JURNAL

by Jurnal_bu Musdalifah Azis Buat Pak_lk_1

Analysis of Investment Portofolio Mutual Funds through Banking Financial Performance

Conference Paper · June 2016

3 authors, including:

Ike Purnamasari
Universitas Mulawarman
7 PUBLICATIONS   1 CITATION

SEE PROFILE

Musdalifah Azis
Universitas Mulawarman
9 PUBLICATIONS   1 CITATION

SEE PROFILE

Some of the authors of this publication are also working on these related projects:

Project   Kinerja keuangan bank View project

Project   financial technology View project

Banking, Finance & Accounting

Wednesday, June 29,2016   **15:00-16:30**   **Meeting Room1**

Session Chair: *Prof. Musdalifah Azis*

ICBM- 17

Analysis of Investment Portfolio Mutual Funds through Banking Financial Performance

Musdalifah Azis | *Universitas Mulawarman*

Maryam Nadir | *Universitas Mulawarman*

Ike Purnamasari | *Universitas Mulawarman*

Syarifah Hudayah | *Universitas Mulawarman*

ICBM- 21

Performance Measurement Practices and Performance in Small and Medium-Sized Enterprises: A contingency Approach

Farhana Zaman | *University of Shizuoka*

Daeyoung Yoon | *University of Shizuoka*

ICBM- 30

The Effect of Earnings Aggressiveness, Income Smoothing, Earnings Transparency on Cost of Equity with Earnings Informativeness as Moderating

Herry Sunarto | *Trisakti University*

Etty Murwaningsari | *Trisakti University*

Sekar Mayangsari | *Trisakti University*

IACSSM-32176

The Effect of Credit Rating on the IPO Underpricing in Korea

Hyung-Suk Choi | *Ewha Womans University*

Seung-Ki Seo | *Ewha Womans University*

ICBM- 17
Analysis of Investment Portfolio Mutual Funds through Banking Financial Performance

Musdalifah Azis[1), Syarifah Hudayah[2), Maryam Nadir[3), Dan Ike Purnamasari[4)

Fakulty Of Economics and business, Universitas Mulawarman

Email: [1]musdalifah.azis@gmail.com; [2]sy.hudayah@gmail.com; [3]nadirmaryam@yahoo.co.id; [4]purnamasari.ike9482@gmail.com

Abstract

Optimize mutual funds portfolio through financial performance banking which managed by The ability investment managers in allocating composition effect on mutual funds portfolio depends on the net assets value of shares per inclusion, every equity share, debt share and money market share of its have a certain optimal return. The mutual funds are distributed by the bank as agent products of its. The achievement of optimize mutual funds portfolio can increase financial performance banking be better and so their relations between mutual funds manager on the other hand too. Data is collected from the stock share portfolio report that are presented on record the balance of each company mutual funds report in partnership with banks as a sales agent of the mutual funds, with use linear programming application software POM for window and multiple regression application IBM Statistical Product And Services Solusion Versi 21. The research results obtained the equity composition is 9.1964% and money market composition is 31.8151% can optimize mutual funds portfolio up to value of 1346.001. And management of the investment mutual funds portfolio are on net asset value of shares per inclusion is IDR 48094.75 to achieve optimal value investment portfolio mutual funds through banking financial performance is IDR442.298,5.

Keywords: mutual funds portfolio, financial performance of banking, investment manage

1. Background/ Objectives and Goals

Research analysis optimize investment portfolio mutual funds banks in indonesia aims to know the level optimize investment portfolio mutual funds formed from compositionof equity mutual funds, balanced mutual funds and fixed income mutual funds optimal based on institutional investors (banking), with the constraints of which is found in banking is on every financial performance itself as a institutional investors. Research objectives is representing the long term objective of which was hoped to be

a consideration decision institutional investors banking on form investment portfolios mutual funds optimal. For academics expected to as an examination theoretical in the development of theory and literature library of investment portfolios mutual funds and financial management, and as a reference for anyone who want to further research with objects the same study.

With a target specifically to designate optimize composition and percentage on equity mutual funds, balanced mutual funds, and fixed income mutual funds in order to increase the fee base income for the banking sector, and capable of forming mutual funds private for institutional investors .

The model optimize is used In this research which was conducted through a linear programming with simplex method. Problems optimize in this research is a kind of portfolio mutual funds managed by investment managers and is distributed by banking, with the constraints of a health banking financial performance.

The portfolio is the combination of some shares as investment options. The goal is to minimize risk investment and optimize return. Investors buy not just one stock, but buy some shares as portfolio. Based on a number of research conducted Cheng-few et al (2001) , chandra, et al (2011), Ashish kumar (2011), Stephanus r.w. et al (2010), Bender.j and nielsen.f (2010), and Bettman et al (2009) indicates that invested fund of investors on fewer shares fundamental and technical good, then risk investment to be lower and their return be optimal .

Model optimization applied to portfolio mutual funds have an important role to play in a decision finances (Gerard Cornuejols and Reha Tutuncu: 2006). A good Portfolio is consisting of shares a correlation coefficient between its shares small. According to the theory of investment, stocks in a kind of mutual funds which is the same will be having a high correlation coefficient, while stocks of a kind of different mutual funds having a correlation coefficient in which a relatively small. Hence, a good portfolio is consisting of shares of originating from the different mutual funds.

Classical model portfolios in election presented by Markowitz (1952, 1959), that model mean-variance, referring to the level of certain risks, we can obtain optimum value expected with optimize investment portfolios; and refer to the level of special returns that can be given, we can obtain the minimum investment different by minimizing risk from portfolios. The Distinct method had challenged and many studies had modify this theory, and one of the popular is stock market, proposed by

Sharpe (1966, 1967, 1970 and Litner (1965), simplified Markowitz that included the difference between model covariance and return.

