

MARKET TIMING OF EXECUTIVE STOCK OPTION GRANTING AND EXERCISING: EVIDENCE FROM BURSA MALAYSIA

Ahmad Ibn Ibrahimy & Rubi Ahmad

Department of Finance and Banking, Faculty of Business and Accountancy
University of Malaya, 50603 Kuala Lumpur, Malaysia
mister_ahmad@yahoo.com

ABSTRACT

Separation of ownership and control creates the necessity of corporate governance mechanisms, such as Executive Stock Option Scheme (ESOs), which reduce the conflicts of interests between managers and shareholders. In spite of the fact that shareholders exercise their option when it is in the money, this study attempts to explore the properties of option exercising behavior by executives to verify any differences of trading patterns in terms of ESO granting and exercising. In the presence of concentrated ownership coupled with poor corporate governance structure in Malaysia, executives might have control over management compensation plan to benefit them rather than maximizing wealth of the corporations. Using data on ESO granting and exercising from 201 non-financial companies, this paper aims to recognize the pattern of ESO exercises by Malaysian executives affecting firm performance. We found that Malaysian companies are granting their ESO when market is overvalued. We also found a significant positive relationship between ESO exercising and firm performance for both market and accounting based performance measures. Panel data analysis of fixed effect estimation revealed the fact that Malaysian executives exercise their option immediately after they are granted; suggesting intended behavior of adopting ESOs.

Keywords: Management Compensation, Executive Stock Option Scheme (ESOs), ESO Granting, ESO Exercising, Corporate Governance

1. Introduction

Jensen and Meckling (1976) relate agency theory to Modern Corporation and form relative amount of ownership claims held by insiders and outsiders. Insiders are the management, and outsiders refer to the investors with no direct role in the management of a corporation. They formalize the survival of organizations by “separation of ownership and control” that dates back from Adam Smith (1776) to Berle and Means (1932). In particular, managers do not bear a sizeable wealth effect of their own decisions. Adolph Berle and Gardiner Means in their ‘The Modern Corporation and Private Property’ noticed that ownership is diffused among small shareholders in the US and the control is concentrated with hands of managers. Consequently, shareholders experience a loss of control over their resources to oversee managerial activities in modern corporations. Management exercises more freedom rather if at least ownership is concentrated or firm is managed by its owners. Since management and ownership usually do not coincide, Berle and Means (1932) perceived a conflict of interests between parties.

Recently, this image of one run by professional managers without accountability to shareholders clearly stuck. There are some evidences of concentrated ownership existence around the world. Shleifer and Vishny (1986) demonstrated

that there is a modest ownership concentration even in largest American firms. Holderness et al. (1998) found that percentage of insider ownership of US listed corporations is increasing from an average of 13% in 1935 to 21% in 1995. The developing markets including Malaysia are characterized by an insider system of corporate governance. According to Claessens et al. (2000), Hong Kong, Singapore and Malaysian firms are owned by a family (20% cut off) of 70%, 55.4% and 67.2% where firms are widely held by 10%, 5.4% and 10.3% respectively. Still, there are somewhat little systematic evidence about the ownership structures and the impact of it to performance of publicly listed firms worldwide.

Malaysian corporate sector is characterized by concentrated ownership (Haniffa & Hudaib, 2006), pyramidal structures¹, cross holding²; and sometimes with dual class shares³ that well-defined in family controlled firms (Claessens, et al., 2000). Managers usually come from the same family of large controlling shareholders where managers (agents) and shareholders (principals) conflicts of interests are limited. According to Zhuang (2001), Asian countries are characterized by concentrated ownership and weak regulatory structure leading to a weak corporate governance setting. With the implementation of interest alignment mechanisms such as ESOs Malaysian corporate scenario, therefore, suggests potential conflicts between concentrated ownership and minority shareholders of the firms rather than the conflicts between managers and shareholders. This study attempts to recognize the pattern of ESO exercised by Malaysian executives which may granted for intended reasons.

