TOP PAY, COMPANY PERFORMANCE AND CORPORATE GOVERNANCE

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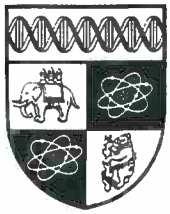

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Top pay, company performance and corporate governance.

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Preliminary : Comments welcome

Abstract

This paper examines the relationship between top director pay, company performance and corporate governance in a sample of approximately 390 companies in 1985. The reported econometric results reveal that although a statistically significant relationship can be established between highest paid director salary and company performance, the estimated elasticity is very small. In line with other research, company sales is a dominant predictor of top pay. The paper shows that measures of corporate governance also shape top directors salary. Ownership controlled firms, or where the primary shareholders are insurance companies and pension funds, or where there are non-executives on the main board depress top director pay. On the other hand, separating the role of the chairman and chief executive officer, or where there is an executive share plan in existence, plays no role in shaping top pay.

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1. Introduction.

There is still considerable controversy concerning which factors are dominant in shaping the pay of top directors. Public concern has been expressed that the compensation packages received by those at the head of the corporation are not justified by the underlying economic performance of the company in question (eg Schneider-Lenne, 1993). Recent academic evidence, too, has found it difficult to isolate a positive relationship between top pay and company performance. Moreover, when such a relationship is identified, the evidence suggests that the link is particularly weak (eg Gregg et al, 1993).[1]

Not surprisingly, attention has switched to the actual mechanisms by which senior executives are compensated ie to the role played by corporate governance. Although there has been much claimed for the importance of corporate governance in shaping key economic variables such as directors' pay (eg Cadbury committee, 1992), there has been little direct evidence to substantiate such claims.[2]

This paper empirically examines the determination of top directors salary using a sample of large UK listed companies in 1985. Specifically, we test whether the highest paid directors salary is systematically related to company performance, size and measures of corporate governance. The picture that emerges is quite striking. A positive pay for performance relationship is established but the estimated elasticity is very small. On the other hand company sales is a dominant factor in shaping top

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[1] Rosen(1990) reviews the empirical evidence on top pay determination. Recent UK research includes, Gregg et al(1993), Conyon and Gregg(1993), Main(1991, 1992) and Main and Johnston(1992). US work on top pay determination includes Abowd(1990), Murphy(1985), Leonard(1990), Gibbons and Murphy(1990, 1992) and Jensen and Murphy(1991).

[2] The exception here is the work by Main and Johnston(1992), Main et al(1991) and Main(1992).

pay with an estimated elasticity of about 0.20. Aspects of corporate governance and ownership structure turn out to be important in influencing top directors pay. Ownership control, and the existence of non-executive directors on the board depress top pay. On the other hand separating the role of chairman and chief executive, and executive share plan schemes have no effect on director remuneration.

The paper is organised as follows. Section 2 briefly considers the theoretical aspects of top pay determination. The modelling strategy and data construction are described in section 3. The results of the data analysis, together with a discussion, are presented in section 4. The paper closes with a short summary and conclusion.

2. The determination of directors pay.

Factors governing the remuneration of senior executives have recently received much theoretical attention. Typically, models have been developed which demonstrate that compensation received by senior management should be linked to company performance for incentive reasons (see Rosen, 1990). An important element, here, is the design of optimal compensation contracts to elicit appropriate effort by senior management. The typical principal agent framework has shareholders (principals) delegating decision making authority to managers (agents) whose interests potentially diverge from those of shareholders. The principal's goal is to induce the manager to act in his (ie the principal's) best interest, given an asymmetry of information exists. In this way the optimal contract offered to the agent potentially aligns shareholder and manager interests by generating appropriate incentives.

The nature of the optimal contract offered to the agent will depend on who knows what and when, as well as each party's attitude to risk. Suppose the agent

produces an output y, subject to the production function $y=y(x,\theta)$, where x is effort and θ is a random variable with zero mean and known variance. The principal is assumed to be risk neutral. Agent utility is captured by a utility function which is concave in consumption and convex in effort. It is assumed that utility and production functions are common knowledge, but effort, x, and the random component, θ, are private knowledge to the agent. Since x and θ are non-separable and individually non-observable by the principal, the agent receives a share of the output $s=s(y)$. The principal's objective is to characterise the optimal contract s(y).

