PROCEEDING

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"ASIA EMERGING ECONOMY TOWARD GLOBAL ECONOMIC INTEGRATION"

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Joint Organizer:

UKM   **IPB**   **UNSYIAH**   **UNPAD**   **UNIB**   **UMS**

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PANEL OF REVIEWERS

Greetings from Dean of Faculty of Economics, Sriwijaya University

Dear participants of the Miicema 13th - 2012 Conference,

On behalf of the Faculty of Economics, Sriwijaya University, we would like to welcome you to Palembang, Indonesia for the Miicema 13th Conference, 18th-20th October 2012.

We are excited organize our thirteeth Miicema conference in Palembang at Sriwijaya University. Sriwijaya University is States University in South Sumatera, has 10 faculties and 2 campuses. One is located at Bukit Besar in Palembang and another campus is located on 712 ha area of Indralaya, Ogan Ilir. This conference is really support us to be a "world class university".

The conference bring together scolars and practitioners who interested to present theirs papers in area of economics, management and accounting. Participants found an excellent opportunity for presenting new research, exchanging information and discussing current issues. We believe that this conferences will improve further the development of knowledge in our fields. This opportunity could be used as a way to broadening their international networks.

We regret that we were unable to accept more paper than we have. In this conference, 163 papers were presented. In addition, based on the contribution of the paper to the field, the Miicema Committee has selected three papers for the best paper award.

Finally, I would like to thank our sponsors for their generous financial support and valuable collaboration. I would also thank all of the presenters, participant, board members, and keynote spreakers.

I hope you enjoy the conference and wish a pleasant and memorable stay in Palembang.

Best Regards,
Dean of Economic Faculty,
Sriwijaya University

Prof. Syamsurijal AK, Ph.D

MESSAGE FROM CONFERENCE CHAIR

Welcome to The 13th Malaysia-Indonesia International Conference on Economics, Management and Accounting (MIICEMA) 2012

The Malaysia-Indonesia International Conference on Economics, Management and Accounting (MIICEMA) aims to stimulate interest in economics, management and accounting research and to encourage discussion on those related issues with special reference to ASEAN countries. The conference has been held for 13 times in this year. As time goes on, the number of MIICEMA members increase and it also tries to broaden the scope of collaboration to include academic matters amongst others.

The 13th MIICEMA 2012 is hosted by Faculty of Economics, Sriwijaya University in collaboration with UKM, IPB, UNPAD, UNSYIAH, UNIB, UMS, UNJ, UNILA, UPI (YAI) AND STIE (YAI). of MIICEMA and. The association aims to play supportive role in promoting Palembang as an international city.

MIICEMA has been successfully organizing annual conferences in collaboration with those higher learning institutions mentioned. The support from academicians, researchers and business practicioners is clearly evident from the increasing numberof papers received by organizers this year. This year a total of more than 220 abstract and 163 full papers were received and most of them will be presented.

I would like to thank and congratulate the Rector of Sriwijaya University, Dean of Faculty of Economics for their support, Ministry of Finance of Republic of Indonesia for their support financially, South Sumatera Government, Palembang City Municipal and other sponsors i.e PT. BUKIT ASAM, PT. SEMEN BATURAJA, PT. PUSRI, BANK MANDIRI, BANK SUMSELBABEL, BANK BNI, MITRA ADIGUNA, AJB BUMIPUTERA, for their finance support. Last but not least I would like to thank to paper writers, participants and organizing commitee for your support.

Isnurhadi, Ph.D
Conference Chair
October, 2012

PANEL OF REVIEWERS

Editors:

1. Isnurhadi
2. Zulkarnain Ishak
3. Kitima Tamalee
4. Hasni Yusrianti

Investment, Capital Structure, Dividend Policy and Firm Performance:
Evidence Indonesia Listed Companies

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Abstract

This study investigates the impacts of investment, capital structure and dividend policy on firm performance, by taking into account the correlation between investment and free cash flow for the Indonesia listed companies. There are two latent variables of the firm performance will be considered, namely an accounting firm performance (F_AFP) and a market firm performance (F_MFP). In addition, the latent variable capital structure (F_CS) is represented by two latent variables, Leverage_1 and Leverage_2. The data used is a yearly panel data of 212 listed firms in IDX, over the years 2002 to 2011. This paper presents the result for the whole data set, at the 10% level of significance, based on correlation analysis, it is found that Investment (INV) has a significant positive linier effect on each of F_AFP and F_MFP, and F_CS has a significant positive linier effect on each F_AFP but it has a significant negative linier effect on F_MFP. For the joint effects of selected sets of independent variables on F_AFP and F_MFP, several alternative panel data models applied, which are additive lagged latent variables random effects models. Furthermore, the estimates of the models can also represent or test the effect of independent variables on the firm performances, adjusted for the other independent variables in the models. However, it should be noted that unexpected adjusted effects of each independent variable can be obtained, because of the unpredicted impact of the multicollinerity.

1.0 Introduction

Management of a corporation has important role to increase the firm value for its shareholders. Corporate finance has some financial issues that relate in achieving the objective of the firm. When the role of management is focusing to increase the shareholder value, then the managers should raise and manage their capital, how to make better investment decision, and what portion of the profit should be returned to shareholders in the form of dividends payments. Thus, the impact of financial decision made by managers is very crucial to enhance firm's performance. Studies of the firm's internal and external factors that influence corporate performance have been conducted by many researchers in previous studies. In this study, the focus is to examine the internal factors of corporation that have direct impact on firm's performance, i.e. investment, capital structure and dividend policy. Capital structure is directly related to financing decision of the firm in finance its investments with debt and equity, and it has great impact on the firm's financial performance.

Firm performance has been developed from various perspective in strategic management literature, Lenz (1980), Venktraman and Ramanujam (1986). Two classifications of firm performance measurements are financial performance and operational performance. Based on that classification, this study is concern to look on firm performance based on financial performance that have been addressed by Rose and Thomsen,(2004), Ruzita et.al (2010), Iwu-Egwuonwu,(2011), O'Toole et.al (2011), Fauzias et.al (2011) and Abu-Rub (2012), and many other researchers.

Capital structure is one of the most frequent subjects in the finance literature. This literature has its origins in the studies on the non-financial firms. The interest of this

study is to understand how the patterns of capital structure are shaped within the context of the firms (Kim, 2008). The MM theorem on capital structure argue that the value of the firm is unaffected by its financing decision in an efficient market Modigliani and Miller (1958), that is how the firm decided to increase capital, by using debt or equity, it does not affect the value of the firm. Capital

structure and dividend policy often gained serious attention by many researchers, firm management and outsider, especially the investors. One issue of why the firm should pay dividends or determine the ratio of debt to equity and investment is still unresolved. This issue has become important issue in this study in term of capital structure and dividend payment for Indonesian listed companies, this is due to the fact that many listed companies in Indonesia do not pay dividend. In this sense, why firm would pay dividend or would not pay dividend to shareholder? Is the firm deferring to pay dividends because the firm needs more funds to finance its investment? Moreover, the firm need to finance its operation or investment and source of capital from internal or external, so that whether the capital was raised through retained earnings by reducing the dividend payment or by increasing the debt from external source Li & Wang (2009).