2. Methodology and Data

Forgoing the life span left, stock options are exercised earlier in firms when it is deep in the money or with high stock price volatility (Bettis, Bizjak, & Lemmon, 2005). In other words, options will be exercised early when the expected benefit is greater than holding it. Since managers are risk averse and the option is nontransferable, they exercise option before its maturity (Huddart, 1994). When option is exercised, executives bring in cash into the firm. The exercise pattern differs if holding period is leading to utility maximization. Thus, option values changes with differing incentives based on individual or firm characteristics. To capture these characteristics models are developed to verify the relationship between ESO exercising and firm performance of Malaysian non-financial companies after controlling firm specific variables. Since samples are selected purposively, panel data fixed effect analysis is adopted to observe the heterogeneity of ESO grants (Lam & Chng, 2006; Zhou, 2001). This study employed pooled and fixed effect model to ensure the best fitted model that satisfies the assumptions of Classical Linear Regression Model (CLRM). It also seeks to determine the industry effects a firm belongs to that may lead to better performance. The empirical relationships of regression equation for yearly ESO exercising as dummy variables (Hall & Liebman, 1998; Hillegeist & Penalva, 2003) for firm i in the year t are given bellow:

¹ Pyramidal ownership structure shows a top down chain of control (La Porta et al. 1999) where ultimate owners are located at the top.

² Cross holding ownership structure is linked by horizontal cross holding of shares (Bebchuk et al. 2000) that is the situation where one company holds another company's stock under same index.

³ Dual class share represents two classes of shares with different voting rights under same ownership.

$$TQ_{it} = \alpha + \sum \beta_1 ESO_{it} + \beta_2 RV_{it} + \beta_3 DR_{it} + \beta_4 G_{it} + \beta_5 S_{it} + \beta_6 DT_{it} + \sum \gamma_7 IND_{it} + u_{it} \quad (i)$$

$$ROA_{it} = \alpha + \sum \beta_1 ESO_{it} + \beta_2 RV_{it} + \beta_3 DR_{it} + \beta_4 G_{it} + \beta_5 S_{it} + \beta_6 DT_{it} + \sum \gamma_7 IND_{it} + u_{it} \quad (ii)$$

Where,

TQ = Tobin's Q

ROA = Return on Assets

ESO = ESO Exercising yearly

RV = Return Volatility

DR = Debt Ratio (Leverage)

G = Growth of the Company

S = Size of the Company

IND = Industry Dummy (0 or 1) (i = 1, 2, 3, 4, 5, 6, 7)

A test was developed by Hausman (1978) to choose between fixed effects model and the random effects model to apply. The null hypothesis is that there is no difference between fixed effects and random effects estimators significantly. Actually the test is about composite error term ω_{it} , whether ε_i (random error component) is correlated with the explanatory variables or not. If ε_i is correlated with explanatory variables then applying random effects model will produce biased and inconsistent results. Eventually, fixed effect model will be the appropriate model to apply in this situation. If there is no correlation between ε_i and the explanatory variables, random effects model is suitable. The test statistic has an asymptotic Chi-square distribution with k degrees of freedom, where k is the number of elements in β . If the null hypothesis is rejected, better to use the fixed effects model. Whether the error terms are correlated with explanatory variables or not, that can be tested by using this Hausman test when comparing the fixed effects model coefficients to that of generalized least square random effects model. Besides, econometric issues such as multicollinearity, data stationarity, heteroscedasticity, autocorrelation tests are revised to identify and address in the panel data technique.

The study covers 1407 observations of Malaysian non-financial companies to examine the relationship between firm performance and firm specific characteristics, namely, corporate governance mechanism, firm specific risk, financial leverage, firm's size, growth and date of listing (age) under varying corporate sectors. The historical or secondary data are used and calculated in this paper comprises Tobin's Q, ROA, Return Volatility, Debt Ratio, Growth, Size and Date of Listing (Age). A longitudinal study has been employed to correlate this relationship for seven years period. Latest seven years period is chosen to capture the true picture concerning the movement of company's performance especially after Asian financial crisis of 1997-1998. Since financial data that have been obtained are from audited financial statements (i.e. Annual Reports) and databases from reliable sources; the consistency, reliability and accuracy of the information are controlled. Data for ESO exercising were detected through Bursa Malaysia web information, Annual Reports' of respective companies. While data for the regression variables are gathered from Bloomberg and Data Stream Databases.

