.008	0.103	0.011 (1.85)*
Excess-Q	0.313	0.104	0.876	0.480	0.148	1.245	0.167 (2.61)***
CEODUAL	0.330	0.000	0.470	0.000	0.000	0.000	-0.330 (-15.88)***
AUDCOMM	0.293	0.000	0.455	1.000	1.000	0.000	0.707 (35.63)***
AUDKEY	0.792	1.000	0.406	0.270	0.00	0.444	-0.522 (-20.45)***
REMMCOMM	0.289	0.000	0.454	1.000	1.000	0.000	0.711 (36.00)***
REMKEY	0.815	1.000	0.388	0.315	0.000	0.465	-0.500 (-19.53)***
COMDUM	0.350	0.000	0.477	1.000	1.000	0.000	0.650 (31.33)***
COMKEY	0.866	1.000	0.341	0.361	0.000	0.481	0.505 (20.36)***
NXRATIO	0.363	0.375	0.186	0.407	0.483	0.145	0.044 (4.40)***
DIROWN	0.108	0.009	0.181	0.043	0.002	0.106	-0.055 (-7.11)***
SIZE	890	161	2,913	1,730	352	4,655	840 (3.66)***

Note: In this table, we first sort by those firms which adopted the Cadbury Code and those firms that did not, using the CADBURY4 variable. CADBURY4 is a dummy variable taking the value of 1, if the firm adopts the Cadbury Code defined as: a minimum of three non-executive directors on the board; no presence of duality; the presence of an audit committee; and the presence of a remuneration committee, and 0 otherwise. IAROA is the Industry Adjusted Ratio of EBIDTA to average assets. Excess-Q is the industry adjusted Tobin's-Q. CEODUAL is a binary variable that takes a value of 1, if the posts of CEO and Chairman are undertaken by the same person; 0, otherwise. The AUDCOMM and REMCOMM variables take the value of 1, if a firm has established an audit or remuneration committee, respectively; 0, otherwise. COMDUM is a dummy variable taking a value of 1, if a firm has established either an audit or remuneration committee; 0, otherwise. AUDKEY and REMKEY are dummy variables taking a value of 1, if a key executive sits on the audit or the remuneration committees, respectively; 0, if otherwise. COMKEY is a dummy variable taking a value of 1, if a key executive sits on either the audit or remuneration committee; 0, if otherwise. NXRATIO represents the non-executive ratio and is the percentage of non-executive directors on the board of each firm. DIROWN denotes total executive director ownership as a proportion of total ordinary shares of the company. SIZE is defined as book value of total assets. The final column includes the coefficients and *t*-statistics of the means difference between those firms which adopted the Cadbury Code and those that did not.

***significant at 1%; **significant at 5%; *significant at 10%.

declined from 0.792 (1.000) to 0.270 (0.000), indicating that companies in the post-adoption period decreased the number of key executives sitting on the audit committee. A similar conclusion is also drawn by comparing the mean (median) values of the variable REMKEY between the two periods. The changes of the mean (median) values of the variables COMDUM and COMKEY are also consistent with the corresponding changes of the variables AUDCOMM, AUDKEY and REMCOMM, REMKEY.

Furthermore, consistent with the associated reforms, the mean (median) value of the fraction of non-executive board members increased from 36.3% (37.5%) in the pre-adoption period to 40.7% (48.3%) in the post-adoption period, the difference being statistically significant at 1% level. Interestingly enough, the mean (median) value of the percentage managerial ownership (DIROWN) decreased from 10.8% (0.9%) to 4.3% (0.2%) over the two periods, the difference being statistically significant at 1% level of significance. In light of the enhanced corporate governance structure, brought about by the adoption of the Cadbury Code, this finding might reflect the substitution of managerial stockholdings with other corporate governance mechanisms for monitoring managerial behavior. In this sense, this finding by itself may suggest that the adoption of the Cadbury Code reduces agency costs. Finally, the size of the firm has increased over the two periods.