In operation, firm decision of capital structure is to determining the cost of debt and the cost of capital and reduced its cost that effect on firm value, (Jensen and Meckling, 1976). Debt decision is a management decision to finance the firm activities using fund from creditors. As a consequently, if the firm uses the debt for company operations then the financial leverage will increase. This condition would impact on escalating fixed costs, and even possibility of risk of bankruptcy caused by increase of fixed costs. Therefore, the debt would lay firms at risky condition, especially when the managers do not manage their debt very well and carefully. On the other hand agency cost arises to the firm (Jensen & Meckling, 1976), where managers have disincentive to increase the firm value. When the firms have available free cash flow, the managers with debt financed firm likely to involve in another strategies. However, Jensen (1986) argues that debt financing would control the uses of excess free cash flow by management. On the other hand, the amount of free cash flow for payment of debt was limited for profitable payment (Stulz, 1990). Ruzita et al.(2010) found insignificant impact of investment and its squared term on firm performance, also same finding by Fauzias et al, (2011) found that the investment and optimal investment have insignificant effects on firm performance, even the interaction terms of investment and other independent variables still have insignificant effects on the market performance.

Some researchers have analyzed the corporate finance of Indonesia listed companies and have different findings. Prasetyantoko (2006) examine the sensitivity relation of firm investment by liquidity divided into two different groups of firms namely tradable and non-tradable sector of 226 listed companies in Jakarta Stock Exchange over 1994-2004. His result shows empirical evidence that tradable sector has higher sensitivity in liquidity and investment before crisis than non-tradable sector. In fact that most of Indonesian firms would prefer to external debt rather than internal fund to financing investment activities. Another study by Oka Kusumawijaya (2011) used 27 Indonesia manufactured listed firms to examine the effect of capital structure and firm growth on profitability and firm value. He used debt to equity ratio as proxies of capital structure, and the result shows that it has positive and significant effect on firm value during 2006-2009.

On the other hand, by Sofyaningsih and Hardiningsih (2011) analyzed the effect of ownership structure, dividend policy and debt policy on the firm value of Indonesia Stock Exchange during 2007-2009. They measure of firm performance using profitability. They found that dividend policy and debt policy have insignificant joint effects on firm performance. Then Trinugroho and Rinofah (2011) studied the effect of

mispricing on investment of Indonesia firms, they used investment expenditure by calculating investment cash flow current year divided to net fixed assets last year. The investment cash flow measure the net capital expenditure, then the proxy of capital structure they employ the ratio of debt to equity. They found that the changes in the market value of stock positively affect the level of investment. High stock price increase the firm's investment opportunities. Furthermore, Sudiyatno and Puspitasari (2010) used the firm performance as intervening variable in their study on 116 manufacturing companies listed in Indonesia Stock Exchange over the period 2004 to 2006. They found that financial leverage has negative significant effect on firm performance but capital expenditure has insignificant effect on firm performance and firm value.

This study examines the impact of investment, free cash flow, capital structure and dividend policy on firm performance, where the firm performance divided into accounting firm performance and market firm performance. In general, previous studies has documented that accounting performance can be represented used several alternative measurements such as ROA, ROE, ROC, Sales Growth and some others. And market performance measurement such as Tobin's Q has been used by many researchers as indicator market performance, then several others measurement used market value of equity (MBVR), Price per share to earnings per share (P/E), market value of equity to book value of liabilities divided by book value of equity (MBVE), Shareholder return, Earning per Share (EPS) and some others measurement have been done by Suta (2006), Zeitun and Tian (2007), Ruzita et .al (2010), Sudiyatno and Puspitasari (2010), Fauzias et.al (2011), Saeedi and Mahmoodi (2011), Abu-Rub (2012) and many other researchers. However, based on the previous empirical studies I want to apply a latent variable in this study. A latent variable of accounting firm performance (F_AFP) is generated based on ROA, ROE, ROC and ROIC. And the latent variable of the market firm performance (F_MFP) is generated by Tobin's Q, MBVR and EPS.

The remainder of this study is organized as follows. Section 2 discusses the literature review; section 3 discusses research design and methodology; section 4 discusses the empirical analysis and section 5 is conclusion.

2.0 Literature Review
2.0.1 Investment and Firm Performance
In term of finance and economic, investment has two difference meanings which could be seen from financial and economic perspectives, where the investor put an amount of fund at current time to hopes will get the benefit in the future. That is why the corporate finance more focuses on the selection of new project and how to finance the project. Therefore, it is inappropriate if the investment and source of finance are examined separately because new investment needed right the financing decisions and investment policy that would affect the firm performance. When Modigliani and Miller (1958) in the origin theory of capital structure made their celebrated proposition of corporate financing and investment decisions and its does not matter in perfect capital market, the value of firm's depend on firm's operation and its financial decisions.

Another theory of investment developed by Tobin (1969), he has formulated an investment theory based on financial market. Tobin argues that firm investment level should depend on the ratio of the present value of installed capital to replace the cost of capital. He also argues, firm would to increase their capital when q is greater than one and decrease their capital stock when q less than one. Tobin's q has been a popular proxy for these unobservable investment opportunities. Higher profitability should result in a higher market value and a higher q ratio (Kadapakkam, Kumar, & Riddick, 1997). According to and Miller (1972) in their traditional valuation theory have mentioned that the market value of firm is discounted value of expected future cash flow from all its

investment. The other views of researcher came to have good understanding on investment conducted by Chen & Chen (2011). They considered of investment efficiency is to assessing alterations in firm value by purchases of assets, and they found that post- purchases have significant effect on excess value and investment efficiency. When the firm's choice to hold assets liquid it have an opportunity to invest in illiquid asset and would be allow the firm to invest in more growth opportunity (Butzen & Fuss,2003).

Parker (2010) in his article theories of investment expenditures, states that there are three main sources of firm investment funds namely: internal funding, borrowing from banks or other financial assets such as bond (long term debt) and commercial paper (short term debt), and issuing new share of stock (new equity). When the companies have investment decisions by borrowing, they should pay interest cost, when used internal funds for investment, they would forgoing to those funds, which mean in perfect capital market all borrowers and lenders pay and receive the interest rate. On the other hand by issuing new equity will creates cost for those who own existing shares. Thus the relationship between financial decisions and firm performance influenced by asymmetric information and agency cost (Nowak, 1998), and in capital market imperfection, the agency problem increases of investment expenditures to internal financing (Jensen & Meckling, 1976). Internal investor has suspicious that managers will expand firm size to their own interest rather than for the shareholder interest. Thus, when manager have access to internal funds can avoid capital market discipline and pursue value terminating investment, this situation will increase demand for internal financing (Kadapakkam, et al., 1997). O'Toole et al., (2011) indicated that investment has restricted by debt overhang and it' not depend on internal fund or liquidity. They have a reason why they do not concentrate to internal fund because they have high net worth from land holding and credit environment, which it could provide significant access to external capital. On the other hand Julien Hugonniera (2007) demonstrates that risk aversion provides an incentive for manager to speed up investment.

Ruzita et al, (2010), by used fixed effect models, show that investmnet has insignificantly positive effect on the firm value, and it has positive impacts on dividend and leverage.On the other hand, Huang, Jiang, Liu, & Zhang (2011) studied the effect of agency cost on the relation between top executives and investment-cash flow sensitivity for Chinese listed companies, that found the relation have significantly for state controlled companies. They found the relation is significant for the state controlled companies, and the agency cost has positive effect on investment-cash flow sensitivity. And Mullineux (2011) used differences approach, and he found that the investment-cash flow sensitivity is greater when managers are insulated from takeovers.

2.0.2 Investment, *Free Cash Flow and Firm Performance*

Previous study found that relationship overinvestment and free cash flow led to a declining firm performance due to the firm's own investment activities. Jensen (1986) gave an overinvestment theory that manager have purpose to expand the size of the firm to take the negative NPV project instead paying dividends. Fu,(2010) proposes the empirically test the hypothesis that poor performance is the result of managers' overinvestment. He found that a negative correlation between post issue investments and operating performance, controlling for investment opportunities and pre issue performance, then overinvestment would reduction in asset productivity and is more serve for firm with relatively fewer investment opportunities. Also Mullineux (2011) find that agency theory predicts that overinvestment expenditure by entrenched managers also increases investment-cash flow sensitivity. Again, too much free cash flow in the hands possible to lead overinvestment (Wei & Zhang, 2008).

