

INTERACTIONS AMONG INSIDER OWNERSHIP, DIVIDEND POLICY, DEBT POLICY, INVESTMENT DECISION, AND BUSINESS RISK

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ABSTRACT

The study of interaction among insider ownership, dividend policy, debt policy, investment decision, and business risk is still conducted. This research aims at investigating the influencing factors of insider ownership, dividend policy, debt policy, investment decision, business risk, and the interaction among insider ownership, dividend policy, debt policy, investment decision, and business risk. The samples of the research are 137 manufacturing companies listed in the Indonesia Stock Exchange from the year 2006 to 2010. The three stages least square simultaneous equation model is used to analyze the interaction among insider ownership, dividend policy, debt policy, investment decision, and business risk. The analysis result of insider ownership equation shows that investment, business risk, and size have negative influence on insider ownership. Insider ownership, debt and business risk give negative impact to dividend that is shown on equation of dividend. Negative impact of dividend, business risk, and profitability to debt is shown on equation of debt. The analysis result of investment equation shows that insider ownership and business risk have negative influence on investment, whereas profitability and sales growth have positive influence on investment. The analysis result of business risk equation shows that insider ownership, dividend, investment, and size have negative influence on business risk, whereas variability of earnings has positive influence on business risk. The analysis result of the interaction among insider ownership, dividend policy, debt policy, investment decision, and business risk shows that: 1) there are reciprocal interactions among insider ownership, investment, and business risk; 2) there are reciprocal interactions between dividend and debt; 3) there are reciprocal interactions between dividend and business risk; 4) insider ownership influences dividend; 5) business risk influences debt. The empirical evidence of interaction among insider ownership, dividend policy, debt policy, investment decision, and business risk helps the companies to make financial policy minimize agency problem.

Keywords: *insider ownership, dividend, debt, investment, business risk*

INTRODUCTION

Conflict of interest and asymmetric information results in agency problem that can arise among shareholders, managers, and creditors. Financial policy is prone to be made by managers to maximize prosperity of their

own and not of the shareholders. The disparity of income earned is to be the cause of the rise of conflict among the shareholders and creditors. Asymmetric information results in the use of the policy made by managers for detecting the company's prospect. Insider ownership, dividend policy, debt policy, and

investment decision can be used for agency problem minimization. Financial policies are made in order to make business risk more controllable.

This research is conducted to analyze interactions among insider ownership, dividend policy, debt policy, investment decision, and business risk. So far, some research has been conducted to observe interactions among several variables, while research that observes interactions among insider ownership, dividend policy, debt policy, investment policy, and business risk has not been carried out yet. This interaction is interesting to study more thoroughly through empirical analysis in this research. Jensen, *et al.*, (1992) observed the interaction among insider ownership, debt, and dividend. Adedeji (1998) observed the interaction among dividend, debt, and investment. Chen *et al.* (1999) observed the interaction among managerial ownership, risk taking, debt policy, and dividend policy. Wibowo & Erkaningrum (2002) observed interaction among dividend, debt, and investment in Indonesia.

The major objectives that this research is expected to achieve is to examine empirically: 1) influencing factors towards insider ownership; 2) influencing factors towards dividend policy; 3) influencing factors towards debt policy; 4) influencing factors towards investment decision; 5) influencing factors towards business risk; and 6) interaction among insider ownership, dividend policy, debt policy, investment decision, and business risk.

LITERATURE OVERVIEW

The interaction among insider ownership, dividend policy, debt policy, investment decision, and business risk can be explained by agency theory and signaling theory. The different interests among the shareholders, managers, and creditor are to create inter-group conflict, which is called agency problem. Papadopoulos and Charalambidis (2007) stated that agency problem is interest conflict that

can arise: 1) between the shareholders and managers, and; 2) between the shareholders and creditor. The interest conflict between the shareholders and managers arises because the policy that the managers made is prioritized to maximize their own prosperity over that of the shareholders. While the interest conflict between the shareholders and creditors arises as the result of the fact that the obligation owners generally earn steady income regardless of the good performance of the company, whereas the shareholders will earn larger income along with the better performance of the company.

Asymmetric information results in manager of having better information on the company's prospect than the investors do. Berk & DeMarzo (2011) declared that asymmetric information occurs when managers have better information from the investors. Creditors are outsider party that suffers from the loss of information equal to that obtained by the external shareholders. Bebczuk (2003) affirmed asymmetric information in financial contract every time the loan giver does not have the necessary information for identifying the creditor's capability in paying off its debt.

Pecking order theory is one of theories on funding decision based on asymmetric information. Myers (1984) argued that the decision of funding based on pecking order theory, which was stated in 1961, follows the sequence of funding; 1) a company prefers internal-resource funding; 2) a company adjusts the target of dividend payment to the investment opportunity; 3) dividend policy is sticky, profitability fluctuation and investment opportunity gives impact on larger or smaller internal cash flow than investment expenditure; 4) if external fund is required, a company prefers debt-resource funding as it is regarded safer than publicizing new equity as the last option to meet the need of investment.