Based on the testable hypotheses discussed previously, the predicted signs for the regression coefficients are positive for the variables—COMDUM and NXRATIO. The predicted signs are negative for the variables CEODUAL, COMKEY, and NXRATIO2. Consistent with the earlier literature, we include the variables DIROWN, with a predicted positive coefficient, and DIROWN2, with a predicted negative sign, reflecting managerial entrenchment. Regarding the control variable LNSIZE, the sign could be either positive, reflecting the ability of large firms to capture monopoly rents, or negative, reflecting larger agency costs in the larger firms relative to the smaller ones.

Table 2 presents the correlation matrix of the variables used in the regression analysis. As is shown in Table 2, the correlation coefficient between the variables AUDCOMM and REMCOMM is high (0.876), and statistically significant at 1% level. This indicates that firms established an audit and remuneration committee at the same time. Also, the correlation coefficients between the variables AUDCOMM and COMDUM and REMCOMM and COMDUM are 0.940 (statistically significant at 1% level) and 0.936 (statistically significant at 1% level), respectively. The implications of these high correlation coefficients are: first, we should not include AUDCOMM and REMCOMM in the same regression. Second, COMDUM is a good proxy for either AUDCOMM or REMCOMM. A similar conclusion can be reached by examining the correlation coefficient between AUDKEY and REMKEY (0.739, statistically significant at the 1% level), the correlation coefficient between AUDKEY and COMKEY (0.846, statistically significant at the 1% level) and the correlation coefficient between REMKEY and COMKEY (0.906, statistically significant at the 1% level). That is, we should not include AUDKEY and REMKEY in the same regression, but instead we could use COMKEY as a proxy for both variables.

Table 2: Correlation Matrix of the Key Variables Used in the Regression Analysis

	AUDCOMM	AUDKEY	REMMCOMM	REMKEY	COMDUM	COMKEY	CEODUAL	NXRATIO	NXRATIO2	DIROWN	DIROWN2	LNSIZE
AUDCOMM	1.000	-	-	-	-	-	-	-	-	-	-	-
AUDKEY	-0.670 ^{***}	1.000	-	-	-	-	-	-	-	-	-	-
REMMCOMM	0.876 ^{***}	-0.593 ^{***}	1.000	-	-	-	-	-	-	-	-	-
REMKEY	-0.571 ^{***}	0.739 ^{***}	-0.635 ^{***}	1.000	-	-	-	-	-	-	-	-
COMDUM	0.940 ^{***}	-0.628 ^{***}	0.936 ^{***}	-0.594 ^{***}	1.000	-	-	-	-	-	-	-
COMKEY	-0.575 ^{***}	0.846 ^{***}	-0.578 ^{***}	0.906 ^{***}	-0.541 ^{***}	1.000	-	-	-	-	-	-
CEODUAL	-0.098 ^{***}	0.113 ^{***}	-0.127 ^{***}	0.094 ^{***}	-0.098 ^{***}	0.109 ^{***}	1.000	-	-	-	-	-
NXRATIO	0.241 ^{***}	-0.269 ^{***}	0.232 ^{***}	-0.284 ^{***}	0.246 ^{***}	-0.274 ^{***}	-0.065 ^{***}	1.000	-	-	-	-
NXRATIO2	0.200 ^{***}	-0.245 ^{***}	0.193 ^{***}	-0.258 ^{***}	0.200 ^{***}	-0.257 ^{***}	-0.058 ^{***}	0.955 ^{***}	1.000	-	-	-
DIROWN	-0.258 ^{***}	0.235 ^{***}	-0.241 ^{***}	0.236 ^{***}	-0.261 ^{***}	0.196 ^{***}	0.088 ^{***}	-0.368 ^{***}	-0.325 ^{***}	1.000	-	-
DIROWN2	-0.217 ^{***}	0.177 ^{***}	-0.197 ^{***}	0.168 ^{***}	-0.215 ^{***}	0.140 ^{***}	0.0062 ^{***}	-0.292 ^{***}	-0.248 ^{***}	0.928 ^{***}	1.000	-
LNSIZE	0.309 ^{***}	-0.277 ^{***}	0.270 ^{***}	-0.259 ^{***}	0.299 ^{***}	-0.205 ^{***}	0.001	0.274 ^{***}	0.255 ^{***}	-0.480 ^{***}	-0.359 ^{***}	1.000

