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Executive share ownership, experience and basic salaries: the influence on IPO share option schemes and performance

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ABSTRACT

Corporate governance research often focuses on two theoretical stands, agency theory and resource dependence theory. Whist both provide distinct theoretical roles, this paper combines them to argue that executive stock option plans (ESOs) can serve a dual role, that of re-alignment of managers' and shareholders' interests, and board stability, by 'locking' the executive to reward and thus retaining managerial talent. The paper focuses on a unique sample of 311 entrepreneurial initial public offerings. It examines their choice of schemes prior to and at the initial public offering (IPO). It gives consideration to ESO choices being associated with board ownership, executive wealth and cognitive characteristics of the IPO firm's management team. Finally, it examines performance in line with signalling theory, showing that IPO underpricing is reduced by the presence of executive stock options and that high growth positively moderates the link between underpricing and conditional ESO plans.

Key words: Corporate governance, Initial public offering, executive stock options, underpricing, signalling

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INTRODUCTION

Agency theory underpins much of the research on corporate governance. Studies have looked at board composition and characteristics (Arthur, 2001; Daily & Dalton, 1994; Filatotchev & Bishop, 2002; Hermalin & Weisbach, 1988; Hillman, Cannella, & Paetzold, 2000).

As such the structure of our paper is as follows. Firstly we look at agency theory and how it underpins much of the research in the corporate governance stream and how it describes the separation of ownership from control and its remedies to improve firm performance. Secondly, we examine the board of directors as a provision of company resources in light of the resource-based view of the firm. We then proceed to examine factors that can influence the use and choice of incentive pay schemes, to both motive performance and retain/recruit executive talent. Finally, we discuss important questions as to the strategic use of such schemes particularly in line with corporate governance and whether such schemes enhance performance, signal quality of governance or are simply a way to give additional pay to the executive directors.

Agency Theory

Agency theory underpins much of the research into corporate governance as it focuses on the separation of ownership and control (Jensen & Meckling, 1976). The separation of ownership and control creates the situation where one party (the owners) then has to delegate work to a manager (the agent). In particular, the classic agency problem is characterised by asymmetries of information, with the balance of power lying with the agent who may turn to opportunistic behaviour (Holmstrom, 1979). Theory then attempts to explain this agency relationship in terms of contracts that explain the rights of each party (Hart,

1995). Agency theory then encourages the implementation of policies and procedures to monitor the behaviour of the agent. One such way to aid this is to use incentives that specifically take steps to realign the interests of the agent with those of the principals (Fama, 1980; Fama & Jensen, 1983).

This is particularly pertinent at the point of the IPO as the company exposes itself to public investment through the open market. It purports that the board of directors should be encouraged to act in the shareholders best interests with the use of outcome based contracts which re-align the preferences of both the principal and the agent. One such accepted way of providing an outcome based contract is to incorporate the use of executive stock option schemes in the remuneration of the board of directors (Fama, 1980; Fama et al., 1983). These rely on the ability to reward the agent for acting in the interests of the owners by giving them ownership opportunities (Jensen & Murphy, 1990). Indeed best practice recommend that they are directly linked to performance outcomes (Association of British Insurers, 2004; Financial Reporting Council, 2006).

If corporate governance is defined as the structures, processes, cultures and systems that engender the successful operation of an organisation (Keasey, Thompson, & Wright, 1997) then stock option schemes could be considered as a corporate governance tool. As such schemes can be examined in their own right and this examination would extend the growth in governance research and reinforce the agency theory perspective.

Resource Dependency Theory

Resource dependency theory was developed to explain how organisations and/or individuals use power to obtain the resources needed for the firm to function. Utilising the resource dependence perspective, the board of directors can be seen to be a pool of resources for the company (Daily et al., 1994; Pfeffer & Salancik, 1978). Since individuals in critical positions

(particularly the top executives) control the resources, they are also able to exert influence over the determination of pay levels (Pfeffer & Davis-Blake, 1987).