Share and obligation publication is done when a company needs external funding. With the availability of asymmetric information can help market to detect the prospect of a com-

pany through managerial behavior in making financial decision. A company with poor prospect is inclined to fund the investment by issuing shares in order to share the loss with new investors. The new share publication is interpreted as bad news that results in the company value reflected by the decreasing value of share price. While a company with good prospect is prone to avoiding share sale and attempts additional capital using other efforts, including the use of debt over the target of normal capital structure. Ghosh, *et al.* (2008) stated that managers of good-prospect Company would give signals to the investors by issuing debt instead of self-capital. The use of debt over the target of normal capital structure will enlarge flat-interest burden and bring about the company's financial distress. The use of interest-loaded debt has advantage and weakness. Ross, *et al.* (2010) declared that in the financial perspective, the major differences between debt and self-capital are: 1) debt does not belong to company's ownership, creditor does not have any right to vote; 2) debt interest payment is a business operational cost that can reduce the burden of tax, dividend for the shareholders, and the company's tax; 3) an unpaid-off debt is the company's responsibility.

Interest conflict and asymmetric information influence a company's financial policy. The tendency of the management to make policy that will maximize its own prosperity rather than that of the shareholders requires the shareholders to expend cost for controlling management activity to make it consistent with the contract agreement among the shareholders, managers, and creditors. Agency cost is cost expended for overcoming agency problem. Ghosh, *et al.* (2008) perceived not only does the interaction among the shareholders and the managers cause agency cost, but also the interaction among the loan givers and the creditors cause agency cost. This agency cost will be high if the shareholders always control every management's action. It

will be low if the management is less motivated to elevate its own prosperity.

A company minimizes the costs that result from agency problem and asymmetric information by optimizing insider ownership and other financial policies like dividend policy, debt policy, and investment decision. Optimization of insider ownership and financial policies make business risk more controllable. Insider ownership and financial policies are helpful in overcoming asymmetric information between managers and external investors (Leland & Pyle, 1977; Ross, 1977). Jensen *et al.* (1992) stated that agency and signaling theory indicates that debt, dividend, and insider ownership is not only related to special attributes of the similar companies, but also directly inter-relevant to each other. Chen *et al.* (1999) stated fact that managerial ownership, risk taking, debt policy, and dividend policy are integral part of the company's decision-making process in the agency framework.

The ownership of shares by management (insider ownership) is a policy to reduce interest conflict between the shareholders and the managers. The shareholders control the company by selecting a group of people who have authority to make decision in the company. Hua (2006) revealed the opinion of Agrawal & Mandelker (1987), Lewellen, *et al.* (1985) that insider shareholdings help overcome agency problem between the managers and the shareholders upon doing supervision. Insider ownership is reflected from the percentage of the company's shares owned by directors and commissioners. Directors and commissioners will allocate a great amount of their wealth for the company. Domash (2010) affirmed that insider ownership is usually stated by the percentage of flowing shares held by insiders. Insider ownership gives advantage in relevance with the controlling potentials of managers who have large interest toward the company. The largest advantage will manifest if asymmetric information between insiders and outsiders reaches its highest level. However,

there will only be little advantage obtained from this form of insider ownership, if outsiders know something about the company and the managerial effort as much as that known by insiders. Insider ownership makes management able to manage and make financial policies better, so that business risk can be more controllable.

Dividend policy is a policy that can be used to reduce agency problem. Baker (2009) stated that dividend policy could play an important role in reducing agency problem between the managers and the external shareholders. The company makes dividend policy that can create equality among the current dividends and growth in the future so that it can maximize the share price. The increasing of the share price means promoting the shareholders' prosperity.

Even though dividend policy can enhance the prosperity of the shareholders, the high payment of dividend will give impact on the limited fund available for investors. Besley & Brigham (2012b) stated that residual dividend policy is a policy in which the paid dividend equals the actual profit subtracted to the profit restrained for funding the company's capital budget optimally. The company is exposed to making decision on distributing profit in the form of dividend or holding it back to be invested back to the company. The company's decision to invest will enhance the company's value that is reflected from the share price. The increase of share price will maximize the shareholder's prosperity.

Debt policy enables creditor to obtain more information on the company's prospect. The shareholders make into good use of debt policy to share the cost of supervision with the obligation owners/holders in as such that management is encouraged to act disciplinarily to avoid bankruptcy. Jensen (1986) argued that debt can also function to reduce agency cost concerning with free cash flow. Liquidation or reorganization will be the consequences of the company's bankruptcy if creditors claim for

the company's asset as the result of its inability to pay off its debt. Therefore, one of the debt publication costs is the possibility of financial failure. Ghosh, *et al.* (2008) stated that a company would suffer bankruptcy, as it is not able to fulfill its obligation to the creditors, which are mostly due to the business and financial risks. Moyer, *et al.* (2012) stated that business risk is the variability or uncertainty of the company's operational income. Ehrhardt & Brigham (2011) stated that financial risk is additional risk for the common shareholders because of the decision of debt funding. The use of debt will enhance the risk of the shareholders. The shareholders' risk will increase if the company's business is not in well condition, the operational income will be low and insufficient to cover the interest so that the owner's wealth will reduce even in an extreme condition the company can experience bankruptcy. This explanation above shows the interaction of insider ownership, dividend policy, debt policy, investment decision, and business risk.