Since a mutual fund into a common investment, many an index or technique for measuring the performance of mutual funds also has been served.Your past performance mutual funds play an important role in provide investors with reference about how allocate capital in the long run. Sharpe (1996) is Introducing a performance indicators mutual considering at risk and systematic no risk (systematic or called the total) risk to get excess return. Treynor (1965) proposed on performance portfolio can be measured by using the ratio mean risk premium at risk systematic during the evaluation of portfolio instead of total risk. Jensen (1968) proposed jensen's index much better in performance measurement absolute compared with an sharpe's index and treynor's index. And at other researchers had said[1] that analysis of other data development which that is used evaluate through the performance of mutual funds (Murthi, Choi, & Desai, 1997; Basso & Funari, 2001).

Have much research with the problems portfolio election using the scheme optimization, Sharpe (1967) Proposed model linear programming aims to select portfolio open-end funds. Xia, Liu, dan Lai (2000) said that new models proposed to select considering the portfolio investors interest expected return of the portfolios. Xia, Wang, dan Deng (2001), Algorithms linear programming also applied to learn selection optimal portfolio with transaction costs .And still many other methods optimization scheme.

In this research, optimize an investment calculated with the methods simplex of linear programming. Eddy herjanto (2009:10)[1] linear programming which use the model mathematics to describe problems which want to analysis. In linear programming load function limits as efforts to maximize or to minimize of function of a variable .Function these limits derived from financial performance banking.

Investors can choose a bank or not a bank that can manage their investment portfolios mutual funds. It is the majority investor bank customers who had savings or depositing nor loans and can be invested their funds in the form of mutual funds depending on perception and the level of comfort (Chanchai, 2012) As well as their assessment about banking financial performance, financial performance of health banking will give of perception and the level of comfort the best in its bank customers.

Bank as an agent strategic in distributing a product mutual funds , bank always using the ability maximum the use of leverage to the extent a standard level of set bank indonesia, the use of leverage maximum will have an impact on the level of profitability and liquidity a bank (Christoph Aymanns, 2014).

Machfoedz (1994) Test benefits the ratio financial in forecasting corporate profits in which to be come. The ratio financial used is CAR, NPL, NIM, BOPO dan LDR. CAR is the ratio which shows how much all assets bank containing (on credit risk, participation, securities, the bill at other banks) to funded by their own capital apart from funds from sources out bank. NPL (Non Performing Loan) showed that the bank management in managing non-performing loans provided by a bank. So that the higher ratio this the more worse the quality of bank credit that causes the number of loan defaults the bigger would likely a bank in the condition of troubled the bigger. NIM (Net Interest Margin) used to measure the ability of bank management in managing assets to produce productive age is net interest income. BOPO (the ratio operational costs against revenue operational) used to measures the bank management in controlling operational costs against revenue operational. Dan LDR (Loan to Deposit Ratio) used to evaluate the liquidity of bank.

2. Research Method

The research methodology describes the explanatory research conducted to analyse optimization mutual investment portfolio through financial performance banks. Stage design this research began of technical analysis of the data collection and technical data analysis variable research. Then detect the determination of the population and the sample, so that definition operational and indicators measurements can be known.

2.1 Technical Analysis Of The Data Collection

A method of quantitative this research is using a technique of linear programming with simplex method, and multiple regression. Research is designed in several phases: The first phase, survey data, by steps : (1) Banking identification as a sales agent of the mutual funds in indonesia and a listing on the Indonesia Stock Exchange, (2) Identification portfolio investment options mutual funds banking on as a sales agent of the mutual funds, dan (3) Built the matrix of bank group that have numerous species of mutual funds investment portfolios managed by investment managers.

The second phase, research data analysis, by steps: (1) The determination of bank as dealers mutual funds have a lot of a kind of mutual funds and most investment portfolio mutual funds managed by investment managers. (2) Election investment

options the effect form portfolio mutual funds, namely portfolio stock and potofolio bonds. (3) built the matrix of portfolio stock and bond portfolio on establishing a kind of portfolio mutual funds, namely equity mutual funds, balanced mutual funds and fixed income mutual funds. (4) Match them at a step third in banking financial performance as dealers mutual funds chosen.

The third stage, technique data analysis, by steps: (1) Measurement technique return and risks investment portfolio mutual funds. (2) Technique optimization investment portfolio mutual funds. (3) Measurement technique performance keungan banking as dealers mutual funds. (4) Technique optimization investment portfolio mutual funds through financial performance banking by steps the method simplex .

2.2 Population and Sample

Population this research is banking listing at the indonesian stock exchange as many as 33 bank .Sample techniques used in this research was purpossive sampling with criteria sample as follows:

Tabel 1. The procedure determination of the sample collection

Criteria	Mount
The number of banking listing at the indonesian stock exchange	33
Banks that were not enrolled in APERD	6
No profile banks as dealers mutual fund	9
The number of banking as dealers mutual funds	16

Source : BEI, 2012, The processed data

Matrix bank made in this research founded that there are 16 banking as dealer of mutual funds and there are 20 investment managers in partnership with the domestic banking transaction of products investment mutual funds to their investors.

Based on a lot of type and variation investment portfolio mutual funds there is 44 kind of mutual funds banking as agents mutual funds .

Sample criteria the future research is investment options the effect form investment portfolio mutual funds consisting of of stocks and bonds just, so obtained 25 investment options portfolio mutual funds to a category equity mutual funds, balanced mutual funds and fixed income mutual funds, as seen on the table below : (1) Manulife Dana Saham; (2) Manulife Saham andalan; (3) Manulife Dana Tumbuh Berimbang; (4) Manulife Dana Stabil Berimbang; (5) Manulife