Note: CEODUAL is a binary variable that takes a value of 1, if the posts of CEO and Chairman are held by the same person; 0, if otherwise. The AUDCOMM and REMCOMM variables take the value of 1, if a firm has established an audit or remuneration committee, respectively; 0, if otherwise. COMDUM is a dummy variable taking a value of 1, if a firm has established either an audit or remuneration committee; 0, if otherwise. AUDKEY and REMKEY are dummy variables taking a value of 1, if a key executive sits on the audit or the remuneration committees, respectively; 0, if otherwise. COMKEY is a dummy variable taking a value of 1, if a key executive sits on either the audit or remuneration committee; 0, if otherwise. NXRATIO represents the non-executive ratio and is the percentage of non-executive directors on the board of each firm. NXRATIO2 is the square of NXRATIO. DIROWN denotes total executive director ownership as a proportion of total ordinary shares of the company. DIROWN2 is the square of DIROWN. LNSIZE is defined as the natural logarithm of book value of total assets.

***Correlation is significant at 0.01 level (2-tailed), **Correlation is significant at 0.05 level (2-tailed).

Empirical Results

The Impact of Adopting the Cadbury Code on Corporate Performance

Table 3 presents the regression results regarding the impact of the adoption of the Cadbury Code on corporate performance. In Models (1) and (2) corporate performance is measured by the variable IAROA. In Models (3) and (4) corporate performance is measured by the variable Excess-Q. The adoption of the Cadbury Code is captured by both the CADBURY4 and CADBURY6 variables. In all the four Models, we add the control variables DIROWN and DIROWN2.

	Model (1) Random Effects	Model (2) Random Effects	Model (3) Fixed Effects	Model (4) Fixed Effects
Variable	IAROA	IAROA	Excess-Q	Excess-Q
CADBURY4	0.0137 (3.25) ^{***}	– –	0.0933 (1.87) [*]	– –
CADBURY6	– –	0.0146 (3.17) ^{***}	– –	0.1642 (3.03) ^{***}
DIROWN	0.0392 (0.49)	0.0402 (0.50)	–1.1210 (–1.02)	–1.0903 (–0.99)
DIROWN2	–0.2179 (–1.88) [*]	–0.2365 (–2.03) ^{**}	0.2891 (0.19)	0.0147 (0.01)
LNSIZE	–0.0138 (–3.80) ^{***}	–0.0138 (–3.77) ^{***}	0.0737 (1.05)	0.0436 (0.62)
CONSTANT	0.2869 (3.98) ^{***}	0.2885 (3.97) ^{***}	–1.0045 (–0.73)	–0.4199 (–0.31)
Observations	1116	1116	1116	1116
R ²	0.05	0.04	0.04	0.03
Chi-square	30.84 ^{***}	30.25 ^{***}	–	–
F-Statistic	–	–	4.32 ^{***}	5.76 ^{***}
Hausman Test	2.98 (0.5618)	– –	15.10 (0.0045) ^{***}	– –

Note: IAROA is the Industry Adjusted Ratio of EBIDTA to average assets. Excess-Q is the industry adjusted Tobin's-Q. CADBURY4 is a dummy variable taking the value of 1, if the firm adopts the Cadbury Code defined as a minimum of three non-executive directors on the board; no presence of duality; the presence of an audit committee; and the presence of a remuneration committee, and 0 if otherwise. CADBURY6 is a dummy variable taking the value of 1, if the firm adopts the Cadbury Code defined as a minimum of three non-executive directors on the board; no presence of duality; the presence of an audit committee; and the presence of a remuneration committee; a executive director does not sit on the audit and remuneration committees, and 0 if otherwise. t-statistics and Chi² probabilities are in parentheses.

^{***}significant at 1%; ^{**}significant at 5%; ^{*}significant at 10%.

Both the variables are included here because prior literature has demonstrated that there is a relationship between corporate performance and executive director ownership, and that the relationship is nonlinear (see Morck *et al.*, 1988 and McConnell and Servaes, 1990). Finally, in all the models, we also introduce as an additional control, the variable LNSIZE, that is, the size of the firm as measured by the natural logarithm of the book value of the firm's total assets. According to testable hypothesis H_1 , the coefficients for CADBURY4 and CADBURY6 are expected to be positive. According to prior literature, the coefficient for DIROWN should be positive, while the coefficient for DIROWN2 should be negative. The coefficient for LNSIZE could be either positive or negative.