HYPOTHESIS DEVELOPMENT

1. The influential factors towards insider ownership.

Influential factors towards insider ownership are empirically examined using seven determinants, i.e. dividend, debt, investment, business risk, profitability, sales growth, and size. A company with high payment of dividend is prone to making the share ownership by management become high, because of the high level of dividend payment, as the high level of dividend payment, will encourage management to own the company's shares. The shareholders expect larger dividend at present and in the future than that of the previous years. The increase of dividend payment will likely increase the share price. The increase of the share price will likely increase the shareholders' prosperity. Omran & Pointon (2004) found out that dividend determined the

share price that was actively marketed in Egypt Stock Exchange.

The use of large debt tends to make the level of share ownership by management low, because the higher debt, the higher risk the shareholders bear. The shareholders' wealth reduces when the company undergoes financial distress to fulfill its obligations, even in an extreme condition, it will suffer bankruptcy. Berk & DeMarzo (2011) stated that the use of debt increases the risk of the shareholders, even upon the company's never-going-bankrupt condition. The liquidation cost leads to negative correlation between debt and insider ownership (Friend & Hashrouck, 1987; Friend & Lang, 1988).

The number of investment opportunity gives positive signal about the company's prospect and growth in the future, so it will enhance the value of the company reflected from the price share. Management is encouraged to own the company's shares if the value of the company increases. Eckbo (2008) put forward the opinion of Modigliani & Miller (1961) that investment policy determines the value of the company and payment is a residue between income and investment.

A company with high business risk is inclined to make the level of shares ownership by management low, as management is prone to restrict itself to be the owner of the company upon knowing that the company faces high business risk. Alice, *et al.* (2009) affirmed that when a company uses debt or financial leverage, business and finance risk is borne on the shareholders.

A company that can produce high earnings will encourage management to own the company's share, because the high profit will elevate dividend distributed to the shareholders and enhance the value of the company reflected from the share price. Barnes (2009) stated that the business value is determined by profitability, or to be more exact, the expected profitability in the future.

Sales growth reflects one of the measurements for the level of success or realization of the company's past growth and becomes the measuring rod for its future growth. A company with high sales growth is inclined to encourage management to hold the company's shares, as the future high growth will increase the value of the company. Meier, *et al.* (2005) stated that the steps of increasing the company's value over the level of sale growth and common profit become important matter.

Large-size company reflects the company's past performance and becomes the indicator the company's performance in the future. The development of the company's performance from time to time will encourage management to hold the company's share because the amount of earnings that will be received by the company in the future. Gallagher & Andrew (2007) exposed that the size is expected to give cash flows in the future; the amount of cash inflows in the future will increase the share price. The hypothetical formula based on the above explanation and research outcome is:

H_{1a} = Dividend has positive influence on insider ownership

H_{1b} = Debt has negative influence on insiders ownership

H_{1c} = Investment has positive influence on insider ownership

H_{1d} = Business risk has negative influence on insider ownership

H_{1e} = Profitability has positive influence on insider ownership

H_{1f} = Sales growth has positive influence on insider ownership

H_{1g} = Size has positive influence on insider ownership

2. The influential factors towards dividend

The influential factors towards dividend is examined empirically using seven determinant, namely, insider ownership, debt, invest-

ment, business risk, profitability, sales growth, and variability of earnings. A company with high insider ownership is prone to paying high dividend, as the high payment of dividend will push conflict between managers and the shareholders. Bose (2010) stated that if management is strong enough to control the company (due to the substantial shares ownership), it will have high dividend payout ratio.

A company with good prospect is inclined to use debt as alternative to meet the need of dividend payment in short term, if the company does not have any internal funding to meet the necessity of fund. However, if a company's prospect is poor, it will create continuous use of debt, consequently it will overcome problem by adjusting dividend payout ratio to the new earning level. Ehrhardt & Brigham (2011) stated that the available cash to be distributed to the shareholders depends on the profitability, investment, and debt. Adedeji (1998) found out that financial leverage has positive influence on dividend payout ratio.

A company with investment opportunity is inclined to pay low dividend, in order to increase the proportion of internal equity that is used for funding investment. Besley & Brigham (2012a) stated that dividend policy is much influenced by the investment opportunity and the availability of fund used to finance new investment. Investment has negative influence on dividend (Jensen, 1986; Jensen, *et al.*, 1992; Adedeji, 1998; Chay, 2005).

A company with high business risk is prone to paying low dividend, as the high business risk makes the uncertainty of profitability level at present and in the future. The uncertainty of profitability results in the limited fund available to pay dividend. Baker (2009) stated that a company with high risk is encouraged to decrease the dividend payout ratio. Jensen, *et al.* (1992) found out that business risk has negative influence on dividend.