Following Tirole(1988), the agency problem is solved by maximising the principal's objective function subject to two constraints. First, the agent must willingly engage in the venture with the principal so the agent's payoff must be at least as good as some outside alternative. Second, the agent must undertake costly effort of his own volition. Respectively, these are the participation and incentive compatibility constraints. Since the agent is risk averse, and effort is not observed, the appropriate level of effort must be induced through incentives. Agency theory predicts that the solution to the problem has the agent's compensation increasing with output, or more generally, with shareholder profit.

In this model there is a conflict between incentives and insurance. If everything was observable, such that θ and x could be disentangled, then the principal could observe, and verify, agent effort levels. In this case the risk neutral principal would offer the risk averse agent full insurance, and the agent would receive a constant wage, independent of the outcome. The agent would supply optimal effort and verifiable monitoring eliminates malfeasance. Since a moral hazard problem is likely, though, the payment schedule is based on output, and the principal offers less than

full insurance to ensure the agent supplies optimal effort.

Whilst agency models, then, typically predict a positive correlation between manager compensation and shareholder profit, little can be said about the shape of the payment schedule (see Rosen, 1990). However, Holstrom and Milgrom(1987) prove that agent compensation takes a simple linear form, $s(y) = a + by$, when income effects are absent in preferences and random technology shocks, θ, are i.i.d. Here, letter a represents the insurance aspect and b the power of the incentive component. This is at least a partial justification for the linear estimating equations which characterise all empirical studies into the relation between top pay and company performance (see Abowd, 1990).

As well as these agency considerations in shaping top pay, managerial notions also stress the role of scale effects. Cosh(1975) argues that company size, reflecting managerial preference for absolute firm growth, will determine pay. Indeed, this reflects the continuing focus of the empirical debate : is it sales or profits that are more important is shaping executive remuneration? Rosen(1990) reviews the evidence and concludes that both performance and sales are important.

In addition to these basic variables which are hypothesised to influence top pay, consideration must be given to the role of ownership structure and corporate governance. Lazear(1986) argues that contingent performance based compensation schemes depend crucially on the assumption that direct monitoring of the agent is prohibitively costly. If cheap monitoring technology is available then moral hazard effects may be reduced. In these alternative circumstances both the shareholders and managers might prefer non-contingent compensation systems, such as a fixed salary. Moreover, it suggests an important role for both corporate governance and ownership

structure as these may aid monitoring.

Corporate governance refers to the way in which companies are directed and controlled. Where company ownership is diverse then a potential for a sub-optimal level of monitoring exists, since an individual shareholder is unable to fully appropriate the gains from the monitoring function (see Vickers and Yarrow, 1988). If ordinary share capital is distributed among many individuals the activity of specifying and enforcing contracts bestows positive value to others. Monitoring activity, here, has the characteristic of a public good. If an individual shareholder carries out the monitoring function alone he bears the full specification and enforcement costs, but in return appropriates only a proportion of the assumed total gain. It may not be possible to exclude other shareholders from reaping the (collectively consumed) rewards of efficacious monitoring. If the marginal increase in expected profit from monitoring activity by individual i is equal to $\Delta\pi$, the individual shareholder receives a gain $\lambda_i\Delta\pi$ where λ_i is the proportion of shares owned by individual i. For the shareholders when considered together there might be a sub-optimally low level of monitoring (see Vickers and Yarrow, 1988). In such situations managers can have discretion to pursue their own objectives, hence potentially violating the behavioural assumption of expected profit maximisation.[3] Dispersed share ownership then alters the incentive structure faced by individual owners. Large variations in ownership implies that the benefits from the actions of managers in terms of shareholder wealth are enjoyed in proportion to the number of

[3] The actual effect of diffuse share holding is both a theoretical and empirical question. A robust empirical result in the separation of ownership from control literature is that corporations identified as ownership-controlled have higher profits although the quantitative impact is often small and sometimes insignificant. See Leech and Leahy(1991).

shares held. If the individual stake is low as a consequence of share dispersion the incentive to participate in decision making falls. We might expect as ownership concentration increases then corporate behaviour aligns more closely with profit maximisation.

