# **Broad-based Employee Stock Options Grants and IPO firms**

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## **Broad-based Employee Stock Options Grants and IPO firms**

### Abstract

This paper examines the broad-based grant of employee stock options (ESOs) in the period following the Initial Public Offering (IPO). Stock option grants are used to reduce the negative effects of conflicts of interests associated with a firm's going public. We document that option grants can be seen as corporate governance instruments for a number of model specifications. Also, we find that there is a robust relation between option grants and market and accounting returns, respectively. To the best of our knowledge, no previous study has investigated the determinants of the grants of employee stock options in the post-IPO period to both upper-level and lower-level executives during a period of sixteen years. Because our cross-sectional data amply encompasses more than a business cycle we are able to examine the grants of ESOs across tight and soft labor markets. During the former type of labor market it appears that more options are granted. Also, the empirical results provide evidence that option grants are an increasing function of the employees' benefits for the firm. Finally, our findings show that cash constrained firms appear to use employee stock option grants in place of cash compensation.

JEL classification: G32, J33

Keywords: option grants, corporate governance, IPOs

## **Broad-based Employee Stock Options Grants and IPO firms**

### **1. Introduction**

An IPO (initial public offering) is a classic example of an event in a firm's history at which agency conflicts between inside and outside shareholders may arise (for instance, Beatty and Zajac, 1994; Engel, Gordon and Hayes, 2002; Baker and Gompers, 2003). According to our data, at the time of its IPO the firm's inside shareholders sell a significant number of their shares to investors. Consequently, these inside shareholders are more apt to shirk and not to exert the same effort as before IPO (Jensen and Meckling, 1976). The grant of stock options can reduce agency conflicts. There is a large body of literature about option grants to upper-level executives (for instance, Jensen and Murphy, 1990; Yermack, 1995; Core and Guay, 1999). However, there are only a few empirical studies that pay attention to broad-based option grants (Core and Guay, 2001; Huddart and Lang, 1996; Oyer and Schaefer, 2004). The key issue of

this paper is on option grants to upper-level and lower-level employees of a cross-sectional sample of IPO firms during the years 1985-2000. In particular, we believe that broad-based option plans of IPO firms are an attractive sample to examine due to the imminent conflicts of interest that can arise because of the transition of ownership from inside to outside shareholders when a firm goes public . From this point of view employee stock options can play an important role as a corporate governance mechanism. Upper-level and lower-level employees who own stock options continue to bear a substantial part of the wealth consequences of their actions after IPO and, therefore, will be more likely to act in the interest of outside shareholders. Besides option grants as a corporate governance mechanism we examine the incentive, the retention and the cash constraint effects of broad-based option grants.

Our sample consists of 54 Dutch IPO firms, of which we investigate the grant of employee stock options (ESOs) in the year of their IPO and two years thereafter. The data shows that inside ownership decreases by about one third from 52.1 percent before IPO to 34.7 percent after IPO. This provides evidence that the dilution of retained ownership at IPO is substantial. Our findings show that stock option grants are a positive function of accounting measures and stock market returns. Furthermore, we find that stock option grants and different measures of monitoring (by inside shareholders, venture capitalists and independent board members, respectively) can be seen as substitutes. The empirical results show a number of novel findings. Because our cross-sectional data encompasses sixteen years, *i.e.* more than a business cycle, we are able to examine the grants of ESO s across tight and soft labor markets. We document that more options are granted during tight labor markets. Also, the empirical results provide evidence that option grants are an increasing function of the employees' benefits to the firm. Finally, we find strong evidence that option grants are used when a firm has cash constraints.

The remainder of the paper is organized as follows. In section 2 we present our hypotheses. We describe our data in section 3. The empirical results are in section 4 and section 5 concludes.

### 2. Hypotheses and variable measurement

In this section we discuss the arguments for adopting broad-based stock option grants. Previous studies on stock options (for instance, Core and Guay, 2001; Engel, Gordon and Hayes, 2002; Huddart and Lang, 1996; Oyer and Schaefer, 2004) discuss that ESOs can be used in several ways: 1) as incentives, 2) as substitute for corporate governance mechanisms, 3) to retain employees, and 4) when a firm has cash constraints. This study examines the extent to which those effects apply to broad-based option grants of IPO firms.

