
The Effect of Stock Bonus on Firm Performance: Evidence From Indonesia Stock Exchange

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Abstract

This study investigates the effect of stock bonus on firm performance. We employ 41 non-financial firms listed on the Indonesia Stock Exchange (IDX) during 1998-2007. Controlling for leverage, firm size and previous year performance, the results show that stock bonus does not significantly affect the firm performance. Further, assets in place do not significantly moderate the relation between stock bonus and firm performance.

Keywords: Firm performance, stock bonus, assets in place

1. Introduction

There are many debates on whether the compensation can improve the performance of the firm. The firm performance has always been a concern of all corporate stakeholders, specifically investors. The decision of investors to invest in a firm depends on such factor, the performance of the firm itself. In general, the firm performance can be interpreted as an achievement by a firm within a certain period and can be measured with the accounting profits and market-based income. Firm performance appraisal is a tool that is useful to know and assess the past and future growth of the firm. A good performance will certainly attract investors since it provides an opportunity for investors to generate gain. The selection of companies that have good performance is one of the steps taken by investors to minimize their risk in investment. In addition, good performance will motivate investors to invest their money for a longer time in the firm. In some global multinational companies, financial managers with multiple subsidiaries might be tempted to make decisions that will maximize the value of their subsidiaries at the expense of their parent firm. As a result, the cost of the agent to convince managers that seek to maximize shareholder wealth could be greater for multinational companies than purely domestic firms. Thus, the activity of the shareholders is an important part of corporate governance to ensure that managers take action to reduce agency problems and thereby increase shareholder value.

One incentive that might reduce agency problems and improve enterprise performance is by giving stock bonus (Kim and Kim, 2006). With a stock bonus, the firm can distribute its shares to employees without requiring employees to invest their money to the firm. Psychologically, this can increase the performance of an employee because the employee is an indirect owner of the firm. Employees will do their best to work with optimum performance in order to raise the firm performance. In that way, the stock price can be expected to rise and employees also get benefit from the increasing of stock price.

The effect of employee compensation on firm performance is still inconclusive. Financial incentive can raise the motivation of employee and harmonize their interest with the shareholders. As managers who own shares in the firm, they may avoid the risky projects to achieve organizational goals and maximize shareholder profits. By providing a fraction of stock ownership, employees own the firm and the firm allows employees to do their best to work more effectively and efficiently so that the stock price rises. Consequently, in line with the reduced agency problems, firm performance will

increase. Stock bonus in some companies act as a system balancing the interests between shareholders and employees, so that agency problems can be reduced by increasing the performance of the firm (Guo et al., 2006).

Assets in place are assets or properties where the firm has invested in. In addition, assets in place also include other invisible assets, such as forms, lists of customers, reputation, and other general knowledge. Assets in place giving the expected cash flow in companies by providing opportunities for new investments that will generate additional cash flow in future (Brigham and Ehrhardt, 2008). Nurrohim and Ambarwati (2008) refer to assets in place as property, plant, and equipment (PPE). Enterprise value is greater than the PPE indicate that the firm has huge investment potential.

2. Previous Research

2.1. Stock Bonus on Firm Performance

Han and Shen (2007) investigate the effect of the bonuses on firm performance in the high tech sector in Taiwan. This study outlines the effects of the bonus system both cash bonus and stock bonuses on firm performance. To test the robustness of the model, Han and Shen employ two proxies for the bonus, the total value of bonuses per employee and percentage of bonus payment per total salary. The study is conducted on 672 high-tech companies listed on the Taiwan Stock Exchange. The research periode is between 1993 and 2004. Data is collected from Taiwan Economic Journal, a private agency that collects financial data that go public in Taiwan. The results show that there are positive effects of bonuses on both types of proxy measurement of firm performance, both sales and value-added enterprises. Giving bonuses to employees have a powerful positive effect on firm performance.