A company that produces high earnings is inclined to paying high dividend, as the higher profitability makes the larger fund available to pay dividend. Bose (2010) stated that when earnings rise, dividend would also rise if the company can maintain the new level in the future. Profitability has positive influence on dividend (Jensen, *et al.*, 1992).

A company with high sales growth is inclined to limit the payment of dividend in order to enhance the proportion of internal equity, which is used to elevate its growth. Barclay, *et al.* (1999) stated that a company with high growth requires more fund, as there are more opportunities for investment so that it tends to pay lower dividend than a company with low growth does. Jensen, *et al.*, (1992) found out that growth has negative influence on dividend.

A company with stable earnings level can maintain the payment of dividend without having to risk cutting dividend in the future, as the company can predict the future earnings with higher level of accuracy. Chandra (2008) stated that dividend policy fluctuates along with earnings, resulting in the direct transmission of variability of earnings with dividend. The hypothetical formula, based on the above explanation and research outcome is:

H_{2a} = Insider ownership has positive influence on dividend

H_{2b} = Debt has positive influence on dividend

H_{2c} = Investment has negative influence on dividend

H_{2d} = Business risk has negative influence on dividend

H_{2e} = Profitability has positive influence on dividend

H_{2f} = Sales growth has negative influence on dividend

H_{2g} = Variability of earnings has negative influence on dividend

3. The influential factors towards debt.

The influential factors toward debt are examined empirically using seven determinants, namely, insider ownership, dividend, investment, business risk, profitability, variability of earnings, and structure of assets. A company with high level of insider ownership is prone to using low debt to anticipate the possibility of financial distress resulting from the use of debt. The shareholders' risks rise, when the company does not have adequate capacity to close interest, so that the shareholders' wealth reduces even in an extreme condition, the company can go bankrupt. Insider ownership has negative influence on the financial policy (Friend & Hasbrouck, 1987; Friend & Lang, 1988; Jensen, *et al.*, 1992).

A company that pays high dividend is inclined to use larger debt because the high payment of dividend will increase the need of cash in the future and will result in the limited retained earning that can be used to overcome the need of fund. The limit of retained earning encourages the use of larger debt. Banerjee (2010) stated that the decision of funding in turn, will influence and be influenced by dividend policy, for retained earnings used up for internal funding shows the agreed dividend by the shareholders. Dividend has positive influence on debt (Baskin, 1989; Adedeji, 1998).

A company with more opportunities for investment is inclined to use larger debt if its *internal equity* to finance investment does not suffice. Baker & Martin (2011) stated that Mackay (2003) found out the company's specific factor, like flexibility on production and investment area has an important implication towards the company's structure of finance. Investment has positive correlation with financial leverage (Baskin, 1989; Chang & Rhee, 1990; Adedeji, 1998).

A company with high business risk tends to use low debt, because the high business risk makes the current and future level of profitability uncertain. The uncertainty of profit-

ability decreases the quantity of debt received by the company. Besides, the large debt will also enlarge the flat-interest burden and will result in the company's financial distress. Ehrhardt & Brigham (2011) stated that a company with high operating leverage, and thus, meaning a larger business risk, will limit the use of financial leverage.

A company with high level of profitability is inclined to use low debt because the high profitability result in the larger retained earning available as an internal resource to meet the need of fund. Melicher & Norton (2011) revealed that a more profitable company is inclined to use smaller debt. Profitability has negative correlation towards leverage (Baskin, 1989; Chang & Ree, 1990; Jensen, *et al.*, 1992; Allen, 1993; Pandey, 2001; Shumi, 2005; Hyesung, *et al.*, 2006; Tran & Neelakantan, 2006).

A company with high level of unstable earnings has limitation to obtain loan because of the distrust of the loan giver. The distrust results from the uncertainty of the loan giver about the company's capability to reach the expected profit in the future. Kent & Martin (2011) revealed that high cash flow volatility brings about the potential high cost of financial distress, and either trade-off theory or pecking order theory predicts the negative correlation between volatility and leverage.

A company with assets of high collateral value can obtain larger loan as the company can fulfill its obligations with those assets upon facing bankruptcy. Galindo & Schiantarelli (2003) found out that the company size and tangibility of assets are influential toward long-term debt. Structure of assets has positive correlation with leverage (Adedeji, 1998). The formulation of hypothesis based the above explanation and research outcome is:

H_{3a} = Insider ownership has negative influence on debt

H_{3b} = Dividend has positive influence on debt

H_{3c} = Investment has positive influence on debt

H_{3d} = Business risk has negative influence on debt

H_{3e} = Profitability has negative influence on debt

H_{3f} = Variability of earnings has negative influence on debt

H_{3g} = Structure of assets has negative influence on debt

4. The influential factors towards investment.

The influential factors towards investment are examined empirically using seven determinants, which are: insider ownership, dividend, debt, business risk, profitability, sales growth and Q ratio. A company with the high level of insider ownership is inclined to put large investment, as the shareholder expect the increase of the share price resulting from positive signal on the company's prospect in the future that is arisen by the large investment the company puts.