To conclude firm's investment policy is not only dependent on external source of the firm but also dependent on internal source, especially firm cash flow. Similarly, agency conflicts and asymmetric information can influence investments policies of firms and thus can have an impact on

firm performance. Where the problem of overinvestment due to excess cash to the negative project value can gave negative impact on firm performance. Similarly, underinvestment due to excess debt and agency problems cause firms to forgo the positive project and the residual value will be negative impact on firm performance.

2.0.3   Capital structure and Firm performance

Several theories of investment, capital structure and dividend policy have been created by (Modigliani and Miller, 1958; Tobin, 1969) and agency theory (Jensen and Meckling, 1976). The theoretical principles underlying the dividend policy and its impact on firms can be described either in terms of dividend irrelevance theory.

On the theory of capital structure by Modigliani and Miller (1958) predict that in perfect capital market firm value is independent of its capital structure, implies that the total value of the firm not effected by ratio of debt. Then a number of researchers have empirical work to show the changes in level of debt have impact on the total market value of the firm. Jensen and Meckling (1976) suggest that the value of the firm reflect a valuation by shareholders, including the value perquisites consumed by manager as the agent by shareholder. According to trade of theory when the firm higher profitability the expected cost of distress would be decreases, the firms prefer to use debt financing because of their raising leverage, even it increases the risk of bankruptcy and financial distress (Scott, 1977). Furthermore, the packing order theory by (Mayers and Majluf (1984) also able to explain why the firm's more likely use the internal funds and prefer debt to equity when the external financing needed. In contrast, the theory indicated that issuing debt is not suggested to companies in the condition they have more fund.

Harris and Raviv (1991) argued that capital structure is related to the trade-off between costs of liquidation and the gain from liquidation to both shareholders and managers. So firms may have more debt in their capital structure than is suitable as it gains benefits for both shareholders and managers. The empirical work by Krishnan and Moyer, (1997) found a negative and significant impact of total debt to total equity on return on equity (ROE). Another study by Gleason, Mathur and Mathur, (2000) stated that have significant negative impact on firm performance. However increase in level of debt would decrease firm performance. Since higher quality firms have higher total value, the result that they issue more debt is consistent with Ross (1977). Philip and Jaime (1999), examined the issuance of long term debt, short term debt and equity, the maintenance of corporate liquidity, and the payment of dividend.

Another study is investigates the impact of capital structure on firm performance, they find have a significant and negative impact on firm performance measure by both market performance, Tobin's Q and accounting performance ROA and ROE, but short-term debt to total asset level has significantly positive effect on the market performance measured by Tobin's Q (Zeitun & G.Tian, 2007). When the firm have high growth rate it would be have a high debt to equity ratio, then firms size has significant effect on capital structure (Kraus & R. Litzenberger, 1973) . The other finding by Gul and Keyley (1999) investigates whether firms with more growth options measured of investment opportunities have lower leverage and dividend by using 411 Korean firms.

Another finding by Saeedi and Mahmoodi (2011) use pooling panel data to test relation between firm performance and leverage in Tehran Stock Exchange over the period 2002-2009. They use firm performance measured by EPS, ROE, ROA and Tobin's Q and capital structure have proxies of short term debt, long term debt and total debt. The result show that significant positive correlation between EPS and capital structure, and insignificant between ROA and firm performance. Abu-Rub (2012) found that correlation between ROE the debt ratio (STDA,LTDA and TDTQ) also are insignificant but it is significant only with TDTA. Another finding show insignificant correlation between MBVR and LDTA – TDTQ but it is significant with TDTA and SDTA).

Yu-Shu Cheng, Yi-Pei Liu, & Chien, (2010) apply panel threshold regression model to examine the effect of leverage on firm value of Chinese listed firm, they found that strongly indicate

the triple-threshold effect between debt ratio and firm value. Sudiyatno and Puspita (2010) stated that financial leverage has a significant negative effect on firm performance, but it has a significant positive effect on firm value, and the capital expenditure has insignificant negative effect on and insignificant on firm performance and firm value.

2.0.4 Dividend Policy and Firm Performance

Accordingly when the levels of in corporate finance the patterns of dividend policy still remain an issue and have controversial, how the corporate policy of pay dividend and when the firm must to pay dividend. The theoretical principles underlying the dividend policy and its impact on firms can be described either in terms of dividend irrelevance or dividend relevance theory. According to Miller and Modigliani (1961) in finance theory suggest that dividend policy is irrelevant for the cost of capital and dividend does not effect on firm's value. The shareholder really is not concerned to receive cash flow as dividend or capital gain if the firms still do not change their investment policies. In this condition the residual free cash flow affected by dividend payout ratio, then the firm decided to pay dividend when free cash flow is positive otherwise if the firms issue stock when negative firm has. Another theory by Gordon and Walter (1963) provide the bird in hand theory where the outside shareholder prefer a high dividend policy in shape of cash in hand rather than capital gain.

Jensen (1986) also stated that dividend policy enhances the firm's value because it used to reduce of free cash flows in the decision of management and thus controls the over investment problem. Then Easterbrook (1984) stated based on agency theory explain that the transaction cost proposes that dividend payments reduce value because they lead to the raising of costly external finance, it is this process reduces agency problems. The idea is that the payment of dividends is one possible solution to the problem of collective action that tends to lead to under-monitoring of the firm and its management. Thus the payment of dividends and the subsequent raising of external finance induce investigation of the firm by financial intermediaries such as investment banks, regulators of the securities exchange where the firm's stock is traded and potential investors. This capital market monitoring reduces agency costs and lead to appreciation in the market value of the firm. The position that dividend policy can be used as signal to investors about a firm future prospect, then the reliability of the dividend signal varies across firms or over time for individual firms.

Previous studies has documented that related dividend policy and firm performance has addressed by Amidu (2007), he examine the corporate dividend policies that affect the firm performance of publicly traded companies in Ghana. He found that positive relationship between return on assets, dividend policy and growth in sale and negative associations between return on asset and dividend payout ratio. On the other hand, Tobin's show the contradictory result that market value of firm has negative relation with dividend policy and firm size but positive relation to dividend payout ratio, leverage and growth. Furthermore by Aliahmed (2008), show the finding based on a group of firms which face growth opportunities, dividend policy and debt policy are important factors that explain firm performance. In the absence of growth opportunities it can be observed a positive association between firm performance and dividend payment, while negative association between firm performance and leverage ratio.

On the other hand by Li and Wang (2009) find a significant positive relationship exists between dividends per share and financial performance. Chinese listed companies' dividend policies have strong effects on their share prices, while the market has little reflection on cash dividend, and bonus share is more popular in market than cash bonus. The results suggest that corporate management should consider the interests of the company and its shareholders as well when paying dividends. The latest study examine the dividend policy and firm performance by Drnevich (2011), he found the number of the firms paid dividend increased and that dividend payments increase after that act, then in subsequent analysis he find that contrary to expectation, the probability that firm would increase dividend after the Act was positively associated with growth and investment opportunities.

This study focus on firm paying dividend by using indicator of dividend payout ratio and dividend per share to enhance firm performance. To determine the dividend policy, this study extends to develop the dividend payout ratio issues attempted to discuss by (Omran & Poiton, 2004).