Meng et al. (2011) conduct a study on the influence of employee stock ownership plans (ESOPs) on the firm performance. In US, sometimes used to ESOP retirement plan with firm expectations and employee relations, who retired to stay awake. The study was conducted by taking samples at all listed companies in China's two stock exchanges, SHSE, and SZSE. From January 1996 to December 2000. Meng et al., Does not include listed companies before 1996 because some companies do not follow the rules required employees to hold shares for trading after three years of going public. Measurement used to measure the firm performance in the study are ROA, ROE, ROS, and Tobin's Q. In addition, the study also compared the performance of companies issuing policies ESOP and non-ESOP companies. Overall results obtained by Meng et al., was that there was no significant difference in the performance of ESOP companies issuing policies with non-ESOP companies. The invention obtained from each measurement of firm performance and after going through multiple security checks.

Guo et al (2006) conducted a study on the influence of stock bonuses to the firm's operational performance. The study uses panel regression approach in Taiwan. All data required in the study were drawn from a database of Taiwan Economic Journal (TEJ). In addition, the researchers obtained the number of stock bonuses issued by companies from the Market Observation Post System website and the Taiwan Securities and Futures Information Center. These data contain comprehensive financial information on nearly 1,000 Taiwanese firm that went public. In that study, the sample used was 294 in the year 1996-2001 the firm issuing the policy of stock bonuses. According to his study, there is a positive relationship between stock bonuses to firm performance. The study applies panel regression with the main assumption that the bonus shares a positive influence on firm performance.

Aryanti (1998) examined the effect of ROE, cash dividends and stock bonus to the liquidity of shares on the Jakarta Stock Exchange (JSX). According to her, stock liquidity is an important indicator in describing the performance of shares on stock exchanges. Fundamentally, the liquidity of stocks depending on firm performance as measured by ROE, dividend policy, and the provision of bonus shares. Period of this study was in 1994-1996 and the sample is a firm-perusahaan a listing on the JSE and the policy issued bonus shares, cash dividends, and announced the ROE. The research empirically proves that simultaneously, ROE, cash dividends and stock bonus do not have a significant impact on firm performance, in this case the liquidity of shares. While individually, only the ROE that have a significant relationship with stock liquidity.

Pugh et al. (2000) examined the effect of ESOP on the company's performance. According to their ESOP is considered as one of the tools used to trigger the motivation of employees to work better. In their study, they tested whether the company's financial performance is affected by the implementation of the ESOP. The samples used in these studies is as much as 183 ESOP companies issuing policies identified by the Wall Street Journal Index. This information is cross-referenced with Compustat data available in 1994. Companies included in the report of Non-Employees The Company is a majority of all members of the National Center for Employee Ownership (NCEO). Sample of firms that implement ESOP combined into a single portfolio by using a number of years before or after the implementation of the ESOP as a variable time. The results of the empirical test is that the ESOP had a positive short-term minor effects on firm performance. ESOP may not always provide a consistent advantage in performance, there may be other reasons for firms to issue the ESOP that are not reflected in financial ratios.

Chen et al. (2009) investigate the influence of R&D, stock bonus, assets in place, leverage, and firm size on the firm performance. The study includes sample of 32 IT companies listed on the Taiwan Stock Exchange in 1995-2004. Variables in the study Chen et al., the firm performance by Tobin's q as the dependent variable. The ratio of bonus shares as an independent variable. Then Chen et al., Using the R&D ratio and assets in place as a moderating variable. Variables control on the study are leverage, firm size, and the company's performance the previous year. The results of these studies is that the employee stock bonuses have a positive relationship to firm performance, but the employee stock bonus is not increased with the increase in firm performance.

H1: Stock bonus is positively significant related to firm performance

2.2. Moderating Effect of Assets in Place

Chen et al. (2009) argue that the increased complexity and integration of advanced technology hinders direct monitoring and gives rise to more severe agency problem between employees and shareholders. They argue that employees have better information about future technology, but may keep key technological knowledge as asymmetric as possible if no appropriate incentives provided to them. They also suggest that employees who are demanded greater responsibilities, more skill requirements and varied job tasks should be rewarded appropriately, otherwise, they may leave and exploit their skills and knowledge elsewhere. Accordingly, the ability to recruit, retain and motivate high-quality employees is essential for assets-intensive firms. Employee stock bonus may increase employee commitment and initiative to organizational goals (Ang et al., 2005 in Chen et al., 2009), such as manufacturing capability enhancement. Employee stock bonus makes employees become part owners of the business and consequently spurs them to share their technological knowledge and information with the firm (Frye, 2004 and Chen and Huang, 2006 in Chen et al, 2009). Employee-owners may also tend to work hard and smart to improve manufacturing process and enhance asset utilization. As manufacturing technologies become more integrated and complex, share compensation can lead to greater efficiency.