A company that pays high dividend tends to have limitation in making investment, because the high payment of dividend causes the limited retained earnings that can be used by the company to put investment in the following period. Dividend has negative influence on the investment in the following period (Baskin, 1989; Allen, 1993; Adedeji, 1998). A company with good prospect has tendency to use debt to make good use of the investment opportunities, if the company has limited internal fund. However, if the company's prospect is not well, it will make the necessity of fund last incessantly, so that the company overcomes the necessity of fund with new investment opportunity. Banerjee (2010) stated that the investment decision in purchasing new project capital requires the decision of funding. Financial leverage has positive correlation with investment (Baskin, 1989; Allen, 1993; Tong & Green, 2005).

A company with high business risk is inclined to make low investment, because the high business risk makes the uncertainty of the profitability level at present and in the future. The uncertainty of profitability will create the limited internal fund available to make investment. Madura (2007) stated that when the businesses owner judges the possibility of investment in any business, he would consider the potential return and risk of a kind of investment.

A company with high profitability has larger capability to collect investment fund, because the high level of earnings produced will result in the larger amount of internal fund available for making investment. Profitability has positive correlation with the investment (Baskin, 1989; Tong & Green, 2005).

A company with high sales growth has many opportunities to make investment, because sales growth reflects the realization of the past investment and becomes the barometer of future investment. Fama (1974) observed that sales growth has positive influence on the investment in America. Alice, *et al.* (2009) put forward that the recent years tendencies for companies with high growth; either those of manufacturing company or other companies from business sector, are promoting efficiency through the enhancement of capital investment.

Q ratio variable, which is stated with price to book value ratio, has positive influence on investment. Q ratio has positive influence on investment (Adedeji, 1998; Baskin, 1989). The hypothetical formula, based on the above explanation and research outcome is:

H_{4a} = Insider ownership has positive influence on investment

H_{4b} = Dividend has negative on investment

H_{4c} = Debt has positive influence on investment

H_{4d} = Business risk has negative influence on investment

H_{4c} = Profitability has positive influence on investment

H_{4f} = Sales growth has positive influence on investment

H_{4g} = Q ratio has positive influence on investment

5. The influential factors towards business risk.

The influential factors towards business risk are examined empirically using seven determinants, which are insider ownership, dividend, debt, investment, liquidity, variability of earnings, and size. A company with high level of insider ownership is inclined to control the company by making financial policy that leads to low business risk, because the low business risk is borne by the shareholders. May (1995) found out the reversed causal correlation of managerial ownership towards business risk.

A company with high payment of dividend tends to have high business risk, because the high payment of dividend causes the limited retained earning that can be used by the company to make investment in the subsequent period. The limited opportunities for the company to make investment results in the high business risk because of the incapability of the company to produce profit due to the low sales. Venkatesh (1989) found out the dividend policy has influence on the risk.

The use of large debt will increase the business risk, because the high use of debt will increase the probability of the company of going through financial distress, because the high flat interest burden. The large interest burden will cause the high business risk because the company's operational activities become disturbed. Kent & Martini (2011) stated that the company's capital structure is determining directly the risk and cost of capital entirely.

A company that has many opportunities for investment is inclined to have low business

risk, because the large opportunity for investment gives possibility for the company to produce high profit resulting from the high sale. Harris & Mongiello (2006) stated that the policy for operation, investment, funding and dividend influence the business risk and financial risk and eventually systematic risk.

A company with high level of liquidity is inclined to have low business risk, because the high level of liquidity shows the capability of the company in fulfilling its obligations that will due. The high level of liquidity will cause low business risk because of the absence of obstacles for the company in doing the company's operational activity. Khan (2002) stated that the major risks come from inflation market, interest rate, business, liquidity, currency, as well as specific risks.

A company with high level of unstable earnings is inclined to have large business risk, because the difficulty for the company to predict future earnings causes the uncertainty of the company in making investment. The uncertainty of the company to make investment results in high business risk because the process of selecting investment is not optimal. Mayo (2012) stated the increase of variability of business profit would enhance the company's business risk.

A company with big size is prone to having low business risks, because the large size of company reflects the effectiveness of the company's performance from time to time and indicates the future performance of it. Zion & Shalit (1975) declared that big-sized company has lower risk than small company does. The hypothetical formulation based on the above explanation and research outcome is:

H_{5a} = Insider ownership has negative influence on business risk

H_{5b} = Dividend has positive influence on business risk

H_{5c} = Debt has positive influence on business risk

H_{sd} = Investment has negative influence on business risk

H_{se} = Liquidity has negative influence on business risk

H_{sf} = *Variability of earnings* has positive influence on business risk

H_{sg} = Size has negative influence on business risk

RESEARCH METHODOLOGY

a. Population and Sample

Anderson *et al.* (2011) stated that population is a group of elements of an interest in a specific research. Population employed in this research is manufacturing company that has publicized a complete financial report at Indonesia Capital Market Directory since 2006 until 2010. The selection of manufacturing company as its population is because the research will be more relevant if it is carried out on the same types of industry (considering the difference characteristics among industries) and the amount of manufacturing industry registered in Indonesia Stock Exchange.