3. Results and Analysis

Referring to the seasonality in the Malaysian stock market (Pandey, 2002), it gives a sound financial background to analyze executive stock options granting / exercising that executives may be able to time their options granted to improve returns. Therefore, our objective is to verify the relationship between Executive Stock Option (ESO) exercising and firm performance to explore the exercise pattern of Malaysian executives.

3.1 ESO Exercising Effects on Firm's Performance (TQ)

Table 1 is the results of both pooled and fixed effect regression estimations with a dummy variable of ESO exercised through the years to test the effect of executive stock option exercising on firm performance (TQ) with industry effects. The result shows the positive relationship of ESO exercised for year 2002, year 2006 and year 2007 for both OLS and GLS fixed effects estimators while considering industry effects of companies. Moreover, ESO exercised in year 2003 and Year 2004 is also significant by both pooled estimators. It is observed that option exercising by Malaysian executives is following the similar trends throughout the years.

The risk level is measured by return volatility which exhibits consistent inverse relationship with firm performance and not significant. Among other control variables, leverage (debt ratio) is negatively significant at 1% level and growth is positively significant at 5% level for both pooled and fixed effects GLS estimators. Firm's size is not significant and positively related; and age of the firm is negatively significant by both estimators at 1% significance level which are consistent with earlier results.

Table 1: Pooled and Fixed Panel: ESO Exercised with Industries (TQ)

Variables	OLS		GLS	
	Pooled	Fixed	Pooled	Fixed
Intercept ©	0.89***	0.82***	1.02***	0.97***
ESO Exercised (2002)	0.09*	0.14**	0.10**	0.14**
ESO Exercised (2003)	0.20***	0.05	0.21***	0.06
ESO Exercised (2004)	0.09*	0.07	0.09**	0.07
ESO Exercised (2005)	0.05	0.09	0.06	0.10
ESO Exercised (2006)	0.29***	0.26**	0.29***	0.27**
ESO Exercised (2007)	0.25***	0.20**	0.26***	0.20**
Return Volatility (RV)	-0.19	-0.02	-0.24	-0.08
Debt Ratio (DR)	-0.003***	-0.003***	-0.002***	-0.003***
Growth (G)	0.002***	0.002***	0.002**	0.002**
Size (S)	0.01	0.01	0.007	0.01
Age (DT)	-0.006***	-0.006***	-0.006***	-0.005***
Industrial Products (IP)	-0.05	-0.07	-0.11	-0.13
Consumer Goods (CG)	-0.01	-0.03	-0.07	-0.08
Consumer Service (CS)	0.28*	0.25*	0.17	0.15
Oil and Gas (OG)	1.31***	1.29***	1.09***	1.07***
Technology (T)	0.41***	0.38***	0.35***	0.33***
Telecommunication (TC)	0.90**	0.88**	0.68**	0.66**
Utilities (U)	0.02	-0.007	-0.008	-0.03
R²	0.17	0.17	0.15	0.16
Adjusted R ²	0.15	0.16	0.14	0.15
F-statistic	15.24***	11.98***	14.10***	11.16***

D-W statistic	0.48	0.46	0.45	0.43
---------------	------	------	------	------

$$TQ_{it} = \alpha + \beta_1 \text{ESO Exercised}02_{it} + \beta_2 \text{ESO Exercised}03_{it} + \beta_3 \text{ESO Exercised}04_{it} + \beta_4 \text{ESO Exercised}05_{it} + \beta_5 \text{ESO Exercised}06_{it} + \beta_6 \text{ESO Exercised}07_{it} + \beta_7 \text{RV}_{it} + \beta_8 \text{DR}_{it} + \beta_9 \text{G}_{it} + \beta_{10} \text{S}_{it} + \beta_{11} \text{DT}_{it} + \gamma_{12} \text{IP}_{it} + \gamma_{13} \text{CG}_{it} + \gamma_{14} \text{CS}_{it} + \gamma_{15} \text{OG}_{it} + \gamma_{16} \text{T}_{it} + \gamma_{17} \text{TC}_{it} + \gamma_{18} \text{U}_{it} + u_{it}$$

