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VOLUNTARY DISCLOSURE, MONITORING MECHANISM AND FIRM VALUE

Rina Br Bukit[1]* and Fahmi N. Nasution[2]

Abstract: *Voluntary disclosure and monitoring mechanism have been documented as determinants of firm value. The purpose of this study is to analyze the impact of level of voluntary disclosure and monitoring activities, such as audit quality, debt ratio, and public ownership, on firm value through the mediating role of firm profitability. This study uses cross sectional data for a sample of 103 manufacturing firms listed in Indonesia Stock Exchange during 2013 and 2014. The results explain that voluntary disclosure and audit quality have positive and significant impact on profitability and firm value. This study proves the mediation influence of profitability. The evidences contribute to the considerate on the issue of signalling by corporate managers.*

Type of Paper: *Empirical*

Keywords: *Voluntary Disclosure, Monitoring Mechanism, Profitability, Firm Value, Signalling Theory.*

1. INTRODUCTION

One important goal of any company is to increase the firm value. Firm value information is needed by shareholders to find the complete picture about their interests and welfare. However, several companies with many stakeholders and dealing with various issues such as conflicts of interest and information asymmetry, have difficulties to maximize their firm value (Jensen and Meckling, 1976; Watts and Zimmerman, 1986). Past studies documented that the issues of agency conflict and information asymmetry are still high. The decline in firm value can be detrimental to many parties, including investors. Accounting literatures noted that voluntary disclosure and monitoring mechanism are among the important factors in determining the firm value.

Previous studies indicate that firms with comprehensive voluntary disclosure are associated with higher firm value (Chung, Judge, and Li, 2015). They suggested that voluntary disclosure can increase information transparency and then enhance

[1&2] Faculty Economic and Business, University of Sumatera Utara, 20155, Medan, Indonesia.

* *Corresponding author. E-mail: rinabukit_dba@yahoo.co.id; rina.bukit@usu.ac.id*

the firm supervision through public accountability and protect the shareholders interest. Past studies found that monitoring characteristics, such as audit quality (Wang and Huang, 2014), leverage (Bhardwaj and Dhansoia, 2015), and public ownership (Gilson and Whitehead, 2008), play important role in protecting the interests of shareholders. However, in-depth study of why voluntary disclosure and monitoring mechanism can increase firm value is still rarely investigated.

This study argues that voluntary disclosure can improve firm value because the firm managers, which are transparent in providing information, have strong incentive to give signal regarding the company's performance (Hamrouni, Miloudi, and Benkraiem, 2015). By increasing transparency through disclosure of complete information, corporate managers demonstrate good faith in the company, through the achievement of company performance and increase shareholder benefit and wellbeing. Furthermore, companies with strong monitoring are capable of keeping the interests and welfare of shareholders, such as enhancing the company's value through the achievement of company performance (such as profitability).

This research argues that, profitability has a role to mediate the relationship between voluntary disclosure and monitoring mechanism with firm value. To fill this research gap, this study aims to examine the mediation effect of profitability in the relationship between voluntary disclosure and firm value; and in the relationship between monitoring mechanism and firm value.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Firms characterized by poor disclosure and weak monitoring are common in emerging countries such as Indonesia (Choi and Meek, 2012). However, in 2012, public listed companies in Indonesia have implemented International Financial Reporting Standards (IFRS) affecting international disclosure practices and monitoring system quality. Accounting literatures noted that greater information transparency and good controlling system may contribute to firm value (Hamrouni, *et. al.*, 2015).

2.1 Voluntary Disclosure and Firm Value

Firm managers have incentive to disclose the complete information to demonstrate and convince the public such as investors that firm is running legally and valuably. Social contract theory explained that firms need to get sympathy from the public by explaining that their activities in line with the public interest.

Firm may inform and signal the relevant information about firm prospect and firm value using adequate disclosure of information. There is uncertainty surrounding firm growth perspectives, consequently investors need relevant information through high quality disclosure to properly judge the prospects and risks of investment and to reduce cost of capital (Hassan *et. al.*, 2009). Voluntary disclosure is an effective medium to decrease the information gap between shareholders and managers. Past studies found the positive relationship between voluntary disclosure and firm value (Chung *et. al.*, 2015). Furthermore, hypothesis 1 is developed as follows:

H1: Voluntary disclosure is positively related with firm value.

2.2 Monitoring Mechanism and Firm Value

Monitoring mechanism has an important role in controlling the managerial decision and action to achieve the companies' goal. To measure firm monitoring mechanism, this study focuses on firm monitoring by external auditor (audit quality), monitoring by creditor or banking (leverage) and monitoring by public owner (public ownership).

Previous literatures noted that mostly Big Four auditors provide high quality of audit. Monitoring of Big Four auditors is considered better than Non Big auditors with the reason that high quality auditors have lesser lawsuits and a good reputation. Big four auditors also devote extra time on audits and have higher rate of audit fee as compare to Non Big auditors (DeAngelo, 1981). In general, high class auditors are able to carry out excellent audit and firm inspection. Based on the explanation stated above, hypothesis 2 is formed as below:

H2: Audit quality is positively related with firm value.

Leverage describes the proportion of debt to asset. Generally, firms with high leverage get additional monitoring from creditor or banking (Gul and Tsui, 1998; Watts and Zimmerman, 1986). The management must run firm efficiently and effectively in order to pay the debt installment and its interest. The firms with high debt have incentive to show their best effort to enhance the firms' performance and value. Thus, this study declares hypothesis 3 as follows,

H3: Leverage is positively related with firm value.

Previous studies noted that ownership monitoring may help firms to reduce agency conflict between firms' insider and outsider (Jensen 1986; Jensen and Meckling 1976). This study focuses on monitoring by public owner. Public owners with high shareholding may have strong incentive to argue and voice the shareholder interest and welfare. Hypothesis 4 is described as below,

H4: Public ownership is positively related with firm value.

2.3 Mediating Role of Profitability

Corporate managers may decide to disclose more information voluntarily and implement the good controlling system to signal and inform analysts and investors the relevant information about firm quality and value (Healy and Palepu, 2001).

Past studies have empirically examined the relevance of voluntary disclosure (Hamrouni *et. al.*, 2015) and the benefit of excellent monitoring system (Wang and Huang, 2014). The information of firm performance will help improve the shareholders' confidence that the company's future is safe and protected. High quality of voluntary information disclosed in annual reports and good monitoring mechanism play a significant signaling role of firm performance and hence firm value. This study argues that voluntary disclosure and monitoring mechanism influence firm value indirectly through firm performance (profitability). The next hypotheses are explained as below

H5a: Profitability mediates the influence of voluntary disclosure on firm value effect

H5b: Profitability mediates the influence of audit quality on firm value

H5c: Profitability mediates the influence of leverage on firm value

H5d: Profitability mediates the influence of public ownership on firm value

3. METHODOLOGY

3.1 Population and Sample

The study population is all manufacturing companies listed in Indonesia Stock Exchange for the year 2013 to 2014. The sample only includes firms with complete data for all selected variables for each year from the website www.idx.com which contains annual report information. Table 3.1 describes the sample selection procedure which produces the test sample of 206 firm-year observations.

Table 3.1
Sample description

	Firm Year Observation
Manufacturing firms Listing on the Indonesia Stock Exchange for the period 2013-2014	244
Firm with inaccessible annual report	(9)
Firm with incomplete data	(29)
Final Observation	206

3.2 Operationalization of Variables

To do empirical tests, this study uses firm value (Price Book Value) as dependent variable; voluntary disclosure, audit quality (Big Four vs. Non Big Four), leverage, and public ownership as independent variables, as shown in Table 3.2. This study measures voluntary disclosure based on disclosure data on the financial reporting information, including financial information, operational information, and information about the board structure. The level of profitability is the mediating variables. The relevant control variables are firm size and liquidity.

Table 3.2
Variable definition and operationalization

Variable	*Definition*	*Operationalization*
Dependent Variable		
FV	Firm value	Price to book value ratio = current share price / book value per share
Mediating Variable		
ROE	Profitability	ROE = Net Income divided by the firm's total equity
Independent Variable		
VD	Voluntary disclosure	The amount of additional information that is disclosed voluntarily in the annual report of the company
AQ	Audit Quality	Audit quality is measured by using dummy variables which the companies audited by the Big Four auditor is rated 1 and otherwise is 0.
LEV	Leverage	Debt to total asset Ratio (Chung *et. al.*, 2005).
PO	Public Ownership	The percentage of shares held by public owner (Chung *et. al.*, 2005).
Control Variable		
SIZE	Firm Size	Ln of total asset
LIQ	Liquidity	The ability of a company to meet its short term obligations; Liquidity = current asset/current liabilities

3.3 Research Model

This study constructs four regression models. In the first model, this study examines the effect of voluntary disclosure and monitoring mechanisms on firm value (see Equation 1). The second model regress the relationship between all independent variables and profitability, as described in Equation 2. In the third model, this study tests the influence of profitability on firm value (Equation 3). The fourth model investigates why voluntary disclosure and monitoring mechanisms affect firm value through profitability (Equation 4). To prove the role of mediating variable, this study follows the Baron and Kenny (1986) stages. Finally, this study applies Sobel test to confirm the significance level of the mediation effect of profitability.

$$FV = \alpha + \beta 1 * VD + \beta 2 * AQ + \beta 3 * LEV + \beta 4 * PO + \beta 5 * SIZE + \beta 6 * LIQ + e \quad ...(1)$$

$$ROE = \alpha + \beta 1 * VD + \beta 2 * AQ + \beta 3 * LEV + \beta 4 * PO + \beta 5 * SIZE + \beta 6 * LIQ + e \quad ...(2)$$

$$FV = \alpha + \beta 1 * ROE + \beta 2 * SIZE + \beta 3 * LIQ + e \quad ...(3)$$

$$FV = \alpha + \beta 1 * VD + \beta 2 * AQ + \beta 3 * LEV + \beta 4 * PO + \beta 5 * ROE + \beta 6 * SIZE + \beta 7 * LIQ + e \quad ...(4)$$

4. RESULTS

4.1 Descriptive Statistic

Table 4.1.A shows firm characteristics for the sample. The mean of firm value is 10,330 with the highest standard deviation; it means that its variation is the largest. The average of profitability is 0.120. The mean of voluntary disclosure is 0.314. The average of leverage is 1,266. The average of public ownership is 22.70% of firms' equity. Furthermore, Table 4.1.B describes that 43,2% of firm sample is audited by the Big Four auditor and 56,8% of firm sample is audited by non Big Four auditor.

Table 4.1A
Descriptive statistic

	N	*Minimum*	*Maximum*	*Mean*	*Std. Deviation*
Firm Value	206	0,250	77,000	10,330	15,310
Profitability	206	–1,009	2,019	0,120	0,278
Voluntary Disc.	206	0,095	0,667	0,314	0,104
Leverage	206	0,060	52,780	1,266	5,363
Public Own.	206	0,001	0,671	0,227	0,159
Firm Size	206	25,060	35,980	28,786	2,119
Liquidity	206	0,230	47,900	3,080	5,838
Valid N (listwise)	206				

Table 4.1B
Descriptive statistic

		Frequency	*Percent*	*Valid Percent*	*Cumulative Percent*
Valid	0	117	56,8	56,8	56,8
	1	89	43,2	43,2	100,0
Total		206	100,0	100,0	

4.2 Correlation Analysis

Summary of correlations test between the independent variables are shown in Table 4.2. A small number of independent variables are significantly correlated with each other. The magnitude of correlation coefficients is less than 0.479 (*i.e.*, correlation between audit quality and firm size), therefore, the correlations between independent variables should not affect the results of this study (Gujarati, 2003).

Table 4.2
Correlation coefficient

	Firm Value	*Profitability*	*Voluntary Disc.*	*Audit Quality*	*Leverage*	*Public Own.*	*Firm Size*	*Liquidity*
Firm Value	1							
Profitability	0,310**	1						
Voluntary Disc.	0,142*	0,177*	1					
Audit Quality	0,289**	0,169*	–0,055	1				
Leverage	0,107	–0,003	0,068	–0,121	1			
Public Own.	–0,039	–0,116	0,080	–0,159*	0,089	1		
Firm Size	0,304**	0,133	-0,054	0,479**	–0,075	–0,099	1	
Liquidity	–0,011	0,100	-0,006	-0,152*	0,025	–0,021	–0,106	1

This study tests several collinearity diagnostics before examining the empirical analysis, such as normality test, multicollinearity test, heteroskedasticity test, and autocorrelation test. The test shows that the data is normally distributed based on the Kolmogorov-Smirnov probability value > 5%. Then, by examining the variance inflation factor (VIF), which value is less than 10, this study shows that the multicollinearity problem does not exist. This study considers that there is no heteroskedastisity problem in this study based on the scatter plot picture, which indicates that the data do not form a particular pattern.

4.3 Regression Results

Table 4.4 summarizes results of testing the regression models (Model 1-4). Results on Model 1 show that voluntary disclosure, audit quality and leverage have significant positive relationship with firm value at $p < 0.05$ ($\beta = 0.937$; $t = 2.415$); $p < 0.01$ ($\beta = 0.265$; $t = 2.826$); $p < 0.05$ ($\beta = 0.016$; $t = 2.108$). The result demonstrates the association between voluntary disclosure and firm value is in the same direction which is in accordance with past studies such as Chung *et. al.* (2015). The result supports hypothesis

1. As Wang and Huang (2014) suggested, this study also prove that audit quality is positively associated with firm value, consistent with hypothesis
2. This study also supports hypothesis
3 that leverage is positively related with firm value, consistent with Bhardwaj and Dhansoia (2015).

However, this study does not find the significant relationship between public ownership and firm value, inconsistent with hypothesis 4.

Furthermore, this study finds that voluntary disclosure and audit quality have significant positive relationship with profitability, see Table 4.4 in Model 2. However, this study does not find the significant relationship between public ownership and profitability; and between leverage and profitability. Results on Model 3 show that profitability has a significant positive relationship with firm value.

The coefficient of voluntary disclosure is positive and significant (β = 0.663; t = 1.723) when the variable profitability is included in Model 4. But the significance level of the coefficient of voluntary disclosure in the Model 4 is lower than that in Model 1. This result suggests that the voluntary disclosure carry out the supervisory functions in controlling firm managers to increase firm profitability and hence firm value. The result supports hypothesis 5A. Similarly, after profitability is included in Model 4, the sign of variable audit quality is positive and significant (β = 0.222; t = 2.413). This result suggests that presence of auditor with high audit quality could enhance the overseeing function in firm to focus on firm value through increasing the firm performance, consistent with hypothesis 5B. However, the coefficient of leverage and public ownership in Model 4 are not lower than that in Model 1. It means that profitability does not mediate the relationship between leverage and firm value; and in the relationship between public ownership and firm value, which is inconsistent with hypothesis 5C and 5D.

Table 4.4
Regression results Model 1-4

	Model 1 *DV : Firm Value*	*Model 2* *DV : Profitability*	*Model 3* *DV : Firm Value*	*Model 4* *DV : Firm Value*
Constant	–1,739(–2,770)***	–0,356(–1,214)	–1,721(–3,113)***	–1,554(2,536)**
Independent				
Variable				
Voluntary disclosure	0,937(2,415)**	0,526(2,899)***		0,663(1,723)*
Audit quality	0,265(2,826)***	0,083(1,886)*		0,222(2,413)**
Leverage	0,016 (2,108)**	0,001(1,90)		0,016(2,120)**
Public ownership	–0,028 (–0,110)	–0,174(–1,444)		0,062(0,806)
Mediating Variable				
Profitability			0,613(4,214)***	0,502(3,527)***
Control Variable				
Firm size	0,066(3,046)***	0,010(1,014)	0,078(4,076)***	0,061(2,871)***
Liquidity	0,005(0,665)	0,006(1,893)*	–0,001(–0,150)	0,001(0,199)
R^2	0,167	0,095	0,166	0,216
Adj R^2	0,142	0,067	0,154	0,188
F	6,634	3,463	13,416	7,791
Prob F	0,000	0,003	0,000	0,000

In summary, this study follows Baron and Kenny (1986) stages to demonstrate the mediating role of profitability. In the first stage, this study shows that voluntary disclosure, audit quality, leverage, and firm size are significantly and positively related to firm value. The next step, this study finds that voluntary disclosure, audit quality, and liquidity are significantly and positively related to profitability. Profitability is found significantly and positively related to firm value, in the third stage. In other words, there are only two independent variables, such as level of voluntary disclosure and audit quality, influence the firm profitability and in turn lead to higher firm value. Furthermore, the coefficients of both voluntary disclosure and audit quality decreases from the first phase compared to the fourth stage, but the coefficients remains significant. This study proves the partial mediation influence of profitability. Based on Sobel test, the mediation effect of profitability is significant.

4. CONCLUSION, LIMITATIONS AND RECOMMENDATIONS

This paper links voluntary disclosure, monitoring mechanism, signalling theory and firm value. Some managers provide their private information via complete voluntary disclosure to signal their best performance and prospect. Firm transparency through voluntary disclosure can reduce the information gap between firm managers and shareholders. Besides, in order to protect the interests of shareholders, some firms implement the effective monitoring mechanism, including monitoring by external auditor, controlling by creditor or banking and supervision by public owner. Generally, firms with extensive voluntary disclosure and effective monitoring mechanism provide better attention to the interests and welfare of shareholders and have higher firm value.

This study extends this line of research by examining the effect of voluntary disclosure and effective monitoring mechanism on firm value through the achievement of profitability. As expected, this study demonstrates that voluntary disclosure and monitoring mechanism (i.e. audit quality) affect firm value through profitability. The result suggests that firm profitability mediates the voluntary disclosure which in turn leads to higher firm value. The result also indicates that firm profitability mediates the influence of audit quality on firm value. However this study doesn’t find the effects of leverage and public ownership on firm value through profitability.

The findings contribute to the understanding on the issue of signalling by companies. The information transparency via voluntary disclosure and effective monitoring could enhance the alignment of manager and shareholder interests and reduce agency conflict. Consistent with signalling theory, this study implies that comprehensive voluntary disclosure shows that the firm manager is running the company for the benefit of shareholders. The signal shows that the company achieve what is shown in the company performance.

The results have significant implications for policy makers and practitioners. The findings suggest that better performance and good firm value will be achieved when a company is in condition of practicing wide voluntary disclosure and effective monitoring by external auditor. Thus, voluntary disclosure quality and effective monitoring mechanism need to be improved. The finding informs corporate disclosure practices and certain monitoring mechanism would help boards of directors to explain the adoption of certain disclosure strategies, and understand the corporate disclosure behaviour. The practical implications of this study is that managers will have incentive to disclose more complete information and to strengthen the monitoring mechanism in order to signal firm performance and firm value. This study contributes to the signalling theory.

This study uses data of listed companies for the period 2013-2014. The use of such data which is produced one year after the implementation of International Financial Reporting Standard (IFRS) may not fully disclose the effect of financial reporting and disclosure in Indonesia. Thus, it is too premature to assess effects of the IFRS implementation. Therefore, future research is necessary to address this issue.

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