Signalling

Signalling theory is based around the premise that information asymmetries exist between insiders of a firm and external bodies. This premise holds particularly true in the IPO context, when companies can be deemed to have better knowledge of the present value of the firm and future potential and cash flow than can investors. With particular reference to this, signalling within the IPO context has focussed on levels of underpricing (Beatty & Ritter, 1986; Certo, Covin, Daily, & Dalton, 2001a; Filatotchev et al., 2002; Pham, Kalev, & Steen, 2003). In going public, firms are deemed to transfer ownership and control to new shareholders.

THEORETICAL BACKGROUND AND HYPOTHESES

Bringing any company to the public market for the first time involves many standardised processes whether in the US or UK (Ellis, Michaely, & O'Hara, 1988; London Stock Exchange, 2002). However, it is not just the processes for flotation that must be undertaken; when it comes to gaining investors it is important to show that corporate governance has been taken seriously and systems are in place to protect the shareholders investment. Whilst other studies have shown that board composition has been crucial for success and performance (Certo, 2003; Certo et al., 2001a; Filatotchev et al., 2002; Mak & Roush, 2000) and retained ownership may enhance firms' values (McBain & Krause, 1989; Mikkelson, Partch, & Shah, 1997), this study enhances previous research by taking a cross discipline approach. It investigates executive pay and pay systems at the point of the IPO and speculates as to what this might communicate to investors through the offering document and how this may relate to underpricing.

The flotation of a firm sees the development of the classic agency problem: the divorce of ownership and control (Jensen et al., 1976). As such, the IPO firm provides a unique environment to examine any agency problem. Agency theory sees the development of pay structures that provide incentives based compensation schemes that gives the ability to reward the agents for acting in the best interests of the owners (Fama, 1980; Fama et al., 1983; Jensen et al., 1990). Indeed this has been the foundation of much research into executive pay within the mature company (Buck, Bruce, Main, & Udueni, 2003; Conyon, Peck, & Sadler, 2000; Jensen et al., 1990; Murphy, 1985). However, mature company research has had its focus on the relationship between pay and performance, rather than taking a more strategic overview of executive pay as a governance tool. Asfer (2006) shows a strong negative relationship between the level of managerial ownership and corporate governance factors thus demonstrating the substitutability of ownership and governance mechanisms. Executive pay, as determined by the Combined Code, could be considered as a strategic governance tool.

The standard UK executive stock option scheme provides the executive with the right (but not the obligation) to purchase shares at a fixed predetermined price (the 'exercise' or 'strike' price) following some specified period time (usually after a minimum period of three years). With direct comparisons difficult, incentive schemes have been categorised as present or not present, and where present, those that have no specific performance targets attached, referred to subsequently as 'unconditional' schemes, and those with specific pre-determined performance target requirements in order for the share options to vest ('conditional' schemes) (Allcock & Pass, 2006).

In the case of unconditional schemes there are no pre-determined performance requirements built in. The executive 'gains' if the market price of the company's shares at the time of vesting is greater than the 'exercise' price. However, it is recommended that most modern option schemes are 'conditional' (Financial Reporting Council, 2006) and have pre-

determined performance criteria attached thus preventing the executive from exercising their right to purchase until such performance criteria are met. Thus schemes developed in this way fulfil an undelaying premise that they are an effective and suitable way to bridge agency problems (Fama, 1980; Fama et al., 1983). This substitutability could also play a part in the IPO company. This is further supported by Alchian & Demsetz (1972) who support that the concentration of ownership may be an effective approach to controlling the agency problems caused by the separation of risk-bearing and decision functions in firms (Demsetz, 1983; Tihanyi, Johnson, Hoskisson, & Hitt, 2003)

Considering the basic dilution of ownership argument presented by Jensen and Meckling (1976) and the above, it would seem reasonable to suggest that:

Hypothesis 1a: Executives' ownership is negatively associated with the presence of equity based incentive schemes prior to the IPO
Hypothesis 1b: Executives ownership is negatively associated with the presence of conditional schemes prior to the IPO.

Brennan and Franks (1997) argue that in reality managers will want to retain ownership to prevent the control of the company going outside the firm, in spite of the transfer of ownership at the time of the IPO. There is a further school of thought that greater levels of retained ownership leads to better post IPO performance over a longer time period (Jain & Kini, 1994). However, Mikkelson et al (1997) argue it is not to the managerial equity post IPO that enhances performance but rather a smaller level of dilution at the time of the IPO. This is also re-enforced by south Asian-Pacific models as found by Cai and Wei (1997).