*** 1% Significant level

** 5% Significant level * 10% Significant level

3.2 ESO Exercising Effects on Firm's Performance (ROA)

Table 2 shows the results of both pooled and fixed effect regression estimations of a dummy variable of ESO exercised through the years to test the effect of executive stock option exercising on firm performance (ROA) with industry effects. The results show consistent positive relationship of ESO exercised for all years with both OLS and GLS estimators. The significant correlations of ESO exercised with performance establish the indifferent pattern of ESO exercising by the risk averse Malaysian executives relative to ESO granting.

Return volatility exhibits consistent inverse relationship with firm performance at 1% significance level. Among other control variables, debt ratio and age of the firm are negatively related with firm performance by both estimators where debt ratio is significant at 1% level. Firm's growth and size exhibit consistent positive significant relationship with performance by both estimators at 1% significance level. In terms of goodness of fit of the models, both pooled and fixed effect models explain similar variation to predict dependent variable.

Table 2: Pooled and Fixed Panel: ESO Exercised with Industries (ROA)

Variables	OLS		GLS	
	Pooled	Fixed	Pooled	Fixed
Intercept ©	-16.25***	-15.23***	-14.94***	-14.03***
ESO Exercised (2002)	1.32*	1.23	1.29*	1.29
ESO Exercised (2003)	1.04	2.69**	1.05	2.73**
ESO Exercised (2004)	2.01***	2.08***	2.03***	2.13**
ESO Exercised (2005)	1.21	1.61*	1.27	1.67*
ESO Exercised (2006)	2.28***	3.23***	2.38***	3.33***
ESO Exercised (2007)	1.86	0.55	1.95*	0.64
Return Volatility (RV)	-19.54***	-21.17***	-18.45***	-20.02***
Debt Ratio (DR)	-0.14***	-0.14***	-0.14***	-0.14***
Growth (G)	0.05***	0.05***	0.05***	0.05***
Size (S)	1.35***	1.30***	1.28***	1.23***
Age (DT)	-0.008	-0.02	-0.01	-0.02
Industrial Products (IP)	-3.38***	-3.17***	-3.38***	-3.17***
Consumer Goods (CG)	-2.11***	-1.95***	-2.09***	-1.93***
Consumer Service (CS)	-1.23	-0.99	-1.43	-1.18
Oil and Gas (OG)	2.47**	2.63***	2.48**	2.66***

Technology (T)	-7.64***	-7.43***	-7.47***	-7.27***
Telecommunication (TC)	-2.66	-2.29	-2.68	-2.32
Utilities (U)	-5.15***	-4.78***	-5.00***	-4.66***
R²	0.25	0.26	0.25	0.26
Adjusted R ²	0.24	0.25	0.24	0.24
F-statistic	26.28***	20.44***	25.70***	19.91***
D-W statistic	0.98	0.98	0.94	0.94

$$ROA_{it} = \alpha + \beta_1 ESO_{Exercised02_{it}} + \beta_2 ESO_{Exercised03_{it}} + \beta_3 ESO_{Exercised04_{it}} + \beta_4 ESO_{Exercised05_{it}} + \beta_5 ESO_{Exercised06_{it}} + \beta_6 ESO_{Exercised07_{it}} + \beta_7 RV_{it} + \beta_8 DR_{it} + \beta_9 G_{it} + \beta_{10} S_{it} + \beta_{11} DT_{it} + \gamma_{12} IP_{it} + \gamma_{13} CG_{it} + \gamma_{14} CS_{it} + \gamma_{15} OG_{it} + \gamma_{16} T_{it} + \gamma_{17} TC_{it} + \gamma_{18} U_{it} + u_{it}$$