Dividend Payout Ratio

Dividend payouts have been argued to mitigate agency conflicts by reducing the amount of free-cash flow available to managers, (Grossman and Hart, 1980; Easterbrook, 1984; Jensen, 1986). Bhattacharyya (2007) develop a model of dividend payout that shareholders prepared a menu contract to screen agents according to productivity. Furthermore, Bhattacharyya at al. (2008) found that corporate dividend policy is perhaps best understood by considering the payout ratio (dividend divided by earnings), rather than the level of cash dividend alone. Easterbrook (1984) argues that dividends help alleviate agency conflicts by exposing firms to more frequent monitoring by the primary capital markets because paying dividends increases the probability that new common stock has to be issued more often.

Therefore, there should be a relationship between dividend payouts and the strength of shareholder rights. Two competing hypotheses, the first hypothesis is primarily predicated upon the free cash flow hypothesis (Jensen, 1986). More interesting by Chen at al. (2005) the mixed result on the relationship between dividend payouts and firm performance, they found negative relationship between market-to book and dividend yield, in contrast, positive relationship between ROA and dividend yield and no relationship between dividend payouts and firms performance for small market capitalization. Jensen et al. (1992) also find evidence of a positive association between return on assets and dividend payouts. Murekefu and Ouma (2012) stated that dividend payout was a major factor affecting firm performance and has strong positive relationship.

Dividend per Share

The finding of Adaoglu (2000) states that the main determinant in the amount of cash dividend is earning for the same year in the Istanbul Stock Exchange and when the firm was changeability in the earning is directly will be effect to level of cash dividend. Thus, Fama and French (2001) in their research of the propensity to pay dividends of
U.S companies found that the lower proportion of dividend payers for new listed of small firms it have low profitability and never pay dividend because the firms have high the investment opportunities. Furthermore, the studies of Holder et al. (1998) and Mollah K. Keasey, & Short (2002) suggested that companies with a higher free cash flow should pay more dividends to decrease free cash flow agency cost, and the firms paying dividend are significantly having greater cash flows of Canadian (Baker et al. 2007).

Then other finding of dividend policy of industrial firm listed for Amman Stock Exchange, his found a negative and significant effect of free cash flow on dividend but leverage and profitability have positive influence on dividend payout (Taleb, 2012). Then Ruzita at.al (2010) and Fauzias at.al, (2011), also found that dividend per share has positive significant factors influence on Tobin' q.

3.0 Research Design and Hypothesis

The main research objective of this study is to examine how the firm performance influenced by investment, free cash flow, capital structure and dividend policy for Indonesia listed companies. Refer to all theories that have been described above in the literature that explain the investment theories, capital structure theories and dividend policy theories were developed and created by (Modigliani and Miller, 1958; Tobin, 1969) and agency theory (Jensen and Meckling 1976), and irrelevance theory of dividend policy by (Miller and Modigliani ,1961).

In this research, to investigate the firm performance for Indonesian listed companies, I used two measuring of firm performance are based on accounting firm performance (AFP) and market

firm performance (MFP). The AFP is defined as a latent variable or an unobservable factor F_AFP which is generated based on the measured variables: Return on Asset (ROA), Return on Equity (ROE), Return on Capital (ROC) and Return on Investment Capital (ROIC), and the MFP is defined as an unobservable factor_ MFP which is generated based on the Tobin's q, Market value of equity to bookvalue of equity (MBVR) and Earning per share (EPS).

Investment is an observed or measured variable not as latent variable, but for capital structure is also a concept, sharped by the factors of leverage_1 and leverage_2.Further, the dividend policy in the study examines of dividend payout ratio (DPR), dividend per share (DPS) with dummy variable for the firm pay dividend and firm not pay dividend (*D_Div = 1* firm pay dividend and *D_Div = 0* otherwise). Each ofthese factors measured by observed variables. The first steps is elaborate the firm performance variable and the factors that influence investment, capital structure and dividend policy in order to obtain the measures of firm performance.   Thus,   to analysis the impacts of investment, free cash flow, capital structure and dividend policy on the firm performance by use additive models could be considered, by taking account selected control variables, such as Firm Size (LNSIZE) and dichotomous industry classification *(D_IND)*. The proposed models will be presented in research hypothesis below.

Research Hypothesis

The research hypothesis in this study were developed based on the theoretical and empirical evidence in the literature review explain above, this study will investigate the impact of investment, free cash flow, capital structure and dividend policy on firm performance into consideration dummy dividend and dichotomous dummy industry for Indonesia listed companies in Indonesia Stock Exchange (IDX). The hypothesis on jointeffect of additive exogenous variable as bellow:

The hypothesis for the firms pay dividend as follows:

H1: Investment, FCF, CS, DPR and DPS have an additive joint effect on AFP as well as MFP.
H2: Investment, FCF, CS, DPR and DPS have an additive joint effect on AFP as well as MFP, by taking into account the control variable LNSIZE(or the linier effect of LNSIZE).
H3: Investment, FCF, CS, DPR and DPS have different an additive joint effect on AFP as well as MFP, between INDUSTRY and NONINDUSTRY.
H4: Investment, FCF, CS, DPR and DPS have different additive joint effect on AFP as well as MFP, between INDUSTRY and NONINDUSTRY, bytaking into account the control variable LNSIZE.

The hypothesis for the firms do not pay dividend as follows:

H5: Investment, FCF and CS have an additive joint effect on AFP, as well asMFP.
H6: Investment, FCF and CS have an additive joint effect on AFP, as well asMFP, by taking into account the control variable LNSIZE (or the linier effect of LNSIZE).
H7: Investment, FCF and CS have different additive joint effect on AFP, aswell as MFP, between industry and non-industry.
H8: Investment, FCF, and CS, have different additive joint effects on AFP, aswell as MFP, between Industry And Non-industry, by taking into account the control variable LNSIZE.

4.0 Research Methodology

This study uses a secondary quantitative data analysis, employing a panel data technique. It is recognized that the panel data has advantages over other data sets, such as cross- section or time series data. Baltagi ((1995) quoted by Gujaraty, 2003; 637-638) presents a list of six points of its advantages. However, the models based on a panel data do havealso some problems, which are related

to the two components of the error terms and their assumptions, as well as the correlations between the error terms and the independent variables, in addition to the multicollinearity between the independent variables, which has unexpected impact on the parameters' estimates of the models (Agung (2009) ; Section 2.14). These problems will be mentioned as notes later in the process of the applications of the statistical models.

The models applied in this study are a set of random effect models, using the General Least Square (GLS) multiple regressions. To anticipate the multicollinearity problem, a *manual stepwise selection method* (Agung, 2011) and (Agung, 2012), instead of the stepwise program, will be applied to obtain good fit models, in a statistical sense, having a set of several numerical main and interaction independent variables, as well as dummy variables.

Collecting the Panel Data

The data used in this study is yearly data from 2002 to 2011. Data are retrieved from the latest version 5.1 of DataStream. The data were collected in the Indonesia database and contains 424 listed companies of Indonesia Stock Exchange (IDX). Then the total of non-financial firms is 368 firms and consist of 8 main sector were grouped exclude financial sector, so that for this study have 212 firms are intentionally selected for nonfinancial firms and they have a complete data set within the period 2002 to 2011, then also I have a balanced panel data of 2120 units of the data analysis.

Research Variables and Measured Variables

The research variables in this study are dependent variable, independent variables and control variables. Dependent variable for the study of listed Indonesia firm performance measured by two measurements, namely accounting firm performance (AFP), and market firm performance (MFP).

The AFP is a latent variable or unmeasured factor F_AFP, which is generated based on measured by four observed variable of financial performance indicators including Return on assets (ROA), Return in equity (ROE), Return on capital (ROC), and Return on investment capital (ROIC). ROA is calculated of net profit divided by total assets, ROE is measures by net profit divided by shareholder's equity, ROC is another profitability ratio that measure by net profit divided by total capital and ROIC is measure by the ratio of total capital plus last year's short term debt and current portion of long term debt.