As shown in Table 3, the regression coefficients of CADBURY4 are positive in the two models, statistically significant at 1% and 10% levels, respectively. Similarly, the regression coefficients of CADBURY6 are positive, and statistically significant at 1% level. Inconsistent with earlier literature, the coefficients for DIROWN in all the four models are statistically insignificant at any conventional level. As regards the variable DIROWN2, the regression coefficients are negative and significant in the first two models only, where performance is measured by IAROA. In the last two models, where performance is measured by Excess-Q, the regression coefficients are negative but statistically insignificant at any conventional level. The regression coefficients for LNSIZE are negative and statistically significant at 1% level in Models (1) and (2). In Models (3) and (4), the coefficients of LNSIZE are statistically insignificant.

Based on these findings, we cannot reject the hypothesis that there is a positive relationship between corporate performance and the adoption of the Cadbury Code. The overall conclusion is that the adoption of the Code has had a positive impact on corporate performance.

Having established a positive relationship between corporate performance and the adoption of the Code, we now turn our attention to the investigation of the impact of adopting the key recommendations of the Cadbury Code on the firms' performance.

The Impact of Adopting the Key Recommendations of the Cadbury Code on Corporate Performance

Table 4 contains the regression results regarding the impact of adopting the key recommendations of the Code on Corporate Performance. Corporate performance here is measured by IAROA. Four key recommendations are examined here. First, assigning the position of CEO and Chairman of the Board to two separate individuals, is captured by the dummy variable CEODUAL. Second, increasing the proportion of non-executive directors serving on the board is captured by the variables NXRATIO and NXRATIO2. Third, establishing an audit committee operating independently from the top management is represented by the dummy variables AUDCOMM and AUDKEY. Fourth, establishing a remuneration committee operating independently from the top management, is incorporated in the variables REMCOMM and REMKEY respectively. Similarly, AUDCOMM and AUDKEY show the effect of establishing an audit committee and whether or not an executive director was a member of the committee.

AUDCOMM and REMCOMM are highly correlated. The same is true for variables AUDKEY and REMKEY. This is why in Models (1) to (4), the four committee-related variables AUDCOMM,

Table 4: Panel Data Random-Effects Regressions of Corporate Governance Reforms (Cadbury Code Compliance) and Corporate Performance (IAROA)						
Variable	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)
CEODUAL	0.0101 (1.20)	0.0102 (1.21)	0.0113 (1.34)	0.0108 (1.28)	0.0102 (1.20)	0.0110 (1.30)
AUDCOMM	0.0140 (3.24)***	– –	– –	– –	– –	– –
AUDKEY	– –	–0.0137 (–3.02)***	– –	– –	– –	– –
REMMCOMM	– –	– –	0.0164 (3.83)***	– –	– –	– –
REMKEY	– –	– –	– –	–0.0151 (–3.28)***	– –	– –
COMDUM	– –	– –	– –	– –	0.0141 (3.20)***	– –
COMKEY	– –	– –	– –	– –	– –	–0.0152 (–3.33)***
NXRATIO	–0.0977 (–1.74)*	–0.0987 (–1.76)*	–0.0999 (–1.79)*	–0.0908 (–1.66)*	–0.0971 (–1.73)*	–0.0921 (–1.65)*
NXRATIO2	0.0797 (1.13)	0.0773 (1.09)	0.0807 (1.14)	0.0673 (0.95)	0.0078 (1.11)	0.0688 (0.97)
DIROWN	0.0058 (0.07)	0.0030 (0.04)	0.0093 (0.12)	0.0107 (0.13)	0.4820 (0.10)	0.0058 (0.07)
DIROWN2	–0.1787 (–1.53)	–0.1936 (–1.65)*	–0.1806 (–1.55)	–0.2040 (–1.74)*	–0.1801 (–1.54)	–0.1985 (–1.70)*
LNSIZE	–0.0140 (–3.78)***	–0.0137 (–3.70)***	–0.0143 (–3.88)***	–0.0137 (–3.71)***	–0.0137 (–3.74)***	–0.0138 (–3.74)***
CONSTANT	0.3110 (4.22)***	0.3247 (4.29)***	0.3153 (4.30)***	0.3232 (4.31)***	0.3062 (4.18)***	0.3265 (4.35)***
Observations	1116	1116	1116	1116	1116	1116
R ²	0.05	0.04	0.05	0.04	0.05	0.04
Chi-square	35.00***	33.48***	39.20***	35.15***	34.73***	35.53***
<p>Note: IAROA is the Industry Adjusted Ratio of EBITDA to average assets. CEODUAL is a binary variable that takes a value of 1, if the posts of CEO and Chairman are undertaken by the same person; 0, if otherwise. The AUDCOMM and REMCOMM variables take the value of 1, if a firm has established an audit or remuneration committee, respectively, and 0 if otherwise. COMDUM is a dummy variable taking a value of 1, if a firm has established either an audit or remuneration committee; 0, if otherwise. AUDKEY and REMKEY are dummy variables taking a value of 1, if a key executive sits on the audit or the remuneration committees, respectively; 0, if otherwise. COMKEY is a dummy variable taking a value of 1, if a key executive sits on either the audit or remuneration committee; 0, if otherwise. NXRATIO represents the non-executive ratio and is the percentage of non-executive directors on the board of each firm. NXRATIO2 is the square of NXRATIO. DIROWN denotes total executive director ownership as a proportion of total ordinary shares of the company. DIROWN2 is the square of DIROWN. LNSIZE is defined as the natural logarithm of book value of total assets. <i>t</i>-statistics are in parentheses.</p> <p>***significant at 1%; **significant at 5%; *significant at 10%.</p>						