The dependent variable in our option grants model is the value of all employee stock options that are granted during the fiscal year divided by the sum of the value of the option grants and the fixed compensation paid to all employees of an IPO firm during the same year. Hereafter, we will refer to this dependent variable as option grants. The value of the option grants is calculated with the help of the Black and Scholes model (1973) as modified by Merton (1973) for dividends.

### 2.1. Incentives

Welbourne and Andrews (1996) show that stock option programs and employee profit sharing increase the rate of survival of IPO firms in the United States. Smith and Watts (1992) argue that firms with valuable growth opportunities require high-quality staff to successfully exploit these opportunities. High-quality employees will be interested in stock-based compensation, such as stock options, which allow them to benefit from future increases in firm value. A variable that captures a firm's growth opportunities is the market-to-book ratio, which is the market value of the IPO firm's equity plus the book value of its short and long-term debt divided by the book value of its assets as our proxy for growth opportunities. The market-tobook ratio is widely used as a measure of a firm's growth opportunities in the setting of option grants (for instance, Gaver and Gaver, 1993; Barber and Lyon, 1996). Since firms with higher growth opportunities are more difficult to monitor, ESOs can also be used to address the agency

conflicts inherent to the latter type of firms. We expect a positive relation between option grants and the market-to-book ratio.

Liang and Weisbenner (2001) analyze stock option grants to employees in the United States. They document that there is a greater demand for ESOs following stock price increases and less willingness to accept stock options when past stock price performance has been poor. Engel, Gordon and Hayes (2002) report similar findings for option grants to CEOs of U.S. IPO firms. Because, in general, there is a positive relation between a firm's change in net income and its stock price, and because employees are affected by economic trends (Liang and Weisbenner, 2001; Heath, Huddart and Lang, 1999), we assume that option grants are an increasing function of a firm's past accounting and market performance. We use two variables as measure for past accounting and market performance: a firm's growth rate of net income, and its cumulative stock return.

### 2.2. *Corporate governance mechanisms*

Many studies document an inverse relation between managerial stock ownership and the use of options (for instance, Mehran, 1995; Bryan, Hwang and Lilien, 2000; Ryan and Wiggins, 2001). Baker and Gompers (1999) examine the determinants of CEO pay and ownership in a sample of U.S. IPO firms from 1978-1987. The latter authors conclude that option grants increase incentives and help to mitigate agency problems in IPO firms, but only when the CEO does not own much stock. Undiversified managers who already possess large shareholdings in the IPO firm may be unwilling to accept stock options, as it would increase the risk exposure of their wealth beyond acceptable levels (Beatty and Zajac, 1994; Toyne, Millar and Dixon, 2000). When an IPO firm has large retained ownership, its holders can directly monitor the actions of a firm's managers. Thus, option grants are a decreasing function of retained ownership.

In addition, Beatty and Zajac (1994) find an inverse relation between the fraction of independent board members and the use of stock options in U.S. IPO firms. They conclude that

board monitoring acts as a substitute for stock option grants. Baker and Gompers (2003) find that venture capitalists improve the effectiveness of board supervision in IPO firms. Engel, Gordon and Hayes (2002) document that external monitoring by venture capitalists is a substitute for accounting performance measures. External monitoring in the form of monitoring by venture capitalists (VCs) or independent members in the board of non-executive directors provides an alternative to equity-based incentives. Two variables capture external monitoring in our model: 1) the percentage of non-executive directors affiliated to venture capital firms and 2) the percentage of independent members in a firm's supervisory board<sup>1</sup>. Regarding twenty IPOs in our sample venture capitalist firms sold only part of their equity stake upon IPO. In those cases the venture capital firm remained represented in the board of non-executive directors. We predict that option grants should be lower when external monitoring is greater.

In the Netherlands setting, firms typically adopt takeover defenses upon IPO (Roosenboom and Van der Goot, 2003). These takeover defenses make an unfriendly takeover practically impossible. When takeover defenses are adopted the firm's outside shareholders are deprived of their voting rights: those defenses are an effective anti-corporate governance mechanism. Roosenboom and Van der Goot (2003) document that takeover defenses are motivated by manage rial entrenchment. As a consequence, shareholders of IPO firms that have adopted takeover defenses will not be capable to grab potential takeover premiums. According to the latter authors, due to the inherent agency costs an IPO firm with more takeover defenses to have less option grants.