On the other hand, the market firm performance (MFP) is generated based on three observed variables or market indicators, namely Tobin_Q, which is calculated by ratio of the market value of equity plus book value of equity divided of book value of total assets. Market value of equity to book value of equity (MBVR), and Earning pes share (EPS) is calculated by net income divided outstanding share.

Independent Variable

There are four Independent variable consist of Investment (INV), Free cash flow (FCF), Capital structure and Dividend Policy. Investment is natural log of the investment calculated by deducting log natural of total asset at current year (t=0) and last year (t=1). Free Cash Flow (FCF) is defined as the ratio of the free cash flow to book value of total asset, which calculated by adding EBIT, Depreciation and Interest and by subtracting Tax and Dividend Payment.

Capital Structure is a latent variable, namely F_CS, which is generated, based on two latent variables are Leverage_1 *(F_Lev1)* and Leverage_2 (*F_Lev2*). For measuring the *F_Lev1* is generated based on three measurement are long term debt to total asset (LTDTA), long term debt to common equity (LTDCE), long term debt to capital (LTDC). Then to measuring the *F_Lev2* uses also three indicators of total debt to total asset (TDTA), total debt to total equity (TDTE) and total debt to total capital (TDTC).

Dividend Policy is considered a dummy variable, namely *D_Div*, where $D\_Div_{it}=1$ if the *i*-th

firm pays dividend at the time-t, and $D\_Div_{it} = 0$ if otherwise. Specific for the firms pay dividend, I use numerical variables is Dividend payout ratio (DPR) are measure by total dividend paid divided by profit after tax (net profit) and Dividend per share (DPS) is measure by the ratio of total dividend payment divided by total share outstanding.

Control Variable

This study have two control variable in the regression analysis are Firm size *(LnSize)* and dichotomous industry (Industry classification) by using Dummy industry *(D_Ind)*. Firm size measured by the natural of logarithmic of the total assets to control the size effect, and dummy industry is an industry dummy as explain in the dichotomous industry below.

Latent Variables and Factor Analysis

Latent variables models are widely applied in marketing, strategic management (Hamzal2006, Hamzal and Agung, 2007, Suta 2006, and Do, 2006), and various studies in socialsciences. It has been known that a latent variable is generated based on a set of measured variables, which are defined relevant to represent the conceptual unmeasured variable, ina theoretical sense. In practice, however, it could be found that one of the measured variables is not valid to be used to generate the latent variables, in a statistical sense, based on the Cronbach Alpha reliability score. In such a case, a researcher should use the best judgment to decide whether the variable should be used or not. It is found that Simonin (1999, quoted by Agung, 2011) presents two very low reliability scores of
0.079 and 0.070 for two sets of two and three questionnaires, respectively, and Homburg, et al. (2008, quoted by Agung, 2011) also present three lowest reliability scores of 0.35, 033,and 0.36.
      Furthermore, to use of latent variables in this study should be acceptable or valid in both theoretical and statistical senses. There are three latent variables are consideredfor the data analysis, namely F_AFP, F_MFP, and a second level latent variable F_CS,which is generated based on two first level latent variables Leverage_1, and Leverage_2. To analyze firm performance and capital structure, which are formed by each of observed variables, factor analysis was used. Factor analysis was used to reduce thedimensions of previous several variables into a single value of the latent variable (Hair,Andersen and Tatham, Black, 1998). In the study has been mentioned above, that the factors analysis there are five latent variables, namely the dependent latent variables Accounting Firm Performance (F_AFP), and Market Firm Performance (F_MFP), and an independent latent variable F_CS, which is generated based on the latent variables
F_LEV1 and F_LEV2.

4.2. Random Effects Models Applied
This study applied the random effect model, thus as the extension of the random effects model presented by Gujaraty, the REM applied in this study has the LV(p) REM having the following general equation;

$$Y_{it} = \beta_{0i} + \sum \beta_j \times Y_{i,t-j} + \sum_{j=1p} \delta_k \times X_{k,it} + u_{it}$$

with the assumption that β_{0i} is a random variable with a mean value of β_0, $Y_{i,t-p} = Y_{it}(-p)$ is the *p*-th order lag dependent variable Y_{it}, and X_k is the *k*-th exogenous variable, it can be a single variable or an interaction factor of selected main variables, say two- and three-way interaction factors. The main independent variables used in the models have been mentioned above, such as *INV, F_CS, FCF, D_Div, DPR*, and the control variable lnSize, and a Dichotomous Industry. Take a note that the best possible integer *p,* as well the set of exogenous analysis, using the manual stepwise selection method. The lag variables REM should be applied in order to overcome the autocorrelation problem.

3.3 Empirical Random Effect Models (REMs)

In this study additive random effect model is used to test the hypotheses on joint effect of additive exogenous variable for the firm pay dividend and the firm do not pay dividend. So that I using two dependent variables, namely *F_AFP* and *F_MFP,* for an illustration one of the additive REMs using only the numerical independent variables, applied has the following equations.

$$
\begin{aligned}
F\_AFP_{it} = \beta_{0i} + \sum_{j=1}^{p} \beta_j \times F\_AFP(-j)_{it} + \delta_1 INV_{it} + \delta_2 F\_CS_{it} \\
+ \delta_3 FCF_{it} + \delta_4 LnSize_{it} + u_{it}
\end{aligned} \tag{3.2}
$$

and

$$
\begin{aligned}
F\_MFP_{it} = \beta_{0i} + \sum_{j=1}^{p} \beta_j \times F\_AFP(-j)_{it} + \delta_1 INV_{it} + \delta_2 F\_CS_{it} \\
+ \delta_3 FCF_{it} + \delta_4 LnSize_{it} + u_{it}
\end{aligned} \tag{3.3}
$$

By taking into account the categorical independent variables, namely D_Div, and the dichotomous variable INDUSTRY, then the regression analysis using the additive REMs above (3.2) and (3.3) should be conducted for each group generated by the variables D_DIV, and INDUSTRY. However, for D_DIV=1 (or the firms paying dividend), the numerical variables DPR should be used as additional independent variables. Thence, we have the following additive REMs

$$
\begin{aligned}
F\_AFP_{it} = \beta_{0i} = \beta_{0i} + \sum_{j=1}^{p} \beta_j \times F\_AFP(-j)_{it} + \delta_1 INV_{it} + \delta_2 F\_CS_{it,j=1} \\
+ \delta_3 FCF_{it} + \delta_4 LnSize_{it} + \sigma_5 DPR + \sigma_6 DPS + u_{it}
\end{aligned} \tag{3.4}
$$

$$
\begin{aligned}
F\_MFP_{it} = \beta_{0i} + \sum_{j=1}^{p} \beta_j \times F\_AFP(-j)_{it} + \delta_1 INV_{it} + \delta_2 F\_CS_{it,j=1} \\
+ \delta_3 FCF_{it} + \delta_4 LnSize_{it} + \sigma_5 DPR + \sigma_6 DPS + u_{it}
\end{aligned} \tag{3.5}
$$

Where F-AFP is accounting firm performance, F_MFP is market firm performance, F_CS is capital structure, FCF is free cash flow, LnSize is log natural of total assets, DPR is dividend payout ratio and DPS is dividend payout ratio. Furthermore, the data analysis based on these models should be conducted for each subsample of INDUSTRY and NONINDUSTRY.

4.0 Empirical Statistical Results

4.1 Descriptive Statistic

Table 1 provides the summary of descriptive statistical analysis of dependent variables and explanatory variables, by the dichotomous or dummy variables, *D_DIV and D_Ind*. Bases on this table the following findings and notes can be presented.

(1) Findings based on the firms' performance not pay dividend by *D_Ind*.

The industry firms have averages value of accounting firm performance (F_AFP) of - 0.0536, which is greater than the non-industry firms of -0.0029. Similarly, the industry firms have the market firm performance (F_MFP) of -0.0668, which is greater than the non-industry firms of -0.0549. So that it can be concluded that the industry firms not pay dividend have a good performance than the non–industry firms. The industry firms have the average investment of around 6 percent that is have same finding with non-industry firms of 6.7 percent. Average free cash flow ratio is 13.3 percent for industry firms and average of 10.2 percent for non-industry. This implies the industry firms have free cashflow ratio greater than non-industry firms. The average value factor score of capital structure for industry firms of 0.1158, which greater than the non-industry firms of - 0.1105. The industry firms have average value of firm size (LNSIZE) of 19.94, which is similar with non-industry firms of 20.34.

(2) Finding based on the firms' performance pay dividend by *D_Ind*

The industry firms have the averages value of accounting firm performance (F_AFP) of 0.0437, which is greater than the non-industry firms of 0.0351. Similarly, the industry firms have the market firm performance (F_MFP) of 0.1360, which is greater than the non- industry firms of 0.0161. So that it can be concluded that the industry firms pay dividend have a better performance than the non-industry firms. Average investment of industry firms is 14.5 percent, which is greater than the non-industry firms of 12.2 percent. Average free cash flow ratio of industry firms 83.7 percent, which greater than non-industry firms only of 8 percent. The average value of capital structure of industry firms of 0.0145, which is smaller than non-industry firms of -0.0386. Further, the industry firms have firm size (LNSIZE) of 21.31, which similar with non-industry firms of 21.40, The industry firms provide the average dividend payout ratio of 0.97 Rupiah Indonesia (Rp) and 474.09 Rupiah Indonesia as dividend per share (DPS), which different average with payment dividend of non-industry where it has dividend payout ratio of 2.67 Rupiah Indonesia and 60.55 Rupiah Indonesia as dividend per share.

4.2 Statistic Result of the Correlation Analysis

Table 2 present the summary of the bivariate correlation matrix of the research variables, as well as the latent variables, with their *t*-test statistics and probabilities. Based on these results, the following findings and notes are presented.

(1) Finding based on the industry firms not pay dividend

Each of the variables INV and F_CS has a significant positive linier effect on accounting firm performance (F_AFP) respectively, at the 10% and 1% level of significant. But each of the variables FCF and LNSIZE has an insignificant positive linear effect on accounting firm performance (F_AFP). Further, each of the variables F_CS and LNSIZE has a significant negative linier effect on F_MFP at 5% level of significant. But the variables INV have an insignificant positive effect and FCF has an insignificant negative effect on F_MFP. In the other hand LNSIZE has positively related to INV, and negatively related F_CS.

(2) Finding based on the non-industry firms not pay dividend
Each variable INV and LNSIZE has a significant positive linier effect on F_AFP at 5%but FCF and F_CS has an insignificant negative effect on F_AFP. Then F_CS and LNSIZE has negative significant linier effect on F_MFP but the INV and FCS has an insignificant effect on F_MFP and similarly with the LNSIZE has related to investmentand capital structure.

(3) Finding based on non-Industry firm pay dividend.
The finding shows that F_CS and DPR have significant negative linier effect on F_AFPbut DPS has significant positively on its. Moreover each variable FCF, F_CS has negative significant linier effect on F_MFP, but LNSIZE and DPS significantly positive linier effect on F_MFP. The other variables F_CS positive related on FCF and LNSIZE and DPS has negative significant related on F_CS.

(4) Finding based on the industry firms pay dividend
The finding show that, INV and LNSIZE has positive significant linier effect on F_AFP,but F_CS and DPS has significant negative linier effect on F_AFP but FCF and DPR has insignificant effect on F_AFP. Moreover, FCF, LNSIZE, DPR and DPS has significant positive linier effect on F_MFP and only the F_CS has significant negative linier effect on F_MFP, and only INV has insignificant linier effect on market firm performance. On the others, F_CS negative related on investment but positive to DPR, thus, LNSIZE and DPS has negative related to F_CS positively related with LNSIZE.

4.3 Statistical Results of the Random Effects Model

4.3.1 Findings based on the REM of F_AFP, for the firms do not pay dividend

Table 3 presents the statistical results of additive REMs in (3.2) by the dichotomous or dummy variable *D_Ind* having exactly the same independent variables, namely F_AFP(-1), F_AFP (-2), F_AFP(-4), INV, FCF, F_CS and LNSIZE. Based on these results the following finding and notes are presented.

For the industry, the regression function has a R^2 is 75.76 percent, which all independent variables have insignificant joint effects on F_AFP, based on the F-statisticof 113.4038 with *p*-value is 0.0000. On the other hand for the non-industry, theregression function has a very small R^2 was 17.14 percent, and all independent variablehave an insignificant joint effect on F_AFP, based on the *F*-statistic of $F_0 = 0.8816$, witha *p*-value = 0.5215. Thus, investment has significant effect on F_AFP adjusted for the others independent variables in the model. So it can be said that the set of independent variables clearly have different joint effects on F_AFP, between the industry and non-industry firms. The corresponding hypothesis could easily be tested using the Wald test.These finding for non- industry firms are consistent with (Mustafa, 2009; Ruzita et al, 2010; Fauzias et al, 2011), which investment have insignificant on firm performance.

4.3.2 Findings based on the REM of F_AFP, for the firms pay dividend

Table 3 presents the statistical results of additive REMs in (3.4) by the dichotomous or dummy variable *D_Ind,* having exactly the same independent variables, F_AFP(-1), F_AFP(-2), F_AFP(-4), INV, FCF, F_CS, lnSize, DPR and DPS. Based on these results,di following findings and notes are presented.

For the industry, the regression function has a R^2 is 54.56 percent and all independent variables have a significant joint effects on F_AFP, based on the *F*-statisticof $F_0 = 35.0930$, with a *p*-value = 0.0000. Each of the variables Investment, DPR and DPS has a significant effect on F_AFP, adjusted for the other independent variables in the model. Note that DPR has a negative effect, but INV and DPS have a positive effect.

For the non-industry, the regression function has similarly R^2 is 54.89 percent and all independent variables have a significant joint effects on F_AFP, based on the *F*- statistic of $F_0 = 20.8196$, with a *p*-value = 0.0000. Each of the variables DPR and DPS has a significant effect on

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F_AFP, adjusted for the other independent variables in the model. Note that DPR has a negative effect, but DPS has a positive effect.

Findings based on the REM of F_MFP, for the firms do not pay dividend Table 4 presents the statistical results of additive REMs in (3.3) by the dichotomous or dummy variable *D_Ind,* having exactly the same independent variables, namely F_AFP(-1), F_AFP(-2), F_AFP(-3), INV, FCF, F_CS, and lnSize. Based on these results, di following findings and notes are presented. For the industry, the regression function has a R^2 is 60.41 percent and all independent variables have a significant joint effects on F_AFP, based on the *F*-statistic of $F_0 = 64.9720$, with a *p*-value = 0.0000. Each of the variables Investment, F_CS and LNSIZE has a significant negative effect on F_AFP, adjusted for the other independent variables in the model.

For the non-industry, the regression function has similarly R^2 is 50.39 percent and all independent variables have a significant joint effects on F_MFP, based on the *F*- statistic of $F_0 = 40.6324$, with a *p*-value = 0.0000. Each of the variables F_CS has a significant negative effect on F_MFP, adjusted for the other independent variables in the model.

4.3.3 Findings based on the REM of F_MFP, for the firms pay dividend

Table 4 presents the statistical results of additive REMs in (3.5) by the dichotomous or dummy variable *D_Ind,* having exactly the same independent variables, namely F_AFP(- 1), F_AFP(-2), F_AFP(-3), INV, FCF, F_CS, lnSize, DPR and DPS. Based on these results, di following findings and notes are presented.

For the industry, the regression function has a R^2 is 79.12 percent and all independent variables have a significant joint effects on F_MFP, based on the *F*-statistic of $F_0 = 125.8742$, with a *p*-value = 0.0000. Each of the variables F_CS, LNSIZE, DPR and DPS has a significant effect on F_MFP, adjusted for the other independent variables in the model. Note that F_CS, LNSIZE and DPS have a negative effect, but DPR have a positive effect.

For the non-industry, the regression function has similarly R^2 is 77.02 percent and all independent variables have a significant joint effects on F_MFP, based on the *F*- statistic of $F_0 = 65.9006$, with a *p*-value = 0.0000. Each of the variables INV, F_CS, DPR and DPS has a significant effect on F_MFP, adjusted for the other independent variables in the model. Note that INV, F_CS and DPS have a negative effect, but DPR has a positive effect.

5.0 Conclusion

This study examines the impacts of investment, capital structure and dividend policy on firm performance, by taking into account the correlation between investment and free cash flow for the Indonesia listed companies. There are two latent variables of the firm performance will be considered, namely an accounting firm performance (F_AFP) and a market firm performance (F_MFP), which are generated using factor analyses based on the sets of measured variables, and (Tobin_Q, MBVR, EPS) respectively. In addition, the latent variable capital structure (F_CS) is represented by two latent variables, Leverage_1 and Leverage_2. The models applied in this study are a set of random effect models, using the General Least Square (GLS) multiple regressions and by use additive models could be considered, by taking account selected control variables, such as Firm Size (LNSIZE) and dichotomous industry classification *(D_IND)*. The proposed models will be presented in research hypothesis below. The data used in this study is yearly data from 2002 to 2011. The total of non-financial firms is 368 firms and consist of 8 main sector were grouped exclude financial sector, so that for this study have 212 firms are intentionally selected for nonfinancial firms.

This paper presents the result based on descriptive statistical and correlation analysis, by two dichotomous variables, namely industry and non- industry firms, and the firms pay and not-pay dividend, as well as based on the whole data set. For the whole data set, at the 10% level of significance, based on correlation analysis, it is found that Investment (INV) has a significant positive linier effect on each of F_AFP and F_MFP, and F_CS has a significant positive linier effect on each F_AFP but it has a significant negative linier effect on F_MFP. For the joint effects of selected sets of independent variables on F_AFP and F_MFP, several alternative panel data models applied, which are additive lagged latent variables random effects models. Furthermore, the estimates of the models can also represent or test the effect of independent variables on the firm performances, adjusted for the other independent variables in the models. However, it should be noted that unexpected adjusted effects of each independent variable can be obtained, because of the unpredicted impact of the multicollinerity. For further analysis would be extend the interaction model between investment and capital structure, free cash flow and dividend policy, then capital structure with investment, FCF and dividend policy. Another would be apply the dichotomous time period before and after crises.

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Appendix

Table 1. Descriptive Statistical

Variable	Mean	Std. Dev.	Skewness	Kurtosis	Obvs
OVERALL					
F_AFP	0.0000	0.9975	(40.9573)	1,766.0980	1975
F_MFP	(0.0000)	0.5476	13.7954	261.4797	1893
INV	0.0934	0.3177	2.3553	29.6705	1908
FCF	0.6027	6.2870	11.0773	148.7411	2120
F_CS	0.0000	0.9868	(7.0549)	126.8017	1801
LNSIZE	20.6197	9.5027	35.7559	1,446.5770	2120
DPR	0.6089	1,010.9	15.7827	303.7164	2120
DPS	131.0677	1,010.9	15.7827	303.7164	2119
Not Pay Dividend_Industry.					
F_AFP	-0.0536	1.8196	-22.7704	538.8168	583
F_MFP	-0.0668	0.2678	4.0487	30.3541	582
INV	0.0609	0.3438	2.1936	25.5491	579
FCF	0.1339	2.8306	2.6728	34.5029	652
F_CS	0.1158	1.2277	-10.2123	168.6159	534
LNSIZE	19.9472	1.3618	0.2238	2.6712	652
Not Pay Dividend_ Non Industry					
F_AFP	-0.0029	0.2411	-17.2273	340.5154	579
F_MFP	-0.0549	0.5711	15.4083	298.2245	548
INV	0.0670	0.4129	2.5269	23.3114	553
FCF	0.1017	1.0180	5.0223	50.4567	624
F_CS	-0.1105	1.0583	-2.5956	19.1946	521
LNSIZE	20.3423	1.8195	-0.2594	3.2603	624
Pay Dividend _Industry					
F_AFP	0.0437	0.0289	3.8211	30.0457	515
F_MFP	0.1360	0.8212	9.8480	121.2040	473
INV	0.1449	0.1956	1.5317	9.7949	492
FCF	0.8369	7.6367	7.7388	81.1350	538
F_CS	0.0145	0.7656	-2.9277	24.1251	463
LNSIZE	21.3136	1.6461	0.0393	2.6127	538
DPR	0.9757	4.6703	11.0492	137.4032	538
DPS	474.0865	1965.7930	7.9578	78.3087	537
Pay Dividend_Non Industry					
F_AFP	0.0351	0.0151	0.7794	3.1144	298
F_MFP	0.0161	0.2346	1.5973	6.1664	290
INV	0.1217	0.1763	-0.4641	18.2941	284
FCF	0.0809	1.3725	-8.4487	133.1253	306
F_CS	-0.0386	0.5399	-0.4346	2.4940	283
LNSIZE	21.3981	1.5693	0.2474	2.7333	306
DPR	2.6679	24.1190	14.8136	237.3909	306
DPS	60.5536	149.4861	5.7762	46.1108	306

Table 2. Correlation Matric								
	F_AFP	F_MFP	INV	FCF	F_CS	LNSIZE	DPR	DPS
OVERALL								
F_AFP	1							
F_MFP	-0.1180***	1.0000						
INV	0.0443*	0.0415*	1.0000					
FCF	0.0031	0.0681***	0.0201	1.0000				
F_CS	0.5282***	-0.5722***	-0.0112	0.0100	1.0000			
LNSIZE	0.0393	0.1708***	0.1621*	-0.0452*	-0.2444***	1.0000		
DPR	0.0010	0.0326	0.0012	0.0027	-0.0224	0.0419	1.0000	
DPS	0.0074	0.5957***	0.0126	0.0024	-0.2392***	0.0765***	0.0150	1.0000
Not Pay Dividend_Industry.								
F_AFP	1.0000						-	-
F_MFP	-0.3175***	1.0000					-	-
INV	0.0633*	-0.0392	1.0000				-	-
FCF	0.0002	0.0317	0.0517	1.0000			-	-
F_CS	0.7817***	-0.5831**	0.0562	0.011807	1.0000		-	-
LNSIZE	0.0542	-0.0979**	0.0832*	-0.0370	-0.113437*	1.0000	-	-
Not Pay Dividend_ Non Industry							-	-
F_AFP	1.0000						-	-
F_MFP	0.0488	1.0000					-	-
INV	0.1076**	0.0261	1.0000				-	-
FCF	-0.0646	-0.0555	0.0149	1.0000			-	-
F_CS	-0.0164	-0.5856***	-0.0181	-0.0004	1.0000		-	-
LNSIZE	0.0903**	-0.0936**	0.1841***	-0.0126	-0.2040***	1.0000	-	-
Pay Dividend_Non Industry								
F_AFP	1.0000							
F_MFP	0.6213***	1.0000						
INV	0.0962	0.0612	1.0000					
FCF	-0.0702	-0.1063*	0.0550	1.0000				
F_CS	-0.1046*	-0.5895***	-0.0806	0.1033*	1.0000			
LNSIZE	0.0614	0.3187***	0.0739	-0.0926	-0.4825***	1.0000		
DPR	-0.1337**	0.0125	-0.0221	0.0083	-0.0583	-0.0102	1.0000	
DPS	0.4379***	0.6502***	-0.0187	0.0175	-0.4545***	0.3272	-0.0367	1.0000
Pay Dividend _Industry								
F_AFP	1.0000							
F_MFP	0.4170***	1.0000						
INV	0.2010***	0.0604	1.0000					
FCF	0.0331	0.1323***	0.0658	1.0000				
F_CS	-0.2004***	-0.7968***	-0.1351**	-0.0649	1.0000			
LNSIZE	0.2196***	0.7772***	-0.0108	0.0130	-0.5822***	1.0000		
DPR	0.0513	0.2741***	0.1633***	-0.0161	-0.4810	0.0087	1.0000	
DPS	-0.1445***	0.1127**	0.0107	0.0067	-0.1124**	0.2070***	0.0660	1.0000
Note: Significant level at *=10%, **= 5%, ***= 1%								

Table 3. The Regression Result of the Model of F_AFP based on the whole-sample and the dummy variable D_DIV, and D1_IND

	EQ. 3.2 / F-AFP			EQ. 3.4 / F_AFP			
	1	2	3	1	2	3	
	Whole Sample	NODIV, IND	NODIV_ NONIND	PAY_DIV	PAY_DIV IND	PAY_DIV NONIND	
R^2	0.5467	0.7576	0.1714	0.5615	0.5456	0.5489	
Adj R^2	0.5434	0.7509	0.1494	0.5522	0.5301	0.5225	
S.E. of reg	0.0845	0.1530	0.0562	0.0110	0.0118	0.0084	
F-Value	166.1026	113.4038	7.7996	60.7494	35.0930	20.8196	
P-Value	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Variable	Coeff./Sig.						
C	0.2051*	0.2287	0.0205	0.0302**	0.0207	0.0371**	
	(0.0872)	(0.4012)	(0.4883)	(0.0317)	-0.1787	(0.0348)	
F_AFP(-1)	1.249**	1.5561***	0.1926*	0.5062***	0.4830***	0.4492***	
	(0.016)	(0.0001)	(0.0787)	(0.0000)	(0.0000)	(0.0000)	
F_AFP(-2)	0.0014	0.0019	0.0081	0.1069**	0.0706	0.1340***	
	(0.1101)	(0.2193)	(0.4536)	(0.0302)	(0.3168)	(0.0044)	
F_AFP(-4)	0.0011***	0.0113*	-0.0039	0.0288	0.0227	0.0340	
	(0.0009)	(0.0713)	(0.3048)	(0.1865)	(0.276)	(0.4783)	
INV	0.0230**	0.0111	0.0231**	0.0068**	0.0100**	0.0020	
	(0.0187)	(0.7348)	(0.0436)	(0.0212)	(0.0243)	(0.7509)	
F_CS	-0.0066	-0.0248	-0.0019	-0.0011	-0.0020	0.0014	
	(0.2725)	(0.4686)	(0.6285)	(0.5156)	(0.1680)	(0.5660)	
FCF	0.0002	0.0001	-0.0439	-0.0001	-0.0001	0.0000	
	(0.6142)	(0.4667)	(0.2211)	(0.1642)	(0.1209)	(0.9502)	
LNSIZE	-0.0098*	-0.0112	0.0016	-0.0008	-0.0003	-0.0011	
	(0.0874)	(0.3612)	(0.2795)	(0.1615)	(0.6490)	(-0.1377)	
DPR	-	-	-	-0.0002**	-0.0009**	-0.0001***	
	-	-	-	(0.0030)	(0.0001)	(0.0160)	
DPS	-	-	-	0.0000***	0.0000***	0.0000***	
	-	-	-	(0.0000)	(0.0003)	(0.0000)	

Note: Significant level at *=10%, **= 5%, ***= 1%

Table 4. The Regression Result of the Model of F_MFP based on the whole-sample and the dummy variable D_DIV, and D1_IND

	EQ 3.3 / F-MFP			EQ 3.5 / F_MFP		
	1	2	3	1	2	3
	Whole Sample	NODIV, IND	NODIV_ NONIND	PAY_DIV	PAY_DIV IND	PAY_DIV NONIND
R^2	0.6705	0.6041	0.5039	0.7745	0.7912	0.7702
Adj R^2	0.6684	0.5948	0.4915	0.7703	0.7849	0.7585
S.E. of reg	0.1443	0.1082	0.1325	0.1345	0.1316	0.1287
F-Value	314.5275	64.9720	40.6324	185.4484	125.8742	65.9006
P-Value	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Variable	Coeff./Sig.					
C	-0.0012	0.2386*	0.1727	0.5799***	0.7521***	0.3304**
	(0.9924)	(0.0850)	(0.2935)	(0.0003)	(0.0000)	(0.0469)
F_MFP(-1)	0.5547	0.3860***	0.4129***	0.4272***	0.30050**	0.6920***
	(0.0000)	(0.0000)	(0.0066)	(0.0043)	(0.0469)	(0.0000)
F_MFP(-2)	0.0633	0.0971*	-0.0999	-0.0005	0.0201	-0.1394
	(0.4067)	(0.1007)	(0.9203)	(0.9970)	(0.8532)	(0.3406)
F_MFP(-3)	0.1468**	0.0605	0.1176	0.1673***	0.2252***	0.1143
	(0.0234)	(0.1611)	(0.1333)	(0.0088)	(0.0000)	(0.1826)
INV	-0.0288	-0.0439***	0.0080	-0.0059	0.0081	-0.0497**
	(0.1355)	(0.0024)	(0.7426)	(0.8668)	(0.8780)	(0.0767)
F_CS	-0.0927**	-0.0969***	-0.0830***	-0.1857***	-0.2316***	-0.1207***
	(0.0000)	(0.0001)	(0.0003)	(0.0000)	(0.0000)	(0.0000)
FCF	0.0006	0.0007	0.0012	0.0023***	-0.0022	0.0062
	(0.1584)	(0.2321)	(0.4027)	(0.0064)	(0.0127)	(0.4903)
LNSIZE	0.0009	-0.0128*	-0.0107	-0.0002***	-0.0030***	-0.0001
	(0.8760)	(0.0663)	(0.1686)	(0.0005)	(0.0012)	(0.6632)
DPR				0.0006***	0.0007***	0.0005***
				(0.0000)	(0.0000)	(0.0081)
DPS				-0.0264***	-0.0336***	-0.0160**
				(0.0007)	(0.0001)	(0.0562)

Note: Significant level at *=10%, **= 5%, ***= 1%

This certificate is presented to

Darmawati Muchtar

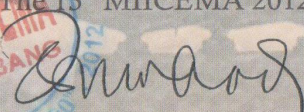in recognition of his/her participation as

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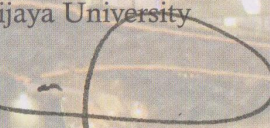## "ASIA EMERGING ECONOMY TOWARD GLOBAL ECONOMIC INTEGRATION"

October 18 - 20, 2012

Faculty of Economics, Sriwijaya University

Conference Chair
The 13th MIICEMA 2012

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