Building upon this, it would also seem reasonable that the levels of retained ownership at the time of the IPO could provide an adequate substitute for schemes being tied to any stringent

performance targets that can be deemed to link rewards to increases in shareholder value. As such:

Hypothesis 2: Executives' ownership is negatively associated with the presence of conditional equity based incentive schemes in the IPO firm.

Over the last decade there has been an increase in the use of variable pay packages for top executives (IRS Employment Review, 2000). This might be due to the recommendations of good practice in corporate governance or simple globalisation of pay strategies with the UK moving towards a more US-style' of executive rewards systems. More recently though, Deloitte & Touche (2005b) have reported a slowdown in the levels of pay that come from such schemes. PricewaterhouseCoopers, (2005) found that the value of long-term incentive grants increased by 10 percent on average in FTSE-100 companies in 2004, with the biggest increases arising in the largest companies. This however, represents a slower rate of increase compared with recent years which parallels the report by Deloittes & Touche. On average incentives comprised of 51 percent of FTSE 100 lead executives total earnings in year June 2004-2005 (IDS, 2005), this still represents a substantial amount of money.

It is not just the levels of bonuses and incentives that have been examined by consultancy companies but also basic salaries. Directors' remuneration levels in the FTSE 100 were not only boosted by high levels of incentives, but high increases in salaries and total cash (defined as base salary and bonus), with an average increase of 8.3 percent (IDS, 2005). Deloitte & Touche (2005a) warn newly floated firms that they should ensure base salaries are set at an appropriate level in order not to be out of line with the market. They also highlight that executive reward is an essential tool for recruiting further talent to the board, which might be particularly relevant for companies undertaking an IPO. However, if basic salaries are set too high, then the impact of performance based rewards might be reduced, similarly too low and the addition reward might be heavily relied upon. As such levels of

salary might impact on whether incentive schemes have performance conditions attached down to the likelihood of returns from them, thus:

Hypothesis 3: Executives' salary is negatively (positively) associated with the presence of unconditional (conditional) ESO scheme in the IPO firm.

The board of directors facilitate the decision making process and provide a pool of resources for the firm (Daily & Dalton, 1992). Organisational theorists and strategy research has already established a relationship between the skills of top executive teams and organisational outcomes (Beatty & Zajac, 1994; Certo, Daily, & Dalton, 2001b). As discussed in Chapter 2, the human capital theory of pay dictates that individual characteristic of the executives can be predictors of levels of executive pay for the top management team (Gerhart & Mulkovich, 1990). Entwined with this is the proposition that the literature further suggests that the top management team is critical to strategic direction, growth and firm performance (Hambrick & Mason, 1984). For example, it was found that entrepreneurs with prior new venture experience influenced their firms to make faster decisions (Forbes, 2001). This has been further linked to a firm's legitimacy and reputation (Daily & Schwenk, 1996; Zajac, 1988; Zajac & Westphal, 1996).

Within the investment world venture capitalists place the highest priority in the venture screening process on the quality of the top management team (Keeley & Roure, 1990; Muzyka, Birley, Leleux, & Bendixen, 1993). Indeed firms with more prestigious and experienced boards of directors at the IPO show better performance (by less underpricing) (Certo et al., 2001b). This is supported by Cohen and Dean (2001) who found that top management teams positively impact on the strategic value of new ventures.

From a resource based perspective, this is vitally important as the skills of the executive directors are seen to support the whole organisation (Pfeffer et al., 1978) and their

experience helps enhance the reputation of the company (Zahra & Pearce, 1989). Thus more prestigious executives have considerable human capital at stake with their reputation and as such are less likely to significantly under-perform. This would be acknowledged within the terms and conditions of employed executives at both a pay level and performance level. As such the strength of their reputation (and the thought of losing it) could provide a simple substitute for any incentive pay strategy. Hence,

Hypothesis 4: Executives' reputation is negatively (positively) associated with the presence of conditional (unconditional) ESO scheme in the IPO firm

Most of the existing research on underpricing focuses on the apparent information asymmetries that exists between the IPO firm and outside investors (Certo et al., 2001a; Espenlaub & Tonks, 1998). This has been developed from the original work of Rock (1986). Rock assumes that various parties to the IPO are 'uninformed' about the true values of the shares whilst others are 'informed'. As such information the information asymmetry that exists can lead uniformed investors to subscribe to what may be considered less successful IPOs. There is then the potential for these uniformed investors to withdraw from the market altogether, keeping them in the market is often seen as one rational as to why underpricing occurs.