H2: There was a positive influence when Asset in Place moderating the influence on the firm performance of the stock bonus

3. Research Method

This paper examines the relationship between stock bonus and firm performance with moderating effect of assets in place and control variables of leverage, firm size, and firm performance in previous year. Using ROA and Tobin's Q as the proxy of firm performance, the data are gathered from Indonesian Capital Market Directory (ICMD) and the official websites of Indonesia Stock Exchange.

We examine the 41 manufacture firm that listed in Indonesia Stock Exchange and issued the stock bonus during 1998-2007 period.

3.1. Measurement of Variables

3.1.1. Dependent and Independent Variables

We use two proxy of firm performance, Tobin's Q and ROA measurement, Tobin's Q is represent the market measurement, measured by market to book value and ROA is represent the accounting measurement of firm performance, measured by net income divided by total assets. Firm performance is dependent variable. For independent variable, we use stock bonus and measured as the amount of outstanding stock bonus divided by 1000 (Han and Shen, 2006).

3.1.2. Moderate Variable

Assets in place used as moderate variable on this paper, the increased complexity and integration of advanced technology hinders direct monitoring and gives rise to more severe agency problem between employees and shareholders.

Nurrohim and Ambarwati (2008) argue that assets in place show the indicator of investment potential, or also called property, plant, and equipment. In addition, the technology used by the company, assets in place also represents securities, property, facilities and other assets owned by companies which at times can be used for the benefit of the company. Therefore, good coordination is needed to use it wisely and according to the proportions. Therefore, the accordance incentive system with the desire of employees is needed.

3.1.3. Control Variables

We use leverage, firm size, and previous firm performance as the control variables. Leverage is measured by total debt divided by total assets, firm size is measured by natural logarithm of total assets, and previous firm performance is measured with previous year's Tobin's Q and ROA.

3.2. Methodology

We use the regression below to investigate the effect of employee stock bonus on firm performance:

$$Performance_{it} = \beta_0 + \beta_1 (Stock\ Bonus\ Ratio_{it}) + \beta_2 (Leverage_{it}) + \beta_3 (Firm\ Size_{it}) + \beta_4 (Performance_{it-1}) + \varepsilon_{it} \quad (1)$$

Where the model is constructed in firm i and year t ($t=1998-2007$)

Performance:

a. ROA = net income / total assets

b. Tobin's Q = market to book value = market price per share / book value per share

Stock Bonus Ratio = outstanding stock bonus issued / 1000

Leverage = total debt / total assets

Firm Size = natural logarithm of total assets

ε = error term with zero mean

To investigate the moderate effect of Assets in Place in relationship between employee stock bonus and firm performance, we extending the equation below from equation (1):

$$Performance_{it} = \beta_0 + \beta_1 (Stock\ Bonus\ Ratio_{it}) + \beta_2 (Assets\ in\ Place_{it}) + \beta_3 (Stock\ Bonus\ Ratio * Assets\ in\ Place_{it}) + \beta_4 (Leverage_{it}) + \beta_5 (Firm\ Size_{it}) + \beta_6 (Performance_{it-1}) + \varepsilon_{it} \quad (2)$$

Assets in Place = $\frac{Total\ assets_{it} - total\ equity_{it} + (outstanding\ common\ stock \times price\ per\ share)_{it}}{net\ fixed\ assets}$

4. Empirical Result

We conduct the descriptive statistics analysis with means, median, and standard deviations tools. The descriptive statistics analysis are shown in table 1:

Table 1: Descriptive Statistics

	Employee Stock Bonus (shares)	Plant, Property, & Equipment	Debt to Assets Ratio (%)	Total Assets (IDR)	Tobin's Q	Tobin's Q _{t-1}	ROA (%)	ROA _{t-1} (%)
Mean	1.140.000.000	7,10	50,55	1.758.116	5,73	0,97	2,93	5,04
Median	386.000.000	2,76	44,85	526.273	1,31	1,39	5,07	5,64
Std. Dev.	1.830.000.000	10,49	28,76	3.969.481	22,06	10,62	12,15	10,19

The correlation of each of non-independent variable in table 2, we can see there isn't coefficient of correlation that greater than or equal to 0,8 or close to 1.