<sup>&</sup>lt;sup>1</sup> Dutch companies have a two-tier board structure. The management board consists of executive directors and is entrusted with the day-to-day management of the company. A Dutch company's supervisory board consists of non-executive directors and is responsible for supervising the executive directors.

### 2.3. *Retention of employees*

In general, it is important to competitively reward key employees to prevent them from leaving the firm. For example, Welbourne and Andrews (1996) show that the retention of employees who are key for the success of the company is of great importance for IPO firms. In particular, the retention argument applies to IPO firms with relatively few employees who possess firm-specific knowledge. Oyer (2004) derives a model that possibly reconciles agency theory with the fact that employees can be rewarded or punished for things they cannot control. His model yields a number of empirical testable implications, such as the relation between the adoption of option grants and the firm's costs of replacing workers. One implication from Oyer's model (2004) is that a firm will grant more options when the benefits from its employees are greater. A variable that captures those benefits is the amount of annual sales per employee. An employee, who realizes more sales, has more value for a firm. Hence, we expect option grants to be an increasing function of a firm's sales per employee.

Also, Oyer (2004) infers that employee ownership is relatively attractive in strong economies and tight labor markets. Option grants are a relatively inexpensive and simple way to adjust worker compensation to market conditions. Because our data encompasses more than a business cycle, namely the years 1985-2000, we are able to test Oyer's prediction. During the years 1985-1992 the Dutch economy can be characterized as weak with relatively high rates of unemployment, while during the years 1993-2000 the economy was strong with yearly decreasing rates of unemployment. Therefore, we have included in our model a dummy (named *After1992*) with a value of zero for the years 1985-1992 and a value of one for the years 1993-2000. We assume that during the economic upswing of the years 1993-2000 the relation between the *After1992* dummy and option grants will be positive.

### 2.4. Cash constraints

Finally, we examine the cash constraint effect option grants. Cash constrained firms can use employee stock option grants in place of cash compensation. For instance, see Core and

Guay (2001), Ittner, Lambert and Larcker (2003), and Oyer and Schaefer (2004). We have examined three variables as proxies for the amount of cash available for compensation payments. The first variable that we expect to affect the ability of the firm to pay its employees cash compensation is the amount of cash per employee. The second variable that measures a potential cash constraint is the amount of net working capital per employee. This variable equals current liabilities minus current assets per employee. We expect the latter two variables (*Cash per Employee* and *Net Working Capital per Employee*) to have an inverse relation with option grants. From the correlation matrix (not reported) it appears that there is a high correlation between both proxies for cash constraint. Hence, we will include only the variable *Cash per Employee* in our model. The third variable that affects the amount of cash, is the firm's pay-out ratio, which is the firm's dividend paid divided by its net profit. Firms with a high pay-out ratio will require more cash. Because these firms will seek non-cash compensation payments for their employees, option grants will be positively associated with a high pay-out ratio.

### 2.5. Controls

Our model includes several control variables. We control for risk using the yearly average standard deviation of daily stock returns from 30 days after IPO until the end of fiscal year 0, 1 or 2, respectively. We omit the first 30 days after IPO because during this period underwriters may have stabilized the stock price of the IPO firm. Further, we control for technology firms by including the variable *IT-dummy* in our model that equals one for technology firms and zero otherwise. Welbourne and Andrews (1996) document that smaller firms with less employees use more option grants. Therefore, the log of the number of employees is included in our model. To account for a potential size effect we have examined the variable *Log of Sales*. However, the correlation between the variables *Log of Number of Employees* and *Log of Sales* appears high. Therefore, we have included in the model *Log of Number of Employees* only.