Another stand of thought within the underpricing literature is that the initial owners of the company underprice the IPO in order to signal favorable information about the value of the firm to investors (Allen & Faulhaber, 1989; Daily, Certo, Dalton, & Roengpitya, 2003; Espenlaub et al., 1998; Michaely & Shaw, 1994). Governance factors can then be considered as a signal of a well managed company that has future potential for investors' returns. According to some signaling research, retained ownership by the executives can lead to higher firm value (McBain et al., 1989). Executives of high quality firms, by retaining

higher ownership levels, communicate favorable information to investors and confidence in future returns (Beatty et al., 1994; Filatotchev et al., 2002; Mikkelson et al., 1997).

Another governance factor that can indicate quality of the firm is the number of non-executive independent directors present on the board and the level of board independence that this brings. A strong, independent board shows accountability (Higgs, 2003; Roberts, McNulty, & Stiles, 2005), which will signal good practice to the potentially uniformed investor.

Similarly, the choice of underwriter bringing the firm to the market had also been seen to affect the issue price and subsequently underpricing. Experienced or 'prestigious' underwriters certify the IPO value to the uninformed investor (Loughran & Ritter, 2004). All of these factors have been linked to underpricing, yet within the agency theory paradigm, the use of incentive pay to realign the board executives with the shareholders can also be seen as good corporate governance. We therefore argue that this too could be considered a positive signal to future investors, hence:

Hypothesis 5: Underpricing is negatively associated with the presence of conditional executive stock option schemes prior to the time of the IPO.

METHODS

Sample and Data

The data sample used in this analysis comprises of a unique data set of 311 initial public offering companies that have founders on the boards of directors at the time of flotation. Between the period of 1 January 1998 and 31 December 2002, a total of 766 companies were floated as initial public offerings on the London Stock Exchange (Main market and the TechMark) and the Alternative Investment Market (AIM) that were UK incorporated. For the sample selections the prospectuses for all 766 companies were obtained. These were predominately obtained from Thomson Research, which provides a comprehensive coverage of company filings for publicly quoted UK companies. Missing prospectuses were obtained

either via company web sites, or by telephone/written request to the companies or their advisors whichever was deemed more appropriate.

The prospectus provides a wealth of information including details of the company's financial history, background details to the board of directors, remuneration contract detail with levels of basic salaries, share ownership and details of any equity based incentive schemes. Each prospectus was examined and particular emphasis given to the section detailing the history and founders of the company. Any companies that were unit or investment trust were excluded from the sample first, (these have particular governance characteristics) then those deemed to involve a de-merger, merger or acquisition, corporate spin off, equity carve outs, reorganisations, or could be considered as solely acquisition vehicles were also excluded (Filatotchev et al., 2002). This resulted in 311 companies who clearly demonstrated that they had been developed via the entrepreneurial process with entrepreneurial founders and those founders were serving as directors at the time of the company's flotation.

Variables

Within the UK, the application for listing (prospectus) is a legal document. Any director of a newly listed company must accept legal responsibility for the information supplied in the prospectus during the flotation process (London Stock Exchange, 2002). Thus the authenticity of any information taken directly from the IPO prospectus is assured. It is this document that has been the root source for most of our data collection.

Dependent Variables

Stock option schemes are diverse by their very nature. It is almost impossible to categorise one scheme as being 'more effective' than another. For this reason, simple dichotomous indicator variables provided the best means of coding for this analysis. The presence of a stock option scheme prior to the IPO was coded as 1 and 0 otherwise. Similarly, whether the scheme had specific performance targets attached at the time of the IPO in order for the

options to vest to the directors was also coded as 1 (conditional scheme) else 0 (unconditional scheme where grants vest 'unconditionally' to the executive following the specified period of time only.)