Table 2: Correlation matrix

	Stock Bonus	Assets in Place	BNS*AIP	Leverage	Size	MB t-1	ROA t-1
Stock Bonus	1						
Assets in Place	-0.1077	1					
BNS*AIP	0.5923	0.4642	1				
Leverage	0.2344	0.0740	0.1036	1			
Size	0.6082	-0.2054	0.3886	0.3045	1		
MB t-1	0.0785	0.0185	0.0562	0.1108	0.1544	1	
ROA t-1	-0.1984	-0.0677	-0.0527	-0.3645	-0.1649	0.2846	1

To determine the effect of employee stock bonus on firm performance, we conduct two equation on each proxy of firm performance, Tobin's Q and ROA. The regression results are shown in Table 3, the table contained the regression coefficient and the *t*-statistics in parentheses. In regression equation 1 and 2, each regression equation with ROA as a proxy of the company's performance without the effects of moderation and a moderation effect, not proven that there is the significantly positive effect of employee stock bonuses on firm performance. Thus, H1 is rejected for the regression equations 1 and 2 with ROA as a proxy for firm performance. Coefficient Stock Bonus_{*t*} * Assets in Place_{*t*}, showed there isn't significant positive sign, meaning there is no significant positive effect when assets in place moderating influence of the relationship between stock bonus and firm performance with ROA as a proxy for firm performance. Thus, H2 is rejected for the regression equation with ROA as a proxy for firm performance.

For the regression equation with Tobin's Q as a proxy for firm performance, employee stock bonus does not have significant positive effect on the performance of the firm in equations 1 and 2. Thus, H1 was rejected. Coefficient Stock Bonus_{*t*} * Assets in Place_{*t*} show negative insignificant coefficient. That is, the regression equation with Tobin's Q as a proxy for firm performance, assets in place does not also show a significant moderation effect on the relationship between stock bonuses to performance. Thus, H2 is rejected. Evidently there is no positive effect when Assets in Place moderating effect of employee stock bonuses to the performance of manufacturing companies listing on the Indonesia Stock Exchange.

For both proxies, proved that stock bonus hasn't significant effect on firm performance, it is contrary to the study of Han and Shen (2007), Guo et al. (2006), Chen et al., (2009), and also Aryanti (1998) showing that the bonus, in this case the employee stock bonus, has significant effect on company performance. It happened because there may be no choice of the best single equity-based compensation that can be applied universally to all companies. Good selection of equity-based compensation is a selection based on the culture and philosophy as well as compensation from the company's strategic plan itself (Lipman and Hall, 2008). According to researchers, cash compensation

perhaps more able to specifically to enhance the firm performance significantly because of cash compensation can be used directly whenever the employee's own suit. This is consistent with research Sigler and Haley (1995) Kato and Kubo (2006), as well as Liu and Stark (2009) which states that cash compensation is positively associated with firm performance.

Assets in place should be able to moderate the relationship between employee stock bonuses to the performance of the company well, because according to Chen et al., (2009), the number of assets or technologies applied within an enterprise can improve the capabilities and the ability of an employee in doing such jobs, it this should be in tandem to improve employee performance and company performance. However, assets in place not always well moderate the relationship between employee stock bonuses to company performance, because even good technology can improve the performance of employees, but employees occasionally make the information on such technologies as asymmetric information so that not all parties, especially the shareholders, can know the functions and use these technologies properly. This also might affect the decline in firm performance, because a good incentive not accompanied by the distribution of information about the technology well, too. If there is asymmetric information on usage, it will increase the agency problem. Conversely, if the assets in place are used to without hiding any information about the property or facilities that become assets in place of a company, agency problems can be reduced and can improve the performance of the company.