Based upon the hypotheses mentioned earlier, we specify the following model: *Option*  $Grants_t = a_0$ 

 $+ a_1Market-to-Book \ ratio_t + a_2Profit \ Growth_t + a_3Cumulative \ Stock \ Return_t$ 

+  $a_4$ Retained Ownership  $_t$  +  $a_5$ Venture Capital Monitoring  $_t$  +  $a_6$ Independent Board

 $Monitoring_t + a_7 Number of Takeover Defenses_t$ 

+  $a_8Cash per Employee_t + a_9Pay-out ratio_t$ 

+  $a_{10}$ Sales per Employee  $_t$  +  $a_{11}$ After1992-dummy

+  $a_{12}$ Volatility  $_{t}$  +  $a_{13}$ IT-dummy +  $a_{14}$ log(Number of Employees)  $_{t}$  +  $e_{t}$ 

where t = 0 is the year of IPO, t = 1 is the first fiscal year after IPO, and t = 2 is the second fiscal year after IPO. The variable  $e_t$  is a disturbance term.

### 3. Data and sample description

Our sample consists of firms that have gone public on Euronext Amsterdam during the years 1985 to 1998. We have examined each IPO firm during three consecutive years. The accounting data of three subsequent fiscal years for every firm is hand-collected. The data comes from four documents: the IPO prospectuses and three annual reports, namely from the year of IPO and the two subsequent years. Stock prices are from Datastream. All money amounts are in constant prices computed with the help of the consumer price index of the year 2001. In the Netherlands' setting, during the period examined listed companies only have to disclose the aggregate number and exercise price of option grants in their annual report. This limited disclosure requirement is typical for Continental European countries, such as Germany and France (Ferrarini, Moloney and Vespro, 2003). As a result, we cannot distinguish between ESOs that are granted to upper-level and lower-level executives. Using data from Netherlands'

listed companies Duffhues, Kabir, Mertens and Roosenboom (2002) report that more than 70 percent of all outstanding options in 1997 are held by board members.

As can be seen in table 1, our initial sample consisted of 126 IPOs on Euronext Amsterdam during 1983-1998 of which 66 IPO firms did not provide stock options. We have included all IPO firms that had already issued employee stock options upon listing. Because of incomplete or missing data we have omitted 6 firms. As a consequence, the final sample consists of 54 IPOs, which should result in 162 firm-year observations. Firms that were delisted because of mergers and bankruptcies during the two years after IPO remained in the sample until the time of delisting to avoid survivorship bias. Because of missing data our final sample consists of 158 firm-year observations.

### [Please insert Table 1 about here]

As noted earlier, option grants are measured as the value of the option grants as percentage of the sum of the employees' fixed compensation and the value of the option grants. Figure 1 shows that the value of option grants as percentage of the sum of fixed compensation and the value of the outstanding options is increasing from 3 to more than 5 percent during the period examined.

### [Please insert Figure 1 about here]

We use the market-to-book ratio as our proxy for a firm's growth opportunities. This variable is the market value of the IPO firm's equity plus the book value of its short and long term debt divided by the book value of its assets. As can be seen in Table 2, the average (median) value of the market-to-book ratio is 5.2 (2.8). The average (median) number of employees is 7,403 (521). The average (median) market value of the IPO firms equals €,090

(O8.8) million. The volatility of the stock returns is calculated as the average standard deviation of the daily stock returns from 30 days after IPO until the end of fiscal year 0, 1 or 2, respectively. The average volatility equals 43.2 percent. The firm's cumulated stock return measured from the date of its listing including the IPO firm's first-day return to the end of fiscal year 0, 1 or 2, respectively, is 38.7 percent, on average.

[Please insert Table 2 about here]

As can be seen in table 2, the average number of options granted is 263,581. Figure 2 shows that the number and the percentage of option grants increase during the years examined.

[Please insert Figure 2 about here]

On average, retained ownership after IPO is 33 percent. As reported earlier, before IPO retained stock ownership was much larger. At the time of IPO stock ownership decreases from an average of 52.1 percent to 34.7 percent immediately after IPO. This underlines the dilution effect that the IPO has on the equity stake of an IPO firm's inside shareholders. On average, venture capitalists occupy 8.2 percent of the supervisory board seats. Independent members in the board of non-executive directors possess 88.9 percent of the seats. The average number of takeover defenses is 1.9. The average (median) amounts of cash and sales per employee are 0.030(0.009) million and 0.211(0.125) million, respectively. The average (median) percentage of pay-out is 4.4 (13.5) percent. As can be inferred from table 2, two firms paid dividends although they were making a loss.