For the OLS regressions, we used the IPO's underpricing as the dependant variable and a measure of short term performance. We defined underpricing as the percentage difference in the offer price and the price at the end of the first day of trading (Barry, Muscarella, Peavey, & Vetsupens, 1990).

Independent Variables

Ownership for the purposes of the analysis was split into the pre and at IPO positions as shown in the prospectus. Ownership details were initially collected against each individual director with dummy variables created to indicate board position. Particular attention had to be given where shares were attributed as being part of trusts or held by seemingly outside firms that were controlled by a particular director. As a result of this, where the specific voting rights were controlled held by the individual director, these were included in their share ownership. A cumulative total was used for all executive directors' ownership and for non-executive directors' ownership.

We defined executive's experience as the total outside management positions and board memberships currently held and previously held over the last five years, as disclosed in the prospectus. In line with previous research, board independence was taken to be the ratio of non- executive independent directors to executive independent directors. Executive compensation was taken to be the basic salary (i.e. the guaranteed amount) paid to the executives'. This measure was deemed to fairly represent the risk free remunerative return to the executive. Due to research in mature companies stating that size has an implication on salary (Conyon, Gregg, & Machin, 1995; Conyon et al., 2000; Murphy, 1985; Murphy,

2003), we adjusted for company size by dividing by the sales figure in the year prior to the IPO.

Control Variables

In order to prevent any unauthentic correlations in the binary logit and multiple regression analysis, several control variables were used. Previous research indicates that size and age of the company can have effects on organisational structures (Mikkelson et al., 1997). In recognition of this, we used the logarithm of the market capitalization at the offer price as one representation of size and the logarithm of sales in the year leading up to the IPO as another. The age of the firm has been used to control for the sophistication of the firm as its organisational structure and the development of governance strategies may be linked to life-cycle development effects (Core, Holthausen, & Larker, 1999; Hall & Leibman, 1998; Mikkelson et al., 1997). The age of the firm was calculated in years from the point of founding to the point of the IPO. SIC codes were examined to identify 'high-tech' companies. A dummy variable was created, coded 1 for a high tech company, otherwise 0.

The sample covers a five year period with a stock market peak mid way through. Boom periods by their nature encourage a large number of new issues and offer high stock returns. To account for such fluctuations two variables were created. The market return variable was calculated as a weighted average of the buy-and-hold returns of the AIM index in the three months prior to the IPO date. The weights were equal to 3 for the first month, 2 for the second month and 1 for the third month prior to the offering, and the weighed sum was divided by 6. The market volatility was calculated as the standard deviation of the one-month returns of the AIM index in the immediate month prior to the IPO first-trade date. AIM was deemed to be the most appropriate indicator as over 70% of the companies in the sample chose this market to float on.

As previous IPO research suggests underwriter quality may affect the IPO firm's performance. The UK does not demonstrate the same underwriter system as the US enable rankings identical to Loughran & Ritter (2004). To be comparable to this, all underwriters were noted over the sample period of time along with their cumulative market share. A dummy variable was created using 1 to indicate the top 5 underwriters over the period, else 0. Similarly, the involvement of venture capitalists can have an effect on the governance of firms (Barry et al., 1990). Venture capitalist backing was a dummy variable coded 1 if the company had VC backing and 0 otherwise. Venture capital firms were identified from the British Venture Capital Association's Directories covering the sample period.

RESULTS

Table 1 provides the descriptive statistics for all variables used. These have been categorised into the companies who have stock option schemes prior to their IPO and those who do not. Furthermore those with schemes, have been subdivided into firms who tie grants of options to specific performance criteria in order for them to vest to the executive (conditional schemes) and those whose schemes vest only after the required period of time (non conditional schemes). Of the 311 companies in the sample, 126 firms had stock option schemes prior to their IPO. In terms of general firm and director characteristics, older firms, with lower levels of executive ownership are more likely to have schemes (consistent with agency theory predictions). Furthermore, these firms have less experienced board of directors who have higher levels of monitoring (board independence) and venture capitalist involvement.