For control variables, leverage, company size, as well as the firm performance the previous year there is a significant effect on the regression models and some are not entirely control variables have a significant effect. As leverage is only significant influence on the model with ROA as a proxy of firm performance and company size are only significant effect on firm performance by Tobin's Q as a proxy for firm performance. In accordance with the empirical results by Ebaid (2009), there is a significant negative relationship between leverage against ROA. Jermias (2008), received the same empirical results that leverage significant negative effect on firm performance. As for company size, the results obtained in this study in accordance with Chen et al., (2009) which have empirical evidence that the size of the company's significant effect on Tobin's Q. Firm performance in year before showed no indication of significant influence on the performance of the company in year t on the second proxy for firm performance are ROA and Tobin's Q. ROA_{t-1} showed no significant effect on ROA_t . However, Tobin's Q_{t-1} significantly influence Tobin's Q_t , consistent with Chen et al., (2009).

Table 3: Regression Result

<i>Proxy</i>	ROA		Tobin's Q	
Variabel	Equation 1	Equation 2	Equation 1	Equation 2
<i>Intercept</i>	0.02 (0.08)	0.08 (0.24)	-4.96 (-1.38)	-5.90* (-1.88)
Stock Bonus Ratio _t	1.15E-08 (1.12)	1.61E-09 (0.12)	17588.76 (0.74)	29249.77 (1.27)
Assets in Place _t	-	-0.0006 (-0.29)	-	2.21*** (4.04)
Stock Bonus _t *Assets in Place _t	-	2.75E-09 (1.22)	-	-20391.91 (-0.35)
Leverage _t	-0.23*** (-4.06)	-0.23*** (-3.89)	0.015 (0.19)	0.01 (0.16)
Firm Size _t	0.004 (0.29)	0.001 (0.11)	153.35 (1.54)	157.66* (1.83)
Tobin's Q _{t-1}	-	-	0.14** (2.34)	0.04* (0.76)
ROA _{t-1}	0.16 (1.05)	0.14 (0.89)	-	-
<i>Adjusted R²</i>	0.29	0.47	0.12	0.44

<i>F-Statistics</i>	5.87	8.13	2.63	7.35
<i>Prob-Jarque-Bera</i>	0.600		0.090	
<i>Prob-obs*R-squared</i>	0.1356		0.0675	

5. Conclusion

The employee stock bonus does not have significant effect on firm performance of manufacturing companies listed on the Indonesia Stock Exchange and there is no positive effect when Asset in Place moderating the relation of employee stock bonuses on firm performance of manufacturing companies listing on the Indonesia Stock Exchange.

References

- [1] Aryanti, Rahmi, 1998. *Pengaruh Return on Equity (ROE), Dividen Tunai, dan Saham Bonus Terhadap Likuiditas Saham di Bursa Efek Jakarta*. Jakarta: Program Pascasarjana Universitas Indonesia.
- [2] Bloom, Nicholas and John Van Reenen, 2002. Patents, Real Options And Firm Performance. *The Economic Journal*, vol.112, p.C97-C116.
- [3] Boughzala, Imed and Jean-Louis Ermine, 2006. *Trends in Enterprise Knowledge Management*. London, UK: ISTE Ltd.
- [4] Brigham, Eugene F., and Michael C. Ehrhardt, 2008. *Financial Management: Theory and Practice Twelfth Edition*. OH, USA: Thomson South-Western.
- [5] Chandrakumarmangalam, S., and P. Govindasamy, 2010. "Leverage" – An Analysis and its Impact on Profitability with Reference to Selected Cement Companies in India. *European Journal of Economics, Finance and Administrative Sciences*, Issue 27, p.53-66.
- [6] Chen, Hsiang-Lan; Hsiu-Chuan Lee; Cheng-Yi Chien; and Yen-Sheng Huang, 2009. R&D Investment, Assets in Place, Employee Stock Bonus and Firm Performance. *International Research Journal of Finance and Economics*, Issue 31, p. 41-54.
- [7] Ebaid, Ibrahim El-Sayed, 2009. The Impact of Capital-Structure Choice on Firm Performance: Empirical Evidence from Egypt. *The Journal of Risk Finance*, vol.10, no.5, p.477-487.
- [8] Guerard, John B. Jr., and Ely Schwartz, 2007. *Quantitative Corporate Finance*. New York, USA: Springer.
- [9] Guo,Wen-Chung; Shin-Rong Shiah-Hou; and Yu-Wen Yang, 2006. Stock Bonus Compensation and Firm Performance in Taiwan. *Journal of Managerial Finance*, vol.32, no.11, p.862-885.
- [10] Han, Tzu-Shian and Chung-Hua Shen, 2007. The effects of bonus systems on firm performance in Taiwan's high-tech sector. *Journal of Comparative Economics*, vol.35, p.235-249.
- [11] Jermias, Johnny, 2008. The relative influence of competitive intensity and business strategy on the relationship between financial leverage and performance. *The British Accounting Review*, vol.40, p.71–86
- [12] Karpoff, Jonatan M.; M. Wayne Marr, Jr.; and Morris G. Danielson, 1994. *Corporate Governance and Firm Performance*. Virginia, USA: The Research Foundation of The Institute of Chartered Financial Analysts.
- [13] Kato, Takao and Katsuyuki Kubo, 2006. CEO Compensation and Firm Performance in Japan: Evidence from New Panel Data on Individual CEO Pay. *Journal of the Japanese and International Economies*, vol.20, issue 1, p.1-19
- [14] Kim, Suk and Seung H. Kim, 2006. *Global Corporate Finance Sixth Edition*. Malden, USA: Blackwell Publishing
- [15] Lipman, Frederick D.; and Steven E. Hall, 2008. *Excecutive Compensation Best Practices*. New Jersey, USA: John Wiley & Sons, Inc.
- [16] Liu, Lisa Shifei and Andrew W. Stark, 2009. Relative performance evaluation in board cash compensation: UK empirical evidence. *The British Accounting Review*, vol 41, p.21-30.