The research sample collection is done using method of purposive sampling. Sekaran & Bougie (2010) stated that the research sample collection using this purposive sampling method is a process of collecting samples referring to the type of special person who can provide the wanted information either because they are the only ones that own the information or because the information is adjusted to the criteria established by the researcher. The criteria used is manufacturing company with data about insider ownership, dividend, debt, investment, business risk, profitability, sales growth, size, variability of earnings, structure of assets, Q ratio, and liquidity. Data pooling is carried out by adding companies that can fulfill the research criteria in five-year research period. Companies that can fulfill the criteria are 137 companies.

b. Research Variables

This research hypothetical examination employs variables that refer to the size of researches ever conducted. Variables of debt, business risk, and profitability refer to the research size of Jensen *et al.* (1992). Variables of dividend, investment, sales growth, size, variability of earnings, structure of assets, Q ratio, and liquidity refer to the research size of Adedeji (1998).

INS = Insider Ownership is measured with the percentage of the company's shares owned by directors and commissioners.

DIV = Dividend is measured with dividend divided by earnings after tax

DE = Debt is measured with ratio of long-term debt to the book value of total assets

INV = Investment is measured with $(\text{total assets}_t - \text{total assets}_{t-1})$ divided by $\text{total assets}_{t-1}$

BRISK = Business risk is measured with standard deviation of the first difference in operating income divided by total assets

PRO = Profitability is measured with ratio of operating income to total assets

GRO = Sales growth is measured with $(\text{sales}_t - \text{sales}_{t-1})$ divided by sales_{t-1}

SZ = Size is measured with the natural logarithm of total assets

VAR = Variability of earnings is presented with the standard deviation of (annual change in profit before interest and tax divided by total assets)

STR = Structure of assets is measured with total net fixed assets divided by market value of the firm

Q = Q ratio is measured with price to book value ratio

LIQ = Liquidity is measured with current assets minus stocks and divided by current liabilities

c. Hypothetical Examination Model

This research hypothesis is examined using simultaneous equation model of three stage least square (3 SLS). This equation model is used because this simultaneous equation model of three stage least square (3 SLS) is a method in which all equations in model are made into account altogether and predicted simultaneously by noticing the whole limitation at the equation system in the model.

The simultaneous equation model employed to observe reciprocal interactions among variables of insider ownership, dividend, debt, investment, and business risk is:

$$\text{INS} = f(\text{DIV}, \text{DE}, \text{INV}, \text{BRISK}, \text{PRO}, \text{GRO}, \text{SZ})$$

$$\text{DIV} = f(\text{INS}, \text{DE}, \text{INV}, \text{BRISK}, \text{PRO}, \text{GRO}, \text{VAR})$$

$$\text{DE} = f(\text{INS}, \text{DIV}, \text{INV}, \text{BRISK}, \text{PRO}, \text{VAR}, \text{STR})$$

$$\text{INV} = f(\text{INS}, \text{DIV}, \text{DE}, \text{BRISK}, \text{PRO}, \text{GRO}, \text{Q})$$

$$\text{BRISK} = f(\text{INS}, \text{DIV}, \text{DE}, \text{INV}, \text{LIQ}, \text{VAR}, \text{SZ})$$

THE OUTCOME OF DATA ANALYSIS

Table 1 indicates that investment, business risk, and size has negative influence on insider ownership, whereas dividend, debt, profitability and sales growth does not have any influence on insider ownership. Negative coefficient on investment variable shows that Indonesian shareholders prefer that dividends be distributed to the shareholders in the form of dividend than be retained in the company for investment. Dividend is regarded to give certainty than investment. Negative coefficient variable of size shows that small company

gives bigger authority and larger control by the owner in the company. The owners of the company take a larger position than those of small company because it only requires far smaller wealth to control several percentage of the company. Size has negative influence on insider ownership in line with the research of Jensen, *et al.* (1992). Brigham & Daves (2012) declared that in individual company, partnership and small company, the owner of the company also serves as the manager. This does not prevail in big company, where it will face serious problem if the shareholders acts as managers. Dividend and debt do not have any influence on insider ownership in line with the research of Jensen, *et al.* (1992). Therefore, proof that dividend, debt, profitability, and sales growth are significantly determinant toward insider ownership is never found or there is no a plausible reason to believe that the company's management is encouraged to own the company's shares because of dividend, debt, profitability, and sales growth.

Insider ownership, debt and business risk have negative influence on dividend, whereas investment, profitability, sales growth, and variability of earnings do not have any influence on dividend. Negative coefficient of insider ownership variable is possibly caused by the fact that the shareholders prefer to choose the available fund for paying off debt rather than receiving dividend. This explanation is put forward in relevant with the outcome of investment's negative influence on insider ownership and debt's negative influence on dividend. Profitability and variability of earnings do not have any influence on dividend along the lines of the research of Adedeji (1988). Investment, profitability, sales growth and variability of earnings do not have any influence on dividend, showing that dividend is not determined by investment, profitability, sales growth, and variability of earnings.

Table 1. Outcome of Hypothetical Examination

Dependent Variable: Insider Ownership		Dependent Variable: Dividend		Dependent Variable: Debt		Dependent Variable: Investment		Dependent Variable: Business Risk	
Independent Variable	Outcome	Independent Variable	Outcome	Independent Variable	Outcome	Independent Variable	Outcome	Independent Variable	Outcome
Constant	0.58865 (5.411)***	Constant	0.39912 (7.776)***	Constant	0.17385 (6.653)***	Constant	0.12563 (2.814)***	Constant	0.48913 (4.978)***
Dividend	-0.034028 (-1.324)	Insider Ownership	-0.49017 (-1.838)*	Insider Ownership	-0.14730 (-1.232)	Insider Ownership	-0.77363 (-3.726)***	Insider Ownership	-0.20998 (-2.836)***
Debt	0.012862 (0.2099)	Debt	-0.92220 (-4.888)***	Dividend	-0.16910 (-4.757)***	Dividend	-0.069924 (-0.9981)	Dividend	-0.050980 (-2.270)***
Investment	-0.11330 (-3.559)***	Investment	-0.13608 (-1.254)	Investment	0.056387 (1.241)	Debt	0.14788 (0.9583)	Debt	-0.054516 (-1.029)
Business Risk	-0.20540 (-2.251)**	Business Risk	-0.90516 (-2.851)***	Business Risk	-0.27320 (-1.984)**	Business Risk	-0.53078 (-2.342)**	Investment	-0.054942 (-2.115)**
Profitability	0.025576 (0.3106)	Profitability	0.047455 (0.1719)	Profitability	-0.22212 (-1.887)*	Profitability	0.66758 (3.210)***	Profitability	-0.00067032 (-0.9794)
Sales Growth	-0.0022155 (-0.2009)	Sales Growth	0.027371 (0.7568)	Variability of Earnings	0.032232 (0.1953)	Sales Growth	0.093213 (3.248)***	Variability of Earnings	0.44554 (5.032)***
Size	-0.018514 (-4.681)***	Variability of Earnings	-0.24302 (-0.6465)	Structure of Assets	0.041150 (1.004)	O Ratio	-0.0072319 (-0.6949)	Size	-0.014631 (-4.139)***
R ² = 0.1650		R ² = 0.0419		R ² = 0.0455		R ² = 0.2120		R ² = 0.2775	

Remark:
 * = Sig. at level of prob. signif = 0.10
 ** = Sig. at level of prob. signif = 0.05
 *** = Sig. at level of prob. signif = 0.01

Dividend, business risk, and profitability have negative influence on debt, whereas insider ownership, investment, variability of earnings, and structure of assets do not have any influence on debt. Negative coefficient of dividend variable describes that a company with high dividend is prone to being selective in judging investment, so that it results in the low debt that the company uses. Dividend has negative influence on debt (Jensen, *et al.*, 1992; Allen, 1993). Variability of earnings does not have any influence on debt corresponding to the research of Adedeji (1998). Insider ownership, investment, variability of earnings, and structure of assets do not have any influence on debt, showing that no proof is found to show that insider ownership, investment, variability of earnings, and structure of assets do not significantly determine debt.

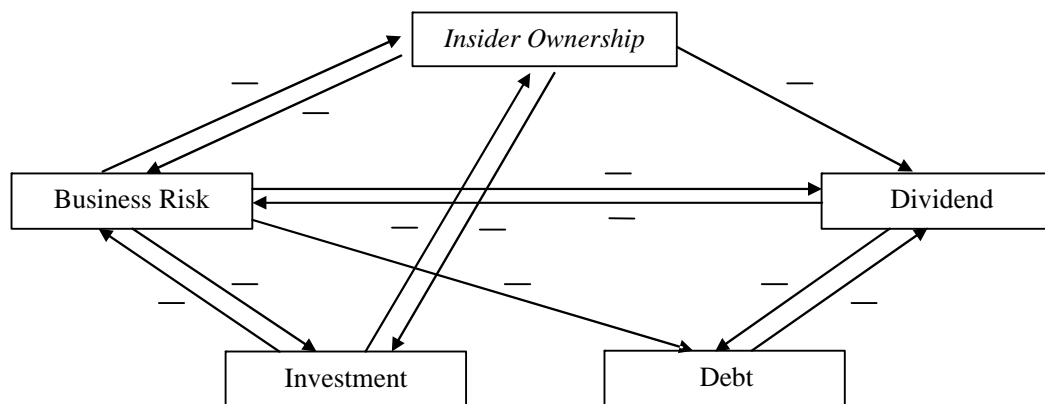
Insider ownership and business risk have negative influence on investment, profitability, and sales growth have positive influence on investment, whereas dividend, debt, and Q ratio do not have any influence on investment. Negative coefficient of insider ownership variable indicates that Indonesian shareholders prefer to receive dividend rather than making investment in compliance with the research by Adedeji (1998). Dividend, debt, and Q ratio do not have any influence on investment,

showing that no proof is found to show that dividend, debt, and Q ratio are importantly determining investments.

Insider ownership, dividend, investment and size have negative influence on business risk, variability of earnings have positive influence on business risk, whereas debt and liquidity do not have any influence on business risk. Dividend has negative influence on business risk, indicating that companies in Indonesia are careful in making investment. Debt and liquidity do not have any influence on business risk, showing that debt and liquidity do not importantly determine business risk.

Picture 1 shows the interactions among variables of insider ownership, dividend policy, debt policy, investment decision and business risk. The analysis outcome on the equation of insider ownership, dividend, debt, investment and business risk indicate that: 1) reciprocal correlation is found among insider ownership, investment and business risk; 2) reciprocal correlation is found between dividend and debt; 3) reciprocal correlation is found between dividend and business risk; 4) insider ownership influences dividend; 5) business risk influences debt.

Reciprocal correlation among insider ownership, investment and business risk indi-



Picture 1. The Research Outcome on the Interactions among Insider Ownership, Dividend Policy, Debt Policy, Investment Decision, and Business Risk

cates: 1) a company with high level of insider ownership is inclined to apply alertness principles in making investment and controlling the company by making financial policy that leads to a low business risk; 2) a company that makes large investment will make business risk low but the large investment even will make management reluctant to own the company's shares; 3) a company with high business risk will result in the management reluctant to own the company's shares and the low investment that the company makes.

Reciprocal correlation between dividend and debt indicates the large debt the company uses for making the reduction of dividend distributed to the shareholders, contrary to that, the large dividend distributed to the shareholders makes the low debt that the company uses because of the company's alertness in making investment. Reciprocal correlation between dividend and business risk indicates that a company with high business risk will give low dividend because of the limited fund available for the payment of dividend, and on the other hand, the company that gives high dividend will make business risk low.

Seeing the result obtained and comparing the proposed hypotheses, we can get hold of outcome, showing that the proven hypotheses are hypotheses of H_{1d} , H_{2d} , H_{3d} , H_{3e} , H_{4d} , H_{4e} , H_{4f} , H_{5a} , H_{5d} , H_{5f} , and H_{5g} . R^2 value or determination coefficient for equation of insider ownership is 0,1650, equation of dividend is 0,0419, equation of debt is 0,0455, equation of investment is 0,2120, equation of business risk is 0,2775. R^2 or determination coefficient shows the variability of variables that can be clarified by the independent variables in such equations.

CONCLUSION, MANAGERIAL IMPLICATION, AND RESEARCH SHORTCOMINGS

1. Conclusion

The analysis outcome of insider ownership equation indicates that investment, busi-

ness risk, and size have significant, negative influence on insider ownership. Insider ownership, debt, and business risk gives significant negative influence on dividend as can be seen from the analysis outcome of dividend equation. The significant, negative influence of dividend, business risk and profitability towards debt can be seen from the analysis outcome of debt equation. The analysis outcome of investment equation indicates that insider ownership and business risk have significant, negative influence on investment, whereas profitability and sales growth have significant, positive influence on investment. The analysis outcome of business risk equation shows that insider ownership, dividend, investment and size have significant, negative influence on business risk, whereas variability of earnings has significant, positive influence on business risk.

The interactions among insider ownership, dividend policy, debt policy, investment decision and business risk are; reciprocal correlation is found among insider ownership, investment and business risk; 2) reciprocal correlation is found between dividend and debt; 3) reciprocal correlation is found between dividend and business risk; 4) insider ownership influences dividend; 5) business risk influences debt.

2. Managerial Implication

The description of the analysis outcome and the managerial implication of the equation of insider ownership, dividend, debt, investment, and business risk indicate that:

- a. The shareholders in Indonesia prefer to allocate the obtained profit in the form of dividend rather than retaining profit for making investment, because dividend is considered to give more certainty than investment. This allocation requires the management to notice, as the large profit distributed to the shareholder will bring about the limited internal fund, which can be used for investment, consequently the

company will find it hard to develop in the future.

- b. The companies in Indonesia are relatively not brave to bear risk, as can be seen from 1) the financial policy made leads to low business risk; 2) they are selective in making investment, so that investment is only made if the company has made successful investment in the past and has high certainty to make future investment; 3) the company prefers internal resource to finance investment. Alertness principles should necessarily be noticed by management, because if the company is very alert and selective in making investment, it will result in the incapability of the company to make good use of investment opportunities.

3. Research Shortcomings

This research has some shortcomings, which can be the future research orientation. Such shortcomings are:

- a. The utilization of manufacturing companies registered in Indonesia Stock Exchange in 2006 until 2010 as sampling data in this research cannot reflect the entire condition of companies in Indonesia. The use of samples in each industry is good in order to obtain outcome that can be compared for each industry.
- b. Insider ownership used in this research is insider ownership data, which is acquired directly from Indonesia Capital Market Directory. The future research should utilize insider ownership data, which is indirectly acquired in order to produce outcomes that can be compared to the current existing proofs.

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