--------- Take in Table 1 near here ---------

Initial investigations showed strong correlations between the levels of executive ownership and incentive schemes. Indeed correlations significant at the 0.01% level were reported for

no schemes and unconditional incentive schemes, thus reinforcing agency theory. Furthermore, experience and basic salary also had correlations with stock option schemes.

---------- Take in Table 2 near here ----------

The first stage of further examination was to examine the relationship between specific executive director characteristics and determine whether these had any significant effect on whether stock option schemes were used by the firm. Table 3 shows the results of the binary logit analysis examining the ownership and experience of the executives, along with their levels of basic remuneration. In all models, the levels of ownership by the executive directors was significant and in line with agency theory predictions. The greater levels of ownership reduce the need for the use of stock option schemes, thus hypothesis 1a and 1b, ownership being negatively associated with the presence of ESO schemes pre the IPO, and conditional schemes pre the IPO is supported. Model 4 shows no support for hypothesis 2, although the founder domination of the board is marginally significant here.

---------- Take in Table 3 near here ----------

Model 5 shows that basic salary of the executives has a substitution effect on the incentive schemes and model 6 shows executives experience is also a significant factor driving the choice of such schemes, thus hypotheses 3 and 4 are supported.

Pay schemes prior to and at the time of the IPO further signal governance aspects to future investor and reduce the levels of underpricing experienced at this time. Thus table 4 shows strong support for hypotheses 5.

---------- Take in Table 4 near here ----------

It appears that these not only signal future good governance but can add complementary effects to other governance aspects such as executive ownership and board independence. Thus table 4 shows strong support for hypotheses 5,

DISCUSSION

The main aim of this paper was to examine the factors influencing the presence of stock option schemes and to assess what type of roles such schemes might have at the point of the IPO. The results of this study provide evidence that investors view the presence of stock option compensation positively. We argue that any type of incentive scheme, whether linked to specific targets or not could indeed achieve board alignment with the shareholders and have an added retention effect to the executives who have been awarded grants. Integrating the agency and resource perspective gives enhanced insight into the particular challenges faced by entrepreneurial firms at the point of their IPO. If upholding the single view of agency theory, that the use of stock option schemes motive key managers to perform and align the financial interests of the executive with the shareholders, then the reality is that all stock option schemes should have performance targets attached in order to ensure that grants truly reflect increased shareholder return. Our study shows us though that the vast majority of schemes (82%) in place prior to the IPO are non conditional, thus another tacit function might be emerging once or retaining executive talent on the board. In an ever increasing global recruitment environment, this might prove to be particularly relevant.

Stock options provide a rewarding way of retaining key players on the board for extended periods of time particularly through a time of company change and greater exposure to external influences.

LIMITATIONS AND FUTURE RESEARCH

This research is not however without its limitations. The sample's focus is on the entrepreneurial IPO and this sample should be extended to provide a greater depth of investigation.

Further extensions to this research could be suggested. The dilution of ownership at the point of the IPO might just be the initial change, and that over time control would be lost by the board as shareholdings become more dispersed and involve different groups requiring different levels of monitoring and performance. Boards will therefore progress and become more independent and with this might come changes either through greater monitoring or by gaining a pool of experienced independent directors who are more incentive pay aware.

Research on long-term pay performance sensitivities could be undertaken with the growth of post IPO financial data. This would give a beneficial comparator to the wealth of research undertaken with regards to executive pay and the mature listed company. Furthermore, if undertaken following the initial three year cycle of stock option grants it would also provide enhanced perspectives to corporate governance life-cycle effects.