REMCOMM, AUDKEY and REMKEY enter the regressions one at a time. In Model (5), the committee-related variables are represented by the dummy variables COMDUM. In Model (6), the committee-related variables are represented by the dummy variable COMKEY. Models (1) to (6) also include the variables NXRATIO and NXRATIO2. All six models also include the control variables DIROWN, DIROWN2 and LNSIZE.

The regression coefficient for variable CEODUAL is predicted to have a negative sign. According to testable hypothesis H_{3a} and H_{4a} , the regression coefficients for AUDCOMM and REMCOMM should be positive. Also, according to testable hypotheses H_{3b} and H_{4b} , the regression coefficients for the variables AUDKEY and REMKEY are predicted to have a negative sign. Accordingly, the regression coefficients for COMDUM and COMKEY are predicted to be positive and negative, respectively. According to testable hypothesis H_{1b} , the coefficients for NXRATIO are predicted to have negative signs, while the coefficients for NXRATIO2 are expected to have positive signs. Consistent with prior research, the coefficients for DIROWN should be positive while the coefficients for DIROWN2 should be negative. The coefficients for LNSIZE could be either positive or negative.

As shown in Table 4, the regression coefficient for variable CEODUAL is statistically insignificant at any conventional level of significance in all models, suggesting the rejection of testable hypothesis H_2 . The implication of this finding is that assigning the two positions to separate persons, has not had any impact on corporate performance. This confirms prior empirical findings of Weir *et al.* (2002).

The regression coefficients for AUDCOMM in Model 1; REMCOMM in Model 3; and COMDUM in Model 5; are all positive and statistically significant at 1% level. Therefore, we cannot reject the testable hypotheses H_{3a} and H_{4a} . The implication of these findings is that the establishment of audit committee and/or remuneration committee has had a positive impact on corporate performance.

The regression coefficients for AUDKEY in Model 2; REMKEY in Model 4; and COMKEY in Model 6 are all negative and statistically significant at 1% level. Therefore, we cannot reject the testable hypotheses H_{3b} and H_{4b} , implying that the presence of an executive director on the audit and/or remuneration committee has had a negative impact on corporate performance.

In all the six models, the regression coefficients for NXRATIO are negative and statistically significant at 10% level. Also, in all the models, the regression coefficients for NXRATIO2 are positive, but statistically insignificant at any conventional level. The implication of the findings regarding these two variables is that there is weak evidence of a nonlinear relationship between corporate value and fraction of outside (non-executive) directors. That is, for small fractions of outside directors, the relationship between these two variables is negative, but for larger

fractions it becomes zero. This finding is consistent with the view that there is a trade-off between executive and non-executive directors. In particular, executive directors bring to the firm, knowledge and expertise, but are associated with severe agency costs. On the other hand, non-executive directors reduce agency costs but replace knowledgeable executive directors. Apparently at small fractions of non-executive directors, agency cost cannot be reduced, while at large fractions of non-executive directors, the reduction of the agency cost offsets the loss of value from replacing the executive directors with the non-executive ones.