- [17] Lun, Y.H. Venus and Mohammed A. Quaddus, 2011. Firm size and performance: A study on the use of electronic commerce by container transport operators in Hong Kong. *Expert Systems with Applications*, vol.38, p.7227–7234
- [18] Nachrowi, Nachrowi D and Hardius Usman, 2006. *Pendekatan Populer dan Praktis Ekonometrika untuk Analisis Ekonomi dan Keuangan*. Jakarta: Lembaga Penerbit Fakultas Ekonomi Universitas Indonesia.
- [19] Meng, R., Ning, X., Zhou, X., and Zhu, H. 2011. Do ESOPs enhance firm performance? Evidence from China's reforms experiment. *Journal of Banking and Finance*, 35, p.1541-1551.
- [20] Nurrohim KP, Hasa and Sri Dwi Ari Ambarwati, 2008. Strategi Valuation Model: Pengambilan Keputusan Investasi pada Perusahaan Manufaktur di Bursa Efek Indonesia. *Jurnal Keuangan dan Perbankan*, vol.12, no.3, p.369-383.
- [21] Pugh, William N; Sharon L Oswald; and John S Jahera Jr., 2000. The effect of ESOP adoptions on corporate performance: Are there really performance changes?. *Managerial and Decision Economics*, vol.21, issue 5, p.167
- [22] Purnama, Nursya'bani and Hery Setiawan, 2003. Analisis Pengaruh Sumber-Sumber Keunggulan Bersaing Bidang Pemasaran Terhadap Kinerja Perusahaan Manufaktur Di Indonesia. *Jurnal Siasat Bisnis*, vol.2, p.105-130.
- [23] Sigler, Kevin and Joseph P Haley, 1995. CEO Pay and Company Performance. *Managerial Finance*, vol.21, no.2, p.31-41.
- [24] Sudiyanto, Bambang, 2010. Peran Kinerja Perusahaan Dalam Menentukan Pengaruh Faktor Fundamental Makroekonomi, Risiko Sistematis, Dan Kebijakan Perusahaan Terhadap Nilai Perusahaan (Studi Empirik Pada Perusahaan Manufaktur Di Bursa Efek Indonesia). Semarang: Program Pascasarjana Universitas Diponegoro.
- [25] Supriyanto, Eko and Falikhatun, 2008. Pengaruh Tangibility, Pertumbuhan Penjualan, dan Ukuran Perusahaan Terhadap Struktur Keuangan. *Jurnal Akuntansi dan Bisnis*, vol.10, no.1, p.13-22.
- [26] Yeo, Gillian H.H.; Sheng-Syan Chen; Kim Wai Ho; and Cheng-few Lee, 1999. Effects of executive share option plans on shareholder wealth and firm performance: The Singapore Evidence. *The Financial Review*, vol. 34, no.2, p.1-20.