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Table 1: Descriptive statistics

	Pre IPO				At IPO
Variables	With scheme	Conditional	Un-conditional	Without scheme	Conditional
N	126	22	104	185	145
Underpricing	.0874	-.0097	.1084	.2132	.1180
	(.3002)	(.2989)	(.2977)	(.4011)	(.2997)
Executives' Ownership Pre IPO	35.24	35.93	35.11	53.82	47.48
	(25.12)	(33.89)	(23.25)	(29.19)	(28.94)
Executives' Ownership at IPO	26.14	31.34	25.01	36.63	32.59
	(20.37)	(27.05)	(18.59)	(22.81)	(21.39)
Executives' Experience	19.55	8.50	21.11	20.38	19.16
	(20.40)	(7.18)	(21.18)	(15.91)	(16.10)
Mean Executives' Compensation	169394	264882	148997	85497	155730
	(215232)	(383803)	(153630)	(65433)	(203761)
Founder domination	25.10	26.96	24.70	31.85	27.45
	(12.47)	(15.42)	(11.80)	(14.96)	(13.84)
Board Independence	44.04	44.39	43.97	40.37	41.65
	(14.67)	(18.14)	(13.93)	(14.21)	(13.75)
Sales -1 *(in £000)*	35934	58869	30732	8547	30481
	(124396)	(151308)	(117748)	(30204)	(10595)
Hi-Tech Company	.34	.27	.36	.24	.30
	(.476)	(.456)	(.481)	(.430)	(.461)
Company Age	7.78	9.31	7.45	5.35	7.61
	(6.80)	(5.72)	(6.99)	(5.90)	(6.94)
Venture Capitalist backed dummy	.40	.32	.42	.17	.31
	(.492)	(.477)	(.496)	(.374)	(.465)
Underwriter Reputation	.33	.27	.35	.41	.36
	(.473)	(.456)	(.478)	(.492)	(.481)
Market Return	-.0216	-.0180	-.0223	-.0078	-.0159
	(.0648)	(.0477)	(.0680)	(.0791)	(.7449)
Market Volatility	.0105	.0071	.0112	.0092	.0101
	(.0093)	(.0072)	(.0095)	(.0077)	(.0090)

Table 2: Correlation matrix for all variables

		1	2	3	4	5	6	7	8	9
1	Pre IPO presence of incentive scheme	1								
2	Pre IPO presence of any conditional scheme	.334**	1							
3	Pre IPO presence of any unconditional scheme	.859**	-.196**	1						
4	Pre IPO no incentive scheme	-1.000**	-.334**	-.859**	1					
5	At IPO: presence of any conditional scheme	.066	.235**	-.062	-.066	1				
6	Underpricing	-.168**	-.130*	-.104	.168**	-.078	1			
7	Executives' Ownership pre IPO	-.314**	-.095	-.276**	.314**	.045	.116	1		
8	Executives Ownership at IPO	-.230**	-.013	-.233**	.230**	.011	.071	.842**	1	
9	Executives Experience	-.023	-.147*	.043	.023	-.055	-.050	.099	.069	1
10	Executive Compensation	-.082	-.025	-.071	.082	.062	-.048	.037	-.069	-.042
11	Founder domination	-.231**	-.041	-.218**	.231**	-.106	.100	.164**	.149**	.058
12	Board Independence	.125*	.048	.103	-.125*	-.003	-.058	-.383**	-.380**	-.216**
13	Sales -1 (in £000)	.154*	.130*	.083	-.154*	.096	-.065	-.028	-.014	.044
14	Hi tech company	.107	-.006	.115*	-.107	.040	.058	-.083	-.004	-.191**
15	Company Age	.187**	.129*	.124*	-.187**	.166**	-.075	.105	.092	-.113
16	Venture Capitalist Backed dummy	.260**	.036	.251**	-.260**	.089	.000	-.299**	-.260**	-.076
17	Underwriter reputation	-.073	-.059	-.044	.073	-.047	.032	.064	.054	-.017
18	Market Return	-.091	-.017	-.086	.091	.008	.340**	.160**	.112*	-.104
19	Market Volatility	.074	-.086	.124*	-.074	.047	.029	.028	.035	-.045