Regarding the control variables DIROWN and DIROWN2, the coefficient for DIROWN is positive, but statistically insignificant at any conventional level in all models, while the coefficient of DIROWN2 is negative, and statistically significant at 10% level in three out of six models. These findings are only partially consistent with the earlier literature and provide weak support to the managerial entrenchment hypothesis established in earlier papers.

Regarding the control variable LNSIZE in all the models, the corresponding regression coefficient is negative and statistically significant at 1% level. The general conclusion from Table 4 is that, with the exception of duality, the adoption of all the other key recommendations of the Cadbury Code has had a significant impact on corporate performance. Additionally, the board restructuring which followed the issuance of the Cadbury Code has partially eliminated managerial entrenchment from companies adopting the Code.

Table 5 presents the regression results regarding the impact of adopting the key recommendations of the Cadbury Code on corporate performance, where corporate performance here is measured by Excess-Q. The format of Table 5 is similar to that of Table 4, the dependent variable being the only difference.

It is interesting to notice that the findings from Table 5 are qualitatively similar to those reported in Table 4 regarding the Cadbury Code related variables—CEODUAL, AUDCOMM, AUDKEY, REMCOMM, REMKEY, COMDUM, and COMKEY. Regarding the variables NXRATIO and NXRATIO2, the regression coefficients are now much stronger, negative for NXRATIO and positive for NXRATIO2, respectively, and statistically significant in almost all cases at 5% level or better. The implication from the results reported in Table 5 is that compliance with the Cadbury Code has had a strong positive impact for complying UK firms listed on the London Stock Exchange.

Regarding the control variables DIROWN and DIROWN2, the regression coefficients are statistically insignificant at any conventional level in all the six models. The implication of this finding is that the board restructuring following the adoption of the Cadbury Code has eliminated managerial entrenchment from adopting UK companies. The coefficients for LNSIZE are statistically insignificant at any conventional level for all models.

Table 5: Panel Data Fixed-Effects Regressions of Corporate Governance Reforms (Cadbury Code Compliance) and Corporate Performance (Excess-Q)						
Variable	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)
CEODUAL	0.1005 (1.18)	0.1410 (1.41)	0.1242 (1.23)	0.1340 (1.33)	0.1144 (1.14)	0.1464 (1.46)
AUDCOMM	0.1020 (2.57)***	– –	– –	– –	– –	– –
AUDKEY	– –	–0.2283 (–4.22)***	– –	– –	– –	– –
REMMCOMM	– –	– –	0.1381 (2.67)***	– –	– –	– –
REMKEY	– –	– –	– –	–0.1729 (–3.16)***	– –	– –
COMDUM	– –	– –	– –	– –	0.1141 (2.15)**	– –
COMKEY	– –	– –	– –	– –	– –	–0.2184 (–3.98)***
NXRATIO	–1.8137 (–2.78)***	–1.9918 (–3.07)***	–1.8075 (–2.78)***	–1.7528 (–2.71)***	–1.7731 (–2.72)***	–1.8202 (–2.82)***
NXRATIO2	2.0104 (2.46)**	2.1018 (2.59)***	1.9985 (2.45)**	1.8811 (2.31)**	1.9709 (2.41)**	1.9265 (2.37)**
DIROWN	–1.3811 (–1.25)	–1.4030 (–1.28)	–1.3547 (–1.23)	–1.3648 (–1.24)	–1.4048 (–1.27)	–1.3848 (–1.26)
DIROWN2	–0.7037 (0.47)	0.4064 (0.27)	0.6896 (0.46)	0.4229 (0.28)	0.7320 (0.49)	0.3865 (0.26)
LNSIZE	–0.0487 (–0.67)	0.0015 (0.02)	0.0505 (0.70)	0.0432 (0.61)	0.0657 (0.91)	0.0114 (0.16)
CONSTANT	–0.225 (–0.16)	0.9563 (0.67)	0.2654 (–0.19)	0.0699 (0.05)	–0.5524 (–0.39)	0.7410 (0.52)
Observations	1116	1116	1116	1116	1116	1116
R ²	0.03	0.04	0.06	0.04	0.03	0.04
F-Statistic	3.96***	5.59***	4.03***	4.45***	3.66***	5.30***