### 4. Empirical results

In the analysis we pool cross-sectional data and estimate the models for option grants with the help of the Tobit regression method with fixed effects. As can be seen in table 3, there are 58 cases where the number of options granted is zero. Therefore, the Tobit method is used that adjusts the regression estimates for observations where the dependent variable has a value of zero. Because the firms of the sample are not homogeneous the fixed effect method is used We present three different model specifications: Model I, which includes all explanatory variables, Model II including market and accounting variables (the market-to-book ratio, growth of profit, and cumulative stock return), and Model III including the variables retained ownership , venture capital monitoring , independent board monitoring, and number of takeover defenses. Furthermore, we report heteroskedasticity-consistent t-statistics based on White (1980). Variable definitions can be found in Table 2.

Table 3 shows the empirical results of the option grants model. The outcome of model I provides significant evidence that firms with a higher market-to-book ratio grant more stock options. Furthermore, we find that option grants are an increasing function of the growth rate of a firm's profit and cumulative stock return. These findings support the notion that option grants are used more if the company possess higher growth opportunities and has experienced higher accounting and stock market performance, respectively.

### [Please insert Table 3 about here]

We find an inverse and significant relation between retained ownership and option grants. Further, monitoring by venture capitalists or by independent board members appear inversely associated with stock option grants at a statistically significant level The latter supports that when employees own more stock in the company and venture capitalists *c.a.* engage in external monitoring activities, there is less need to address the agency problem by using stock option grants. Also, option grants appear a decreasing function of the *Number of Takeover Defenses*. To the extent that these takeover defenses prevent the mitigation of agency conflicts due to external monitoring, fewer options need to be granted.

The retention argument is particularly important for IPO firms that, in general, are smaller than listed firms and also have a smaller number of employees who are key for the success of the firm. The retention argument applies *a fortiori* when the benefits of an employee are greater. A variable that captures the benefits of an employee is *Sales per Employee*. Further, an IPO firm will attempt to hold an employee during periods of strong economies, when the labor market is tight. The empirical results show that option grants are an increasing and significant function of the two variables that can be considered as proxies of an IPO firm's benefits from its employees and tight labor markets, respectively.

As can be seen in table 3, both variables that capture cash constraints (the amount of cash per employee and the pay-out ratio) are significant at a 1 percent level of significance. In addition, the relation has the predicted direction.

In model I of table 3 two of the three control variables (volatility, the number of employees) are significant. The inverse relation between option grants and the volatility of the underlying stock is consistent with options holders who are risk averse. Option grants appear a decreasing function of the number of a firm's employees. This provides evidence that option grants are more important in smaller firms, which are dependent on a small number of employees who are essential for the success of the IPO firm.

As can be seen in table 3 (models II and III), the empirical results across different model specifications are qualitatively similar except for the significance of the variables *Venture Capital* and *Independent Board Monitoring*. Furthermore, in models II and III none of the control variables is significant. After omitting the five largest and five smallest outliers the results for the option grants model are qualitatively similar. Regression estimates using the

ordinary least squares method in place of the Tobit method provide qualitatively similar results, also.

### 5. Conclusions

An IPO is a major event in a firm's history where agency conflicts may arise between its inside and outside shareholders. Our data shows retained ownership is decreasing from 52.1 percent before IPO to 34.7 percent after IPO. Stock option grants may offer a potential mitigation of the agency problem due to the change in ownership upon IPO.

The key issue of this paper is, which variables determine option grants to upper-level and lower-level employees of a cross-sectional sample of IPO firms during the years 1985-2000. Broad-based option grants have been examined by a relatively small number of empirical studies. Furthermore, we believe that broad-based option plans of IPO firms are an attractive sample to examine due to the imminent conflicts of interest that can arise because of the transition of ownership from inside to outside shareholders.

The empirical results provide evidence employees are more willing to be compensated by options when the company has higher past accounting and stock price performance. Also, option grants appear an increasing function of a firm's growth opportunities. Further, we find that option grants are inversely related to retained ownership and two forms of external monitoring, namely monitoring by venture capitalists and by independent board members. The outcome provides strong support that retained ownership and external monitoring can be seen as substitutes for option grants. The inverse relationship between option grants and the number of takeover defenses is consistent with takeover defenses being a managerial entrenchment mechanism that decreases firm value. The empirical results show that cash constraints play an important role when a firm considers an alternative to cash compensation. And finally, option

grants are more used when employees have more benefits to the firm and when the labor market is tight.