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

		10	11	12	13	14	15	16	17	18	19
1	Pre IPO presence of incentive scheme										
2	Pre IPO presence of any conditional scheme										
3	Pre IPO presence of any unconditional scheme										
4	Pre IPO no incentive scheme										
5	At IPO: presence of any conditional scheme										
6	Underpricing										
7	Executives' Ownership pre IPO										
8	Executives Ownership at IPO										
9	Executives Experience										
10	Executive Compensation	1									
11	Founder domination	.169**	1								
12	Board Independence	-.004	-.227**	1							
13	Sales -1 (in £000)	-.064	-.187**	.002	1						
14	Hi tech company	.038	.006	.049	-.037	1					
15	Company Age	-.065	-.224**	-.005	.401**	.015	1				
16	Venture Capitalist Backed dummy	-.048	-.042	.164**	.079	.098	.139*	1			
17	Underwriter reputation	-.060	.049	-.133*	-.036	-.002	-.041	-.096	1		
18	Market Return	.024	.002	-.062	.039	-.057	.098	.036	.010	1	
19	Market Volatility	.095	-.032	.023	-.126*	.197**	-.144*	-.039	.004	-.063	1

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

Table 3: Regression analysis of the effects of ownership, experience and compensation on choice of stock option scheme

pendent Variable	Incentive Scheme Pre IPO	Incentive Scheme Pre IPO	Conditional Incentive Scheme pre IPO	Conditional Incentive Scheme at IPO	Conditional Incentive Scheme Pre IPO	Conditional Incentive Scheme pre IPO	Condition Incentive Scheme IPO
	Binary Logit Model 1	Binary Logit Model 2	Binary Logit Model 3	Binary Logit Model 4	Binary Logit Model 5	Binary Logit Model 6	Binary Lo Model 7
nstant	-1.223	-.474	-3.120 *	-.829	-5.378 *	-1.746	- 4.466
ecutives' Ownership pre IPO		-.020 ***	-.001		-.001 †	.008	.004
ecutives Ownership at IPO				-.001			
ard Independence	1.223	.731	2.457	.563	3.250 †	3.504 †	4.783 †
ecutive Compensation					.722 *		.762 †
ecutives Experience						-.099 *	-.113 *
under domination	-.031 **	-.028 **	-.029 †	-.019 †	.026	.036 †	.031
es -1 (in £000)	.399 *	.450 **	.164	.398 **	.341	.638 †	.017
ech company	.345	.307	-.649	.113	-.544	-.554	-.427
mpany Age	-.024	-.001	.079	.030	.058	.073	.059
nture Capitalist Backed dummy	.749 †	.371	.407	.544 *	.395	.771	.663
correct predictions	52.6	70.7	80.6	61.8	82.5	85.7	89.0
gelkerke R^2	.167	.246	.105	.128	.187	.297	.375
del X^2 value	33.19 ***	45.21 ***	6.77	23.41 ***	12.33 †	15.31 **	19.80
mber of Observations	311	311	126	126	126	126	126

≤0.10; * p≤0.05; ** p≤0.01, *** p≤0.001

Table 4: Regression analysis of the effects of incentive schemes at IPO on underpricing

Dependent variable	Underpricing	Underpricing	Underpricing	Underpricing	Underpricing
	OLS model 1	OLS model 2	OLS model 3	OLS model 4	OLS model 5
Constant	.091	.191	.187	.198	.313 *
Board Independence	-.078	-.078	-.067	-.084	-.107
Executives Retained Ownership at IPO	-.001	-.001	-.001	-.001	-.001
Venture Capitalist Backed dummy	.052	.052	.048	.053	.058
Underwriter reputation	.054	.054	.052	.065	.061
No Scheme pre IPO	.100 **	-.100 **			
Pre IPO presence of incentive scheme		-.147 **			
Pre IPO presence of any conditional scheme			-.182 **	-.172 **	-.162 **
Pre IPO presence of any unconditional scheme			-.078 †	-.073 †	-.079 †
At IPO: presence of any conditional scheme				-.024 †	-.015 †
Executives Experience					-.027 *
Executive Compensation					-.009
Sales -1 (in £000)	.018	.018	.018	.024	.003
Hi tech company	.057	.057	.056	.054	.045
Company Age	-.006	-.006	-.005	-.005	-.004
Market Return	1.512 ***	1.512 ***	1.501 ***	1.474 ***	1.592 ***
Market Volatility	.581	-.581	.097	-.443	-.661
Adjusted R-squared	.077	.077	.079	.075	.086
F-statistic	2.989 ***	2.989 ***	2.866 **	2.544 **	2.497 **

† p≤0.10; * p≤0.05; ** p≤0.01, *** p≤0.001