The view that dispersed shareholding alone may result in sub-optimal monitoring and hence divergences from profit maximisation behaviour by senior management requires some qualification. First, the existence of a board of directors can act as an efficient device to specify and enforce managerial contracts. Directors can specify contracts which make pay a function of company performance through bonus schemes or share option plans. This can sharpen incentives, but the effect on pay can be two fold. Individual executives may trade off current pay for shares hence a negative association may be observed between pay and share options. Alternatively, and which seems more plausible, contingent bonus and share plans sharpen incentives and hence raise pay. Furthermore, the existence and role of the non executive director may act as a countervailing force to managerial discretion. Such points are stressed by the Cadbury committee(1992). Second, for large institutional investors such as insurance companies and pension funds there might exist positive spillover effects from the monitoring of any one management. A reputation for toughness might be established which restricts the discretion of managements in other corporations which the shareholder has an interest in. The marginal benefit from monitoring a given management can then be depicted as : $\Delta\pi^{*} + \lambda_{i}\Delta\pi$ where $\Delta\pi^{*}$ is the marginal profit increase from other companies in the portfolio. The clear implication is that even if λ is small the payoffs from monitoring might not be as sub-optimal as supposed (see Vickers and Yarrow, 1988).

Leech and Leahy(1991) discuss the formulation of a relevant organisational control variable. They argue that the concept of control is the power to exercise judgment and action over important corporate decision making. It has become standard to assume that a corporation is of an ownership controlled type if the largest share holding exceeds some arbitrarily defined fixed size. In a critique of this approach Cubbin and Leech(1983) demonstrate that it is contingent on the degree of ownership dispersion as measured by the Herfindahl index and the degree of control required. These two contrasting approaches to the issue of ownership are termed fixed and variable classification schemes respectively.

Company ownership structure, following Leech and Leahy(1991), can be characterised in two ways. First, as a simple ownership concentration ratio where we denote the variable C5 as the combined holding of the largest five shareholders. The second, as a variable rule control type, based on the concentration of voting power using the probabilistic voting model of Cubbin and Leech(1983). In their model control is defined in terms of the likelihood of securing a simple majority in a shareholder vote. The degree of control of a given bloc of large share holdings is the probability of that bloc being able to secure majority support in an average contested vote.

Leech and Leahy(1991) illustrate that the degree of corporate control can be expressed as follows :

$$\alpha_k \approx \Phi (C_k / \sqrt{V_k}) \qquad (1)$$

where α_k is the degree of control exercised by the leading k shareholders. The combined holding of the leading k shareholders is $C_k = \Sigma^k_{i=1} p_i$. where p_i is the percentage share holdings in size order such that $p_i \geq p_{i+1}$ for all i and $\Sigma^k_{i=1} p_i = 100$.

Let $V_k = \Sigma^N_{i=k+1} p_i^2$ and the term Φ (.) is the standard normal distribution function such that if $z \sim N(0, 1)$, then $Pr[z < x] = \Phi(x)$ for any x.

The importance of the definition of the degree of control is that it is contingent on both the concentration ratio C_k and the Herfindahl index of concentration, H, since the H index can be simply rewritten as $V_k = H - \Sigma^k_{i=1} p_i^2$, where $H = \Sigma^N_{i=1} p_i^2$. This degree of control has been shown by Leech(1988) to be related to measures of voting power defined for weighted voting games. The interpretation of α_k is straight forward : it is the degree of control exercised by the leading k shareholders acting strategically as a group. For the largest share holder we can say that the degree of control of the largest shareholder (which can range from 0 to 100%) is :

$$\alpha_1 \approx \Phi (C_1 / \sqrt{V_1}) = \Phi (p_1 / \sqrt{(H - p_1^2)}) \qquad (2)$$

In the empirical work that follows we assume that ownership control exists when α_1 is greater than 95 per cent.

3. Modelling strategy and data description.

To investigate the effect of company performance and corporate governance on highest paid director salary we specify the following estimating equation :

$$\ln(HDS_i) = x'_i\beta + z'_i\gamma + \varepsilon_i \qquad (3)$$

where HDS is the highest paid directors salary in company i, β and γ are parameter vectors to be estimated and ε is an i.i.d. disturbance term. The variable x_i is a measure of company performance in firm i. This can be one of three types : market capitalisation (MCAP), return on shareholders capital (RSHC) or the trading profit margin (TPM). There is considerable debate in the literature about which is the appropriate measure of performance to use in top pay equations. The debate centres

around whether accounting or market based measures should be used. Main(1992), using the capital asset pricing model, argues that a stock market measure of performance is appropriate. Rosen(1990) argues that pay should be linked to variables that the executive can control. Other examples of performance can be found : Cosh(1975) uses return on net assets and Ciscel and Carroll(1978) a residual performance measure based on the post tax net income of the corporation. Gibbons and Murphy(1991) use a shareholder wealth measure which is the firms rate of return on common stock. Conyon and Gregg(1993) and Gregg et al(1993) simply use the growth in the trading profit margin and the growth in firm earnings per share respectively.[4]

The vector z contains company sales, corporate governance and organisational control variables as follows : SALES is sales of firm i reflecting managerialism. We control for company risk in this analysis using the company beta coefficient, BETA. The capital asset pricing model (Fama and Miller, 1972) predicts that investors in high beta shares may seek compensation for risk by requiring high financial returns. BETA captures the sensitivity of share price to general market movements. Ownership structure and ownership type variables are also included. The term OC95 is a variable capturing organisational control type in the Cubbin-Leech sense described earlier : the potential ability to control the board of directors. A dichotomous variable OC95 is defined, equal to one if the degree of control of the largest share holding α_1 is greater

[4] The conceptual problem with this formulation of the dependent variable is that it omits other potentially important elements of chief executive compensation wealth (for example stock bonuses, pension benefits, stock holding and options) However, Lewellen and Huntsman(1970) find that when these additional elements are incorporated into the construction of the dependent variable there is little substantive difference in estimated equations, compared to when such factors are omitted. Unfortunately our data set does not allow us to carry out a similar sensitivity check.

than ninety five per cent and zero otherwise. An ownership concentration term is also included, the variable C5 defined as the combined holding of the largest five shareholders. Dispersed ownership gives individual owners weak incentives to participate in decision making because of public good type effects noted previously. However, a risk averse shareholder with a diversified portfolio may sell his holding if its market value falls too much. Our data set classifies firms into ownership types and we include the variable, INS defined as a dummy variable with a value one if the primary share holding is by an insurance company or pension fund.

To capture board characteristics we use two variables, SEP which is a dummy variable equal to one if the chairman and chief executive officer have separate roles, and zero if they are combined.[5] The second board characteristics variable, NEXD is a dummy variable equal to one if the number of non-executive directors are reported in the company accounts. The Cadbury committee report emphasised the important monitoring role of non-executive directors, together with the separation of the roles of chairman and chief executive.

We include a variable EXEC to capture potential incentive effects on top pay. Specifically it is a dummy variable equal to one if there is an executive share option plan available, zero otherwise. To the extent that incentives are sharp we would expect this to impact positively on managerial pay. We also include all employee profit sharing plan, PLAN.

Our sample consists of a potential 470 cross section U.K. listed companies covering a variety of industries in 1985. Of these 323 are from the times 1000 largest

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[5] In the data, if there is a chairman who earns less than the highest paid director SEP=1 and if they earn the same we assume SEP=0, the roles being combined.

industrial companies. Importantly the selection criterion was based on the availability of share ownership data. A detailed description of the original data is given in Leech and Leahy(1989). To this data set are added a number of other variables. Highest paid director salary was derived from datastream international. A measure of market capitalization (MCAP) was added, using reports of the London Business School Risk Measurement Service. Information about the existence of share plans and the other corporate governance variables were derived from Charterhouse Top Management Remuneration.

Table 1 provides sample means and standard deviations of some of the key variables in our analysis.[6] We note that the highest directors salary has a mean value of 49.1 thousand pounds. The maximum value for this variable achieves in our sample (not reported) is 240.5 thousand pounds. Approximately 22 per cent of our sample of companies are ownership controlled, where the degree of control of the largest share holding exceeds 95%.

4. Statistical results.

Our estimated equations are reported in tables 2 and 3. Agency theory predicts that top pay should be linked to economic performance if incentives are sharp. Managerial theories suggests that size is an important determinant to the extent that this reflects divergence from profit maximisation. Table 2 reports a basic model top pay equation and the results are easy to summarise. Each column is differentiated by the measure of company performance. Regardless of how the performance variable is formulated it turns out that, after controlling for company size effects and

[6] Fuller data definitions are to be found in the appendix.

idiosyncratic industry effects, there is a significantly positive relationship between highest director salary and company performance. There is an important qualification. The estimated elasticity of top director pay with respect to company performance is very low. In column 1 a 10% improvement in market capitalisation predicts an increase in highest director salary of only 0.71%. Evaluating this at average director pay in the sample, this corresponds to an increase in directors salary of approximately £349. If one bears in mind that a ten per cent increase in a firm's market value is of the order of millions of pounds, we believe that the predicted increase in directors salary is very small indeed. The return on shareholder capital reveals the same story. The estimated elasticity, evaluated at the mean return on capital, is 0.018. Similarly, the elasticity of directors salary with respect to the trading profit margin, evaluated at the average margin, is 0.11. Furthermore, our results do not indicate that there is a qualitative empirical difference by using stock market or accounting based measures of performance. These results are consistent with other recent academic evidence. Gregg et al (1993), estimate a director pay-market value elasticity of 2 per cent for the period 1983-1986, although thereafter the relationship completely disappears.

On the other hand, our estimated relationship between top director salary and sales is more robust. We find that for directors salary to increase by 10 per cent, say, our model predicts that sales would have to rise by just over 50 per cent. This result is very similar to the result in Gregg et al(1993) who also find that the estimated director pay-sales elasticity is in the region of 0.14 to 0.20. This is also in line with recent US evidence. Rosen(1990) reports, in a review of many studies of executive remuneration, that the elasticity of top executive pay lies in the region of 0.25 per cent.

Table 3 augments the basic top pay equation by corporate governance and

ownership control variables. Dealing with column 1, we immediately confirm that top directors are compensated for being in companies which have relatively high beta values. Firms that are not ownership controlled, have a proportional return in top directors salary which is some 10 per cent higher than otherwise similar firms. Ownership concentration alone plays no role in shaping top director pay. Ownership type also matters, since proportional director return is approximately 8 per cent lower where shares are controlled by pension funds or insurance companies. The introduction of these variables does not alter the qualitative effects of company performance and sales on top pay.[7]

Although the Cadbury committee stressed separating the role of the chairman and chief executive officer, our proxy variable for this plays no part in shaping top director pay. This contrasts with Main(1991) who finds that top pay is higher when the top executive is also the chairman. On the other hand, another important recommendation of the Cadbury committee, the role of the non-executive director, is an important explanatory variable. Proportional director return is approximately 8 per cent lower in companies which report the existence of non-executive directors. Again, this contrasts with Main(1991), who finds that top pay is higher the more non-executive directors there are. The exclusion restrictions that OC95 through to NEXD are jointly zero are easily rejected ($F(5, 286)=3.24$), attesting to the importance of corporate governance in shaping director pay.

The existence of an executive share ownership plan, EXEC, plays no role in shaping top director pay, suggesting that incentive effects of such bonus schemes or

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[7] We experimented with other control variables. The export to sales ratio, a Herfindahl index of product diversification and firm specific risk measures, all failed to play a significant role in shaping top pay.

executive share plans are weak. On the other hand, the existence of an all employee profit sharing plan depresses top pay. The restrictions that both are jointly zero are rejected (F(2,286)=5.58).

5. Concluding remarks.

There has been considerable media attention focusing on the high pay awards received by company directors, and allegations that these are not in line with underlying company performance. The results of this paper partially corroborate such fears. Contrary to the predictions of agency theory there is only a weak link between measures of performance and top pay in a sample of approximately 390 UK listed companies in 1985. This suggests that the adoption of a contingent performance based contract will have to raise shareholder wealth considerably to affect top pay. The power of the performance base seems particularly weak, reflected in a low estimated elasticity.

On the other hand company sales turns out to be a good predictor of top pay, with an estimated elasticity of approximately 0.20. A potential policy concern, here, is that since sales, rather than company performance, is a good predictor of top pay, directors have an incentive to engage in activities which increase the size of the firm. Consequently, merger activity may be undertaken, independent of its economic merits. Conyon and Gregg(1993) demonstrate that top director pay is higher the more mergers there are.

Furthermore, our results indicate there is no relationship between top director pay and the existence of an executive share option plan, even though we might have expected a positive relationship. Incentive structures, then, are particularly weak.

However, the existence of an all employee profit sharing plan is negatively correlated with top director pay. The separation of the highest paid director from the chief executive officer, which might result in less managerial slack, has no effect on pay. However, potential monitoring effects by pension funds and insurance companies depress top pay.

Overall, our results suggest that corporate governance is important in shaping executive pay and economic performance are important. They are important in that many of the recent policy concerns, expressed for example by the Cadbury Committee, have not been resolved. Ownership control clearly matters for top pay determination but we feel the role of non-executive directors, the separation of chairman of the board from the chief executive officer and the role of bonus and share plans need to more fully investigated.