Note: Excess-Q is the industry adjusted Tobin's-Q. CEODUAL is a binary variable that takes a value of 1, if the posts of CEO and Chairman are undertaken by the same person; 0 if otherwise. The AUDCOMM and REMCOMM variables take the value of 1, if a firm has established an audit or remuneration committee, respectively and 0 if otherwise. COMDUM is a dummy variable taking a value of 1, if a firm has established either an audit or remuneration committee; 0 if otherwise. AUDKEY and REMKEY are dummy variables taking a value of 1, if a key executive sits on the audit or the remuneration committees, respectively; 0 if otherwise. COMKEY is a dummy variable taking a value of 1, if a key executive sits on either the audit or remuneration committee; 0 if otherwise. NXRATIO represents the non-executive ratio and is the percentage of non-executive directors on the board of each firm. NXRATIO2 is the square of NXRATIO. DIROWN denotes total executive director ownership as a proportion of total ordinary shares of the company. DIROWN2 is the square of DIROWN. LNSIZE is defined as the natural logarithm of book value of total assets. *t*-statistics are in parentheses.

***significant at 1%; **significant at 5%; *significant at 10%.

Conclusion

The publication of the Code of Best Practices by the Cadbury Committee in the UK in 1992 generated a worldwide wave of reforms in the corporate governance systems. The associated reforms are centered on the structure of corporate boards, the main objective being creating independence on the board so that its monitoring function can be enhanced. The empirical implication of these reforms is that they will improve corporate performance. Although earlier literature has investigated the relationship between board structure and corporate performance, prior to the publication of the Cadbury Code of Best Practice, the empirical findings are mixed, probably reflecting methodological difficulties. The compliance of UK companies with the Code provides a unique opportunity to investigate the impact of exogenously imposed reforms on corporate performance. Previous literature on this issue mainly focuses on the impact of the adoption of the Cadbury Code of Best Practice on corporate activities, indicating that the adoption of the Code is associated with corporate activities (i.e., by hiring and firing the CEO), which presumably enhances the monitoring role of the board, thus, improving corporate performance.

Our study investigates the impact of adopting the recommendations of the Cadbury Code of Best Practice on corporate performance of UK firms. Our findings, in general, are consistent with the view that the adoption of strong corporate governance systems improves corporate performance. In particular, first, we find a positive association between corporate performance and the adoption of the Code. Second, corporate performance is positively associated with the establishment of audit committee and/or remuneration committees. Third, corporate performance is negatively associated with the presence of a key executive director on the committees. Fourth, there is a non-linear relationship between corporate performance and the proportion of non-executive directors. Specifically, there is a negative association between these two variables, but a positive one between corporate performance and the square of the proportion of non-executive directors, when performance is measured by Excess-Q. Fifth, contrary to prior evidence, in most cases there is no positive association between corporate performance and the proportion of shares owned by directors. In general, there is no negative association between corporate performance and the square of the proportion of shares owned by directors. Sixth, there is mixed evidence regarding the association between corporate performance and the size of the firm. Seventh, consistent with prior evidence, corporate performance is not associated with the separation of the titles of the Chairman of the Board and CEO.

The general conclusion from the findings of this study is that, with the exception of duality, corporate performance is associated with the adoption of the various recommendations of the Cadbury Code of Best Practice. The findings of this paper, representing the first direct and comprehensive evidence on the economic impact of the Cadbury reforms, are very important in evaluating such reforms and in motivating studies in other countries that have introduced similar reforms. The findings regarding the nonlinear association between corporate performance and the proportion of non-executive directors are useful in explaining the mixed

findings on the subject, reported by earlier studies that assume a linear relationship between these variables. The findings on the relationship between corporate performance and the proportion of shares owned by directors suggest that, the board restructuring following the publication of the Cadbury Code has eliminated managerial entrenchment. □

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