*** 1% Significant level

** 5% Significant level

* 10% Significant level

3.3 Industry Effects

In order to verify the robustness of industry effects, models are run for both accounting and market based performance of ESO exercising. Oil and Gas industry is still positively significant at 1% level by both performance measurements as ESO granted effects on firm performance. In addition, Oil and Gas has the higher contribution to the Malaysian Economy than other industries that validates the previous finding. On the other hand, Industrial Products, Consumer Goods, Technology and Utility industries exhibit significant negative relationship against firm performance (ROA) suggesting poor market competitions in these industries. In terms of goodness of fit of the models, both estimators exhibit similar variation of explaining the dependent variable.

4. Discussion and Conclusion

The relationship between Executive Stock Option (ESO) exercising and firm performance is verified to explore the exercise pattern of Malaysian executives against market based as well as accounting based performance measures. It is found that through all the years this relationship is significant (except year 2005), conforming the fact that Malaysian executives exercise their option immediately after granting when it is in the money. This early exercise pattern of stock option is consistent with the notion that executives are usually risk averse investors. Early exercise pattern ignores time value of options when a greater proportion of executives' wealth is attached to the firm performance. Therefore, we may conclude that Malaysian executives are risk averse as they are prone to rebalance their portfolios. In addition, issues behind the adoption of ESOs identify time preferences of ESO granting. It is found that companies are granting ESO when firm is overvalued. In other words, executives may expropriate minority shareholders wealth due to poor corporate governance structure in Malaysia.

References

Berle, A. A., & Means, G. C. (1932). *The Modern Corporation and Private Property*. New York: McMillan.

Bettis, J. C., Bizjak, J. M., & Lemmon, M. L. (2005). Exercise behavior, valuation, and the incentive effects of employee stock options. *Journal of Financial Economics*, 76(2), 445-470.

- Claessens, S., Djankov, S., & Lang, L. H. P. (2000). The separation of ownership and control in East Asian Corporations* 1. *Journal of Financial Economics*, 58(1-2), 81-112.
- Hall, B. J., & Liebman, J. B. (1998). Are ceos really paid like bureaucrats?*. *Quarterly Journal of Economics*, 113(3), 653-691.
- Haniffa, R., & Hudaib, M. (2006). Corporate governance structure and performance of Malaysian listed companies. *Journal of Business Finance & Accounting*, 33(7 8), 1034-1062.
- Hausman, J. A. (1978). Specification tests in econometrics. *Econometrica: Journal of the Econometric Society*, 1251-1271.
- Hillegeist, S. A., & Penalva, F. (2003). Stock option incentives and firm performance. *Social Science Research Network Working Paper Series*.
- Holderness, C., Kroszner, R. S., & Sheehan, D. P. (1998). Were the good old days that good? Changes in managerial stock ownership since the great depression: National Bureau of Economic Research Cambridge, Mass., USA.
- Huddart, S. (1994). Employee stock options. *Journal of Accounting and Economics*, 18(2), 207-231.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305-360.
- Lam, S. S., & Chng, B. F. (2006). Do executive stock option grants have value implications for firm performance? *Review of Quantitative Finance and Accounting*, 26(3), 249-274.
- Pandey, I. (2002). Seasonality in the Malaysian stock market: 1992-2002. *Journal of Financial Management and Analysis*, 15(2), 37-44.
- Shleifer, A., & Vishny, R. W. (1986). Large shareholders and corporate control. *The Journal of Political Economy*, 461-488.
- Smith, A. (1776). *The Wealth of Nations*. New York: Modern Library.
- Zhou, X. (2001). Understanding the determinants of managerial ownership and the link between ownership and performance: comment* 1. *Journal of Financial Economics*, 62(3), 559-571.
- Zhuang, J. (2001). *Corporate governance and finance in East Asia: a study of Indonesia, Republic of Korea, Malaysia, Philippines, and Thailand* (Vol. 2): Asian Development Bank.