Table 1 : Means and standard deviations of key variables.				
Variable	Name	Mean	Standard deviation	N
Highest director salary	HDS	49.1412	25.469	439
Market capitalisation	MCAP	124.913	229.422	429
Trading profit margin	TPM	9.7678	7.87228	399
Return on shareholder capital	RSHC	6.0786	10.6398	416
Beta variable	BETA	92.406	92.4064	470
Company diversification	DIV	0.6676	0.27437	389
Export intensity	EXP	0.2714	0.25903	391
Organisation control	OC95	0.2213	0.41555	470
Owner concentration	C5	0.3996	0.18785	468
Non-executive directors	NEXD	0.4745	0.49988	470
Chairman separate	SEP	0.5026	0.50064	382
Executive share plan	EXEC	0.7146	0.45216	382
All employee share plan	PLAN	0.2408	0.42815	382

Notes

1. Fuller data definitions are provided in the appendix.

Table 2 : The impact of company performance and sales on highest paid director salary.			
Constant	2.021096 (0.171396)	1.168695 (0.287382)	1.551222 (0.121479)
ln(MCAP)	0.070831 (0.017297)		
RSHC		0.0031213 (0.0015366)	
TPM			0.0113234 (0.0024391)
ln(SALES)	0.1708692 (0.021108)	0.2193592 (0.0146728)	0.2259174 (0.0135421)
Industry dummies	Yes 11.19 (23,341)	Yes 11.12 (23,364)	Yes 11.83 (23,363)
Number Obs.	367	390	390
Adjusted R^2	0.5113	0.4647	0.4647
Root MSE	0.3061	0.3224	0.3246
Breush Pagan	85.917	61.995	67.038

Notes
1. Dependent variable is the ln(Highest director salary)
2. Breush Pagan is a test for heteroscedasticity. Huber, heteroscedastic corrected, standard errors reported in parenthesis.
3. An F test of the restrictions that industry dummies are jointly zero is reported, with degrees of freedom in parenthesis.

Table 3 : The determination of highest paid director salary			
Constant	1.586986 (0.2851455)	1.279048 (0.305452)	1.026842 (0.3043641)
ln(MCAP)	0.0737376 (0.0167763)		
RSHC		0.0042875 (0.0017955)	
TPM			0.009981 (0.0026766)
ln(SALES)	0.1546725 (0.0176865)	0.1944637 (0.0151265)	0.2128223 (0.0149246)
BETA	0.0022345 (0.0009977)	0.0028588 (0.0010381)	0.0022847 (0.0010262)
OC95	-0.0980844 (0.0434606)	-0.1028702 (0.0437093)	-0.1144195 (0.0437759)
C5	0.0378859 (0.1148615)	-0.127666 (0.1209857)	-0.0426172 (0.1218344)
INS	-0.0795771 (0.0409554)	-0.0782683 (0.0421046)	-0.0746189 (0.0418854)
SEP	0.0023518 (0.0289569)	0.004542 (0.0302805)	0.0103376 (0.0294929)
NEXD	-0.0861256 (0.0328634)	-0.073162 (0.0343485)	-0.0676774 (0.0347459)
EXEC	0.012944 (0.0425374)	0.0022245 (0.0452798)	0.0015441 (0.0456218)
PLAN	-0.1076041 (0.0321396)	-0.1253885 (0.0330016)	-0.1117236 (0.0328931)
Industry dummies	Yes 3.04 (22,286)	Yes 3.72 (22,299)	Yes 3.03 (22,299)
Number Obs.	319	332	332
Adjusted R^2	0.5515	0.5124	0.5203
Root MSE	0.2739	0.2875	0.2852
Breush Pagan	89.247	84.272	91.462

Notes
1. Notes of table 2 apply; variable definitions given in table 1.

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Appendix

Table A1 : Definitions and sources of variables	
HDS	Highest paid directors salary (£000)
MCAP	Market capitalisation : value of ordinary shares (£m)
RSHC	Return on shareholders capital (%)
TPM	Trading profit margin (%)
SALES	Total company sales.
BETA[a]	Coefficient of share price to market movements
INS[b]	dummy variable=1 if largest shareholder is and insurance company
C5	Ownership concentration eg C5=combined holding of the largest five shareholders (%)
OC95	Organisational control eg OC95 degree of control of the largest holding exceeds 95%
SEP[c]	Dummy variable=1 if chairman who earns less than the highest paid director.
NEXD	Dummy variable=1 if number of non-executive directors is reported in company accounts.
EXEC [c]	Dummy variable=1 if an executive share option plan is available.
PLAN[c]	Dummy variable=1 if an all employee share plan is available.

Source : All variables derived from Datastream international unless otherwise indicated. Otherwise the letter a indicates the variable was derived from the London Business School Risk Measurement Service. b denotes the variable was derived from Who Owns Whom on the London Stock Exchange; c means that the variable was derived from a private sector market research company. To minimise measurement error five years data were used for the period 1981-1985, for those firms and variables for which they were available.