The results are subject to a number of limitations. First, due to data limitations it was not possible to assess the number of options granted to each of the two categories of employees, upper-level and lower-level executives. Second, our findings may be biased because our sample consists of IPO firms. Also, the documents examined (IPO prospectuses and annual reports) do not disclose the exact date when the options were granted. Nevertheless, the results are in line with earlier empirical and theoretical studies. In addition, the results provide evidence for a number of hypotheses predicted by Oyer (2004) that are not empirical examined earlier.

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**Figure 1** Average value of option grants as percentage of the amount of total compensation during the 3 consecutive years after IPO.



Figure 2Average number of stock options granted during the three periods of time examined<br/>during the years 1985-2000.



| Number of all IPOs 1983 - 1998 |    | 126 |
|--------------------------------|----|-----|
| IPOs without options           | 66 |     |
| Incomplete or Missing data     | 6  |     |
|                                |    | 72  |
| Number of IPOs examined        |    | 54  |

**Table 1:**Sample construction of firms that went public on Euronext Amsterdam<br/>during the years 1985-1998.

|  |           |        |            |         | Standard    | Number of    |
|--|-----------|--------|------------|---------|-------------|--------------|
|  | Mean      | Median | Maximum    | Minimum | Deviation   | Observations |
| Option Grants (percent)                | 0.039     | 0.009  | 0.500      | 0       | 0.077       | 159          |
| Market-to-Book ratio (percent)         | 5.196     | 2.771  | 68.639     | 0.743   | 7.397       | 159          |
| Profit Growth (percent)                | 0.195     | 0.238  | 8.038      | -8.199  | 1.439       | 159          |
| Cumulative stock return (percent)      | 0.387     | 0.243  | 2.416      | -1.210  | 0.667       | 162          |
| Retained ownership (percent)           | 0.330     | 0.333  | 0.850      | 0       | 0.280       | 161          |
| Venture capital monitoring (percent)   | 0.082     | 0.000  | 0.750      | 0.000   | 0.168       | 162          |
| Independent board monitoring (percent) | 0.889     | 1.000  | 1.000      | 0.000   | 0.228       | 162          |
| Number of Takeover defenses (units)    | 1.913     | 2.000  | 4.000      | 0.000   | 0.990       | 161          |
| Cash per Employee                      | 0.030     | 0.009  | 0.592      | 0.000   | 0.063       | 159          |
| Pay-out ratio (percent)                | 0.044     | 0.135  | 10.142     | -34.268 | 2.862       | 159          |
| Sales per Employee                     | 0.211     | 0.125  | 1.559      | 0.003   | 0.237       | 159          |
| After1992-dummy                        | 0.747     | 1.000  | 1.000      | 0.000   | 0.436       | 162          |
| Volatility (percent)                   | 0.432     | 0.438  | 0.690      | 0.150   | 0.129       | 162          |
| Number of employees (units)            | 7,403.453 | 521    | 139,969    | 14      | 23,742.630  | 159          |
| Sales                                  | 815.270   | 77.128 | 11,056.100 | 0.057   | 2,064.873   | 159          |
| Market value                           | 1,090.018 | 98.807 | 16,388.490 | 8.970   | 3,012.791   | 159          |
| Profit                                 | 51.279    | 5.407  | 1,276.143  | -78.765 | 175.101     | 159          |
| Number of options granted (units)      | 263,581   | 19,766 | 7,712,000  | 0       | 819,409.100 | 159          |

All money amounts in millions of euros and constant prices of 2001, unless indicated otherwise. **Option Grants** = value of all stock option granted per fiscal year divided by the sum of the value of the option grants and the fixed compensation paid to all employees during the same fiscal year, **Market-to-Book ratio** = the market value of equity plus the long-term and short-term debt divided by the book value of a firm's assets of the same fiscal year, **Profit Growth** = a firm's profit after tax and interest payments in year t divided by a firm's profit in year t-1, **Cumulative stock return** = stock return from fiscal year 0 until 1 and 2, respectively, **Retained ownership** = percentage of retained ownership, **Venture capital monitoring** = percentage of venture capitalists in the board of non-executive directors, **Number of Takeover defenses** = number of takeover defenses, **Pay-out ratio** = dividend paid in year t divided by the number of employee = amount of cash in fiscal year t divided by the number of employee = amount of sales in fiscal year t divided by the number of employees in year t, **After1992-dummy** = dummy with a value of one for the years 1993-2000, otherwise zero, **Volatility** = yearly average volatility of the daily stock returns, **Number of employees** = number of total employees, **Sales** = net sales, **Market value** = number of options granted at the end of the fiscal year.

 Table 2:
 Descriptive statistics of firms that during the years 1985 – 1998 have gone public on Euronext Amsterdam and have issued stock options during the years 1985-2000.

|                                 |            |             |             | Tobit Fixed Ef | ffects Regressions |             |             |
|---------------------------------|------------|-------------|-------------|----------------|--------------------|-------------|-------------|
|                                 |            | Model I     |             | Model II       |                    | Model III   |             |
|                                 | Prediction | coefficient | z-Statistic | coefficient    | z-Statistic        | coefficient | z-Statistic |
| Constant <sup>1</sup> )         |            |             |             |                |                    |             |             |
| Incentives                      |            |             |             |                |                    |             |             |
| Market-to-Book ratio            | +          | 0.002       | 2.205**     | 0.003          | 2.777 ***          |             |             |
| Profit growth                   | +          | 0.012       | 2.846***    | 0.009          | 1.774*             |             |             |
| Cumulative stock return         | +          | 0.023       | 2.203**     | 0.034          | 2.908***           |             |             |
| Corporate Governance Mechanisms |            |             |             |                |                    |             |             |
| Retained Ownership              | -          | -0.082      | -2.054 **   |                |                    | -0.125      | -2.507 **   |
| Venture Capitalist monitoring   | -          | -0.098      | -2.293**    |                |                    | -0.069      | -1.289      |
| Independent Board monitoring    | -          | -0.077      | -1.710*     |                |                    | -0.072      | -1.314      |
| Number of Takeover defenses     | -          | -0.019      | -1.827*     |                |                    | -0.038      | -2.990 ***  |
| Cash Constraints                |            |             |             |                |                    |             |             |
| Cash per Employee               | -          | -0.417      | -3.443***   |                |                    |             |             |
| Pay-out ratio                   | +          | 0.023       | 8.800***    |                |                    |             |             |
| Retaining Employees             |            |             |             |                |                    |             |             |
| Sales per Employee              | +          | 0.132       | 3.777***    |                |                    |             |             |
| After 1992-dummy                | +          | 0.054       | 2.851***    |                |                    |             |             |
| Controls                        |            |             |             |                |                    |             |             |
| Volatility                      |            | -0.063      | -2.123 **   | -0.009         | -0.214             | -0.024      | -0.631      |
| IT-dummy                        |            | -0.005      | -0.331      | 0.002          | 0.107              | -0.004      | -0.167      |
| ln (Number of Employees)        | -          | -0.016      | -2.484**    | 0.000          | 0.031              | -0.005      | -0.700      |
| Adjusted R-squared              |            | 0.739       |             | 0.576          |                    | 0.573       |             |
| Log likelihood                  |            | 144.465     |             | 115.143        |                    | 112.310     |             |
| Average log likelihood          |            | 0.914       |             | 0.729          |                    | 0.711       |             |
| Left censored observations      |            | 58          |             | 58             |                    | 58          |             |
| Uncensored observations         |            | 100         |             | 100            |                    | 100         |             |
| Total observations              |            | 158         |             | 158            |                    | 158         |             |

<sup>1</sup>) The constants of the individual firms of the sample are omitted. z-Statistics areadjusted for heteroskedasticity (White, 1980). \*, \*\*, \*\*\* denote significance at the 10% level, 5% level, and 1% level, respectively.

Tobit fixed effects regression estimates with option grants as dependent variable of pooled cross-sectional panel data of firms that have gone public on Euronext Amsterdam during the years 1985-1998. Table 3: