Institutional ownership, independent board, the board size, and firm performance: Evidence from Indonesia

Propiedad institucional, independencia y tamaño del consejo, y desempeño de la empresa: Evidencia de Indonesia

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Abstract

This research examines the effect of institutional ownership, independent board and the board size to firm performance. Using fixed effect data panel regression, this research investigates 293 firms listed in the Indonesian Stock Exchange during 2010-2015. Firm performance is proxied by market measure (Tobin's Q). The findings of this research suggest that the institutional ownership, the board of Independence has a positive impact only to Tobin's Q value, while the board size can increase both Tobin's Q. This research also finds that the board size has a non-linear relationship with investment as proxied by IOS. While the IOS variables can mediate the effect of board size on firm performance.

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Introduction

The worsening global economic condition causes world commodity prices to decline. Indonesia, which has been relying on natural resources must immediately convert to an export-oriented sector and hire a lot of labors. Meanwhile, World Bank economists advise Indonesia to diversify its economy to the manufacturing sector. This is because this sector contributes significantly to the economic growth of Indonesia. In the early 1990s, Indonesia's manufacturing industry grew rapidly, but now, the growth is falling. Thus, it can be a turning point for Indonesia to re-advance that problem. In this case, there are several strategies which have to be taken by the government to achieve the target. These strategies are focused on creating a manufacturing industry that is resistant to crisis shock and attracts as many as investors. With that strategy, it is expected that the manufacturing industry is strengthened so as it contributes optimally to the national economy.

Hence, this paper examines the effect of capital structure on the performance of manufacturing companies. In particular, it directly tests the effects of debt on corporate performance and follows the agency theory introduced by Jensen and Meckling (1976) as well as Jensen's free-cash-flow theory (Jensen, 1986). These theories predict that the choice of capital structure can affect firm performance. Corporate governance is a mechanism that has a purpose to convince investors to have corporate management activities in harmony with the interests of investors. The relationship between corporate governance and managerial choice for value creation is a topic that continues to attract researchers. The practice of corporate governance can increase the corporate value (Johl, Khan, Subramaniam, & Muttakin, 2016), with an effective governance system that can increase its value by decreasing conflicts of interest between minority shareholders and empowered enterprise managers as well as by reducing information asymmetry and increasing efficiency managerial (C. A. Utama & Musa, 2011).

Good corporate governance practices can prove helpful in building an optimistic market reputation in the capital market (Tong & Junarsin, 2013) and hence, funds can be obtained at a lower cost. However, some researchers also raised a question about the positive relationship between corporate governance and corporate value due to the high costs associated with implementing effective corporate governance mechanisms in companies that can offset the benefits (Mai, 2017).

Some studies have been conducted to examine the effect of institutional ownership, the composition of the independent board of commissioners, and the size of the board of commissioners but it has not met with the value of the firm. However, the result is not convincing and depends on the specific conditions of each firm. This study aims to determine the influence of corporate governance mechanism on firm performance.

Literature review and hypothesis development

Berle and Gardiner (1932) explicitly stated about the separation of ownership and control of the company, so that the distribution of stock ownership in the company becomes an important matter. When the control of the company is no longer done by the owner but left to the other party to manage the company's resources, then the problem that arises is the potential conflict in the relationship between the owner (principals), and the agent (agent) is often called agency

problems. The agency relationship defines as a relationship arising from the existence of a contract established between the principal that the agent uses to render his services to the principal's interests (Jensen & Meckling, 1976).

Corporate governance, which is a concept based on agency theory, is expected to serve as a tool to give investors confidence that they will receive a return on the funds they have invested (Tong & Junarsin, 2013). Corporate governance provides new evidence that governance mechanisms are vital to the company (Al-Najjar, 2018; Handriani & Robiyanto, 2018a; C. A. Utama & Musa, 2011). The mechanism of corporate governance is a clear rule of law, procedures, and relations between decision-making parties and those who exercise control and oversight of those decisions. Corporate governance mechanisms are directed to guarantee and monitor the running of governance systems within an organization. The corporate governance mechanism is divided into two groups. The first is internal mechanisms such as the composition of the board of directors and commissioners, managerial ownership, and executive compensation. Second, external mechanisms, such as market control and funding sources. A study conducted by Handriani (2016) in the Indonesia Stock Exchange found that firms with better corporate governance practices tend to encourage alignment of interests between controlling and non-controlling shareholders.

Corporate governance and firm performance

Corporate governance has been known well in the community. In general, it is a good structure and system for managing a firm with the objective of increasing shareholder value and accommodating various stakeholders such as creditors, suppliers, business associations, consumers, workers, government and the wider community. This concept is quickly accepted by the public even the performance of a firm's stock is now determined to what extent its seriousness in implementing corporate governance (S. Utama & Utama, 2005). However, some academic research has proven that there is no significant relationship between corporate governance structure, mechanisms, and financial performance (Balasubramanian, Black, & Khanna, 2008; Bebchuk & Cohen, 2005).

Institutional ownership and firm performance

This research is based on agency theory. The concept of agency problem conducted by Jensen and Meckling (1976) stated that the agency problem will occur if the proportion of institutional ownership of firm stock is less than 100%, which make the managers become selfish and the implementation is not based on maximizing corporate value in making an investment decision. At a very high level of ownership, there is a tendency of institutional investors to enforce certain policies that are not optimal, regardless of the interests of minority shareholders through the voting power they possess. Shleifer and Vishny (1997) argued that the degree of institutional ownership in substantial proportions will affect the market value of the firm. The basis of this argument is the greater the institutional ownership, the more effective the control mechanism on the performance of management.

The institutional ownership as one of the variables proxy of corporate governance structure acts as a control mechanism for the future investment determinants of the firm. A firm investment requires opportunity, plan or project that can be selected to achieve its objectives, namely

profitability. The companies with large investment opportunities indicate its bright future outlook; then it will have a positive impact on the value of the firm. Modigliani and Miller (1958) argued that corporate value is determined by the ability to generate high profitability and investment. Therefore, at a very high level of ownership, there is a tendency of institutional investors to impose certain policies that are not optimal by neglecting the interests of minority shareholders through the voting power they possess.

Having consistent with the concept that corporate governance is a control mechanism for firm performance if the increasing mechanism of institutional ownership control increases the firm performance. Concerning those cases mentioned above, then hypothesis 1a, 1b, and 1c are formulated as follows:

Hypothesis 1a: institutional ownership positively affects firm performance

Hypothesis 1b: institutional ownership positively affects investment

Hypothesis 1c: investment mediates the influence of institutional ownership toward firm performance

Board independent and firm performance

The previous studies conducted by Beiner, Drobetz, Schmid, and Zimmermann (2004) on a set of companies listed on the Swiss Stock Exchange, with the aim of examining the impact of board size on firm performance. The result of the study suggests that the board size is an independent control mechanism. Hypothesis 2 in this study is by agency theory proposed by Jensen (1986) who explained that conflict of interest of manager with shareholder's interest occurs with the assumption that shareholders and agent (each manager) wants a high return on investment projects but in different interests towards the risks.

Corporate governance is the structure and control mechanism for managing a firm by means of improving corporate prosperity and accountability, whose ultimate goal is to make shareholders value (Black, Kim, Jang, & Park, 2015). The independent board is one of the variables of the internal corporate governance structure that is expected to affect the investment. The independent board in this study is proxied by the percentage of the number of independent board members of the total number of board of commissioner's members.

Thus, it can be assumed if a firm's board size is high, it will have a positive effect on firm performance and corporate investment. Hence hypotheses 2a, 2b and 2c are formulated as follows:

Hypothesis 2a: the independent board has a positive effect on firm performance

Hypothesis 2b: the independent board has a positive effect on investment

Hypothesis 2c: investment mediates the influence of independent board toward firm performance

Board size and firm performance

Research on the impact of board size on firm value has a significant positive impact on firm value. The previous research stated that a firm with large board size can make a better decision to improve performance for the achievement of firm value, i.e., Eisenberg, Sundgren, and Wells (1998); Garg (2007); Jensen and Meckling (1976); Lipton and Lorsch (1992); Yermack (1996). The latest research in line with the above results is found the evidence of board size and independence of members of the board of commissioners both for companies with family

ownership and non-family ownership having a strong and significant positive effect on the financial performance of the firm, i.e., Johl et al. (2016).

A study by Mayur and Saravanan (2005) in India found evidence that there was an influence from the boards of size to firm performance banking. The corporate governance is a control mechanism against the tendency of managers to behave opportunistically, in which the board size variable is as one of its proxies. The supportive research is on the relationship between board size to firm performance. The board size in this study is proxied by the total number of members of the board of commissioners owned by the firm. As one variable of internal corporate governance structure, it is expected to have a significant effect on investment and firm performance.

Thus, based on the description above, it can be assumed that if the firm's board size is high, it will have a positive effect on firm performance and investment, then 3a, 3b, and 3c hypotheses can be proposed as follows:

Hypothesis 3a: the board size has a positive effect on firm performance
Hypothesis 3b: the board size has a positive effect on investment
Hypothesis 3c: investment mediates the influence of the board size toward firm performance

Firm size and investment

The problem of firm size is an important factor in the perspective of capital structure. The size of a firm is an important indicator in an economic system that has generated interest among researchers. Prior empirical research regarding the firm size in Indonesia has been done by Handriani (2016), the results show that large companies have a high desire to invest. But the company size in Indonesia is also able to provide information for investors to make decisions on corporate investment (Atahau & Cronje, 2015). Mai (2010) conducted a study of opportunistic managerial conduct in the Indonesia Stock Exchange (IDX) and concluding that the activities of large enterprise managers tend to be opportunistic to investment, indicating that firm size has a significant positive effect on investment.

In general, the result of previous research allows us to conclude that firm size plays an important role in corporate investment policy. This means that the firm has a huge potential to choose different investment opportunities in getting a positive NPV from some investments. The NPV will contribute to cash inflows, and then accumulate in increased profitability. Thus, based on the description above, it can be assumed that if firm size is high, it will have a positive effect on investment, then the fourth hypothesis be proposed in this study is as follows:

Hypothesis 4: Firm size has a positive effect on investment

Debt and investment

Debt policy is the decision of the extent of debt used to manage and run the firm's activities by using debt to equity ratio, where it can be obtained by dividing the total obligations by the firm with own capital. The management of the firm should pay attention to the amount of the loan considering the other parties who have an interest in the firm's ability to pay the interest and loan principal.

The measurement of the firm's debt level is based on data derived from the firm's balance sheet and the ratio which is typically used in financial leverage (Handayani, Muharam, Mawardi, & Robiyanto, 2018; Handriani & Robiyanto, 2018a). This is because of the higher the level of debt, the more funds available to pay dividends. The highest dividend payouts can provide a positive signal that causes to raise on one's firm's value. To measure the amount of financial leverage in which it measures the extent to which debt finances the firm.

An investment policy is a decision that concerns the allocation of internal and external funds to various forms of investment. Thus, based on the description above, it can be assumed that if the firm's debt is high, it will have a positive effect on the investment, then the 5th hypothesis be proposed in this study is as follows:
Hypothesis 5: Debt has a positive effect on the investment

Age and investment

The age of a company is defined as the age since its establishment. Theoretically, long-standing companies will be trusted by investors rather than newly established companies, as long-established companies are assumed to be able to generate higher profits than newly established companies. As a result, the newly established company will find it difficult to obtain funds in the capital market so that it relies more on its capital.

The long-standing companies will increase their profits due to the experience of previous management in business, so they have a force to run a profitable investment, with a good investment capability, the firm is certainly good at managing risks as well. Thus, based on the description above, it can be assumed firm age has a positive effect on investments, then the 6th hypothesis be filed in this study is as follows:
Hypothesis 6: Firm age has a positive effect on investment

Systematic risk and investment

Systematic risk, associated with risk factors that affect the market as a whole. The systematic risk comes from factors that systematically affect most companies such as; war, inflation, recession, exchange rate changes, and high-interest rates (Brigham & Houston, 2012). These risks affect the securities as a whole, and most stocks tend to be negatively affected by these risks, so the consequences cannot be diversified (Brigham & Houston, 2012; Robiyanto & Puryandani, 2015).

Research by Ernayani, Oktiviana, and Robiyanto (2017); Robiyanto (2017) stated that systematic risk or market risk affect firm performance. A firm as business institutions is particularly vulnerable to the pressures of these fundamental macroeconomic factors. In this study, systematic risk is proxied by using Beta (β) market. The concept used is a single-index model, the value of Beta (β) of each firm is calculated by regressing the stock return of each firm with market return during the study period (Robiyanto, 2018; Robiyanto, Wahyudi, & Pangestuti, 2017). Thus, if it is assumed that if the systematic risk is high, it will negatively affect the investment. Henceforth, the seventh hypothesis is proposed in this study is as follows:
Hypothesis 7: Systematic risk negatively affects the investment

Investment and firm performance

The investment decision is the capital expenditure of a current situation to get the result or profit in the future. The shareholders always want managers to be able to choose and create investment decisions that can increase future profits (Handriani & Robiyanto, 2018b; C. A. Utama & Sulistika, 2015). These benefits will improve the firm's performance from investors to provide a positive signal to investors that will increase stock prices and firm performance. Thus, if it is assumed that when the investment is high, it will have a positive effect on firm performance. Then the 8th hypothesis be proposed in this study is as follows:
Hypothesis 8: Investment positively affects firm performance

Definition of operational variables

Therefore, this research uses internal corporate governance structure which is proxied with institutional ownership, board independent, and board size. While the dependent variable is the firm performance, which proxied in Tobin's q and the investment decision variables in proxy investment opportunity set (IOS). The independent variables are firm size, debt, age, and risk. In the other hand, the independent variable that describes the corporate governance policy is the structure of good corporate governance, which consists of; first, institutional ownership is proxied by using the percentage indicator of the number of shares owned by institution, second, the composition of independent board of commissioners that is proxied by using the percentage indicator of the board commissioners come from outside the third, the size of the board of commissioners is proxied by using indicators of the number of members of the board of commissioners of a firm.

The problem will be formulated into a simultaneous model, i.e., a model formed by one dependent variable described by one or more independent variables, where a dependent variable at the same time will act as an independent variable for other tiered relationships (Ferdinand, 2005). The corporate governance structure, firm size, debt, age, the corporate risk is an independent variable. After determining the independent variables, and dependent on this research then determine mathematically the equation of empirical model to test the hypothesis as follows:

1. Firm Performance (Y1) :

$$Y_1 = \beta_0 + \beta_1\, IO + \beta_2\, BI + \beta_3\, BS + \beta_7\, Inv + \varepsilon_1$$

2. Investment (Y2) :

$$Y_2 = \beta_0 + \beta_1\, IO + \beta_2\, BI + \beta_3\, BS + \beta_4\, Size + \beta_5\, Debt + \beta_6\, Age + \varepsilon_2$$

To further explain the measurements of the various variables and research indicators used in this study, it is presented in Table 1

Table 1
Research Variables

Variable	Measurement
Institutional Ownership (IO)	Percentage of the number of shares owned by the institution to the total number of shares outstanding
Board Independent (BI)	Percentage of the number of the independent board of commissioners' member to the total number of the board of commissioners' member
Board Size (BS)	The total number of the board of commissioners' member
Firm Performance (FP)	Market Value of Equity (MVE) + Debt /Total Asset
Firm Size (FS)	Natural Logarithm of Total Asset
Investment (INV)	Investment Opportunity Set = Market Book Value / Total Asset
Debt	Total debt / total asset
Age	The age since its establishment
Risk	The value of beta (β) of each firm is calculated by regressing the stock return of each firm with market return during the study period.

Source: Various previous research.

Data and summary statistics

Our main sample used a population of manufacturing firms which is listed in the Indonesia Stock Exchange from 2010 to 2015. The population is the criteria of a particular sample as preferred by researchers and carefully chose some samples that are relevant to study design. As in previous studies, this research will issue a sample of firms that belongs to the financial industry since the firms have a small physical relatively to capital to avoid the difficulty in calculating the variables research. The sample firms have to require such requirements: The firms must be listed on the Indonesia Stock Exchange (IDX) in the year 2010 -2015, it has a positive asset growth at each year from 2010-2015, and has financial reports and data for five years started from 2010 to 2015. The firms' financial reporting period ended on December 31 at each. These shares have a size and book to market value ratio in December of year. The data are available in the annual balance sheet of each firm issued in the form of annual reports by IDX.

Heteroscedasticity test results

Heteroscedasticity test conducted by using the White test for both equation in this study. The White test result for equation 1 is shown in Table 2, while for equation 2 is shown in Table 3. Both Tables shows that no heteroscedasticity occurred in Equation 1 and Equation 2 because none variable has a significant effect on Squared Residual.

Table 2
White Test Result for Equation 1 (Y1 as Dependent Variable)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.000862	0.182699	0.004721	0.9962
IO	0.000130	0.002761	0.046926	0.9626
IO^2	-4.46E-06	1.28E-05	-0.349291	0.7271
IO*BI	0.004689	0.004210	1.113795	0.2661
IO*BS	-2.62E-05	0.000269	-0.097422	0.9224
IO*INV	-0.001188	0.000879	-1.352622	0.1770
BI	-0.005230	0.345990	-0.015117	0.9879
BI^2	-0.483467	0.284301	-1.700548	0.0899
BI*BS	0.016105	0.028639	0.562336	0.5742
BI*INV	0.029005	0.260401	0.111386	0.9114
BS	0.004383	0.028375	0.154466	0.8773
BS^2	-0.000252	0.001453	-0.173720	0.8622
BS*INV	0.003383	0.017178	0.196925	0.8440
INV	0.010269	0.154090	0.066641	0.9469
INV^2	0.012415	0.014989	0.828274	0.4095

Source: Secondary data, processed.

Table 3
White Test Result for Equation 2 (Y2 as Dependent Variable)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-5.024329	17.43693	-0.288143	0.7734
IO	0.050124	0.114634	0.437254	0.6622
IO^2	0.000797	0.000503	1.584493	0.1162
IO*BI	-0.016539	0.142736	-0.115874	0.9078
IO*BS	-0.000797	0.009928	-0.080263	0.9361
IO*FS	-0.008291	0.005098	-1.626253	0.1048
IO*DER	-0.027992	0.026350	-1.062304	0.2888
IO*AGE	-0.000423	0.000370	-1.142586	0.2540
BI	10.79721	27.27644	0.395844	0.6925
BI^2	-5.293556	8.822219	-0.600025	0.5489
BI*BS	0.424559	0.688784	0.616389	0.5380
BI*FS	-0.532986	1.525524	-0.349379	0.7270
BI*DER	0.533460	10.10973	0.052767	0.9579
BI*AGE	0.015209	0.114553	0.132766	0.8945
BS	0.329005	1.881387	0.174873	0.8613
BS^2	0.012104	0.063778	0.189777	0.8496
BS*FS	-0.037085	0.114680	-0.323380	0.7466
BS*DER	0.012675	0.618347	0.020497	0.9837
BS*AGE	0.002305	0.007928	0.290735	0.7714
FS	0.254694	1.515883	0.168017	0.8667
FS^2	0.013204	0.043361	0.304523	0.7609
FS*DER	0.221746	0.309021	0.717576	0.4735
FS*AGE	0.002837	0.004662	0.608549	0.5432
DER	-2.020580	7.165239	-0.281998	0.7781
DER^2	-0.202114	1.053360	-0.191876	0.8480
DER*AGE	0.020400	0.022988	0.887424	0.3755
AGE	-0.030624	0.088488	-0.346077	0.7295
AGE^2	-5.20E-05	0.000298	-0.174488	0.8616

Source: Secondary data, processed.

The goodness of fit results

Measure the suitability of the input of observation (covariance or correlation matrix) with the prediction of the proposed model. In this analysis, we will use several measures of goodness-of-fit consisting of First, Chi-Square, and Probability; The Chi-Square value shows the size of the poor fit of a model. A Chi-Square value of 0 indicates that the model has a perfect fit. A significant chi-square value (less than 0.05) indicates that empirical data have differences with established theories, and if the probability value is not significant indicates empirical data according to the model. If the assumption of normality is met will result in two types of Chi-Square Minimum Fit Function Chi-Square and Normal Theory of Weighted Least Squares Chi-Square. Second, Goodness of Fit Indices (GFI), is a measure of model accuracy in generating covariance observed matrices. GFI values should range from 0 to 1, and a GFI value greater than 0.9 indicates a fit for either model.

Third, Adjusted Goodness of Fit Index (AGFI), is a GFI that has adjusted the influence of degrees of freedom of a model. AGFI score of 1 shows the perfect fit model. While Parsimony Goodness of Fit Index (PGFI) is a GFI that has adjusted the impact of the degree of freedom and model complexity. Models are said to fit if the value of PGFI is much greater than 0.6. Fourth, Root Mean Square Error of Approximation (RMSEA), measures the deviation of parameter values on a model with its population covariance matrix. RMSEA values less than 0.05 indicate a fit model. Confidence intervals to assess the accuracy of RMSEA estimates should be small, indicating that the RMSEA has good accuracy.

The test results in the goodness of fit model using indicators can be seen in Table 4 as follows.

Table 4
The Test Results of Goodness of Fit Model

Model Fit Indicators	Value	Cut-off Value	Conclusion
Chi-Square and Probability:			
Minimum Fit Function Chi-Square	P = 0.37	P > 0.005	Model fit
Normal Theory Weighted Least			
Square Chi-Square	P = 0.37	P > 0.005	Model fit
The goodness of Fit Indices (GFI)	1.00	P ≥ 0.90	Model fit
Adjusted Goodness of Fit Index (AGFI)	0.92	P ≥ 0.90	Model fit
Parsimony Goodness of Fit Index (PGFI)	0.69	P > 0.05	Model fit
Root Mean Square Error of Approximation (RMSEA)	0.00	< 0.050	Model fit
P-Value for Test of Close Fit (RMSEA)	0.081	< 0.050	Model fit
Expected Cross Validation Index (ECVI)	0.22	ECVI (0.22) < ECVI for Saturated (0.28) Model	Model fit
2. ECVI for Saturated Model	0.28	ECVI (0.22) < ECVI for	
3. ECVI for Independence Model	2.38	Independence Model (2.38)	**Model fit**

Model Fit Indicators	Value	Cut-off Value	Conclusion
Akaike's Information Criterion (AIC) and CAIC:		Model AIC (66.99) < Independence AIC (984.11)	Model fit
1. Model AIC	66.99	and Model AIC (293.59) <	
2. Independence AIC	964.10	Saturated AIC (300.35)	
3. Saturated AIC	90.00	Model CAIC (293.59) <	
4. Model CAIC	293.59	Independence (964.10) and	Model fit
5. Independence CAIC	984.11	Model CAIC (293.59) <	
6. Saturated AIC	300.35	Saturated AIC (311.35)	
Fit Index: Normed Fit Index	P > 0.70	0.95	Model fit
(NFI) Comparative Fit Index	P > 0.80	0.97	Model fit
(CFI) Incremental Fit Index (IFI)	P > 0.80	0.97	Model fit
Relative Fit Index (RFI)	P > 0.80	0.92	Model fit

Source: The result of data processing by LISREL

Fifth, the Expected Cross Validation Index (ECVI), is used to assess the trend that models on a single sample can be cross-validated if the sample size and population are equal. If the ECVI value of the model is lower than the value of ECVI saturated model and the independence model indicates that the model is fit. Sixth, Akaike's Information Criterion (AIC) and CAIC, to assess the parsimony problem in the fit model assessment. If more AIC values and CAIC are lower than the AIC model saturated and independence means having a better fit model.

Seventh, Fit Index, Normed Fit Index (NFI) and Comparative Fit Index (CFI) are used to determine the fit model. NFI and CFI values range between 0 and 1. A model is said to be fit if it has NFI and CFI values greater than 0.9. No-Normed Fit Index (NNFI) is used to overcome problems arising from model complexity. Incremental Fit Index (IFI) is used to address Parsimony problems and sample sizes and is associated with NFI. The cut-off limit of IFI is 0.9. While the Relative Fix Index (RFI) is used to measure fit, whose value ranges between 0 and 1 if the greater value indicates superior fit. Table 4 shows that all goodness of fit model structured index is fit.

Hypothesis test

Based on the calculation through path analysis covers firm value, firm size, leverage, profitability, dividend payout, and investment opportunity set variables. The next step is to test the hypothesis proposed. The hypothesis result can be seen based on the magnitude of t-value in Table 5.

Table 5
Direct Influence of Corporate Governance; DEBT; SIZE; AGE; RISK; FP and INV

Variables	Unstandardized Estimate	Standardized Estimate	t-Value
IO → FP	0.12	0.06	2.74*
BI → FP	0.04	0.01	1.74**
BS → FP	0.11	0.81	4.66*
INV → FP	0.71	0.48	2.25*
IO → INV	0.30	0.34	3.37*
BI → INV	0.39	4.01	2.39*
BS → INV	0.48	0.12	2.44*
SIZE → INV	0.20	0.14	1.68**
DEBT → INV	0.06	0.25	4.87*
AGE → INV	0.00	0.02	0.53
RISK → INV	0.00	0.02	0.76

Source: The result of data processing by LISREL
Description: *) significant on α=5%
**) significant on α=10%

This study also calculates the indirect effect. The first is the indirect effect of institutional ownership on firm performance through investment, which is proven. Second, the indirect effect of an independent board to firm performance through investment, which is not proven, and third, the indirect effect of board size to firm performance through investment, which is not proven as measured by the Sobel Test that showed in Table 6.

Table 6
Direct influence of corporate governance; DEBT; SIZE; AGE; RISK; FP and INV

Variable	Statistical Test	p-value	Standard Error	Result	
IO → INV → FP	0.75	0.6461	0.3436	p-value > 0.05	rejected
BI →INV → FP	0.14	0.0109	0.3557	p-value < 0.05	accepted
BS →INV → FP	0.45	0.3267	0.3449	p-value > 0.05	rejected

Source: The result of data processing by Sobel Test

Conclusions

This study aims to examine the effect of good governance on firm performance. The test result of the first hypothesis is that institutional ownership has a positive effect on firm performance, which is supported empirically. This can be shown with t-value=2.74, which is significant at α=5%. While hypothesis 2 is shown with t-value=1.74 which is significant at α=10% and hypothesis 3 is shown with t-value=4.66, which is significant at α=5%. The results show that institutional ownership is a positive determinant for firm performance. However, the independent board has a significant positive effect on firm performance, and the board size has a positive effect on firm performance. The results of this study can be interpreted that corporate governance as a variable affecting firm performance will affect the reputation of companies in Indonesia.

In line with agency theory proposed by Jensen and Meckling (1976), stated that the agency problems will occur when the proportion of managerial ownership of a firm's stock is less than 100%, so the managers tend to act to pursue their self-interest and are not based on the corporate value in funding decision making. Management does not assume the risk of making a decision; the risk is fully borne by the shareholders. Another cause of this conflict is that shareholders are concerned only with the systematic risk of the firm's shares, as they invest in a well-diversified portfolio. Managers are otherwise more concerned about overall corporate risks.

The results of the second hypothesis test obtained empirical support because it has a positive and significant influence. The third hypothesis is the influence of good governance toward investment including institutional ownership to investment indicated by the t-value= 3.37 which is significant at α=5%, whereas the independent board hypothesis to investment is shown with the t-value =2.39, which is significant at α=5%, and board size hypothesis is shown with t-value=2.44, which is significant at α=5%. The results of the second hypothesis are that corporate governance affects on investment activities of companies in Indonesia. The companies that make investments will certainly attract investors. In line with the signaling theory, that the level of investment chosen is one that maximizes net present value. A future profit is financed from external and internal funding sources. Therefore, its utilization needs a good monitoring mechanism conducted by institutional ownership, independent board, and board size.

The result of the fourth hypothesis is that the firm size has a positive effect on investment and it gets empirical support, shown by t-value=1.68, which is significant at α=10%. Thus, this study supports the results of previous research done by Chung and Charoenwong (1991); Collins and Kothari (1989); Jensen (1986); Kallapur and Trombley (2001); Kester (1984); Lewellen, Loderer, and Martin (1987); Pindyck (1986); Siegel, Siegel, and MacMillan (1988); Smith and Watts (1992); Vogt (1997). The manufacturing companies in Indonesia have started investing in and being diversified since the firm was newly established. The firm managers will always to know more about the value of assets and opportunities than investors. This will show a fundamental thing as investment managers in getting to know that a project has a positive NPV.

A debt testing has a positive effect on investment, and it gets empirical support, shown by t-value=4.87, which is significant at α=5%. Thus, this study supports what Fama (1978) on investment decisions. Fama (1978) stated that corporate value is solely determined by investment decisions. That opinion can be interpreted that the investment decision is important because it achieves the firm's goal shareholder through corporate investment activities. The purpose of investment decisions is to obtain a high level of profit with a certain level of risks. A high profit accompanied by manageable risks is expected to increase the value of the firm, which means increasing shareholder wealth. The use of funding sources for investments by Pecking Orders Theory was first introduced by Donaldson (1961).

This theory demonstrates a hierarchy in fund-raising firms in which the firm has a specific preference order of capital used to finance their business (Myers & Majluf, 1984). Due to asymmetry information between the firm and potential investors, the firm will prefer retained earnings in advance to pay dividends and investment opportunities. If the firm requires external funds, it will prefer to choose the debt before external equity. The internal equity is got from retained earnings and depreciation. Then debt is obtained from a creditor loan, while external equity is obtained from the firm which issues a new share. In short, this theory prefers internal financing (funding derived from the results of the firm's operations in the form of retained earnings).

The sixth hypothesis, age has effects on investments, whereabouts it does not get empirical support. Getting proven with the t-value=0.53, which is not significant at α=10%. This hypothesis shows that firm age has a positive effect and it is not significant to investment. The older companies have better market access and will be able to increase their investment activity. This study is in line with the research run by Humphrey-Jenner and Powell (2011); Pervan and Višić (2012); Srivastava and Laplume (2014); Yildiz, Bozkurt, Kalkan, and Ayci (2013).

The seventh hypothesis test whether the risk negatively affects investment. Based on the t-value=0.76, which is not significant at α=10%, so it concluded that the risk does not have any effect on investment. The results of this study are consistent with Evgeny Lyandres and Zhdanov (2010); Evgeny Lyandres and Zhdanov (2013). The test of the eighth hypothesis shows that there is a positive effect on investment to firm performance. The t-value=2.25 is significant at α=5%. The research implies that manufacturing companies in the Indonesia Stock Exchange have a positive effect on investment to firm performance since large companies tend to have lower volatile income and net cash flow (Fama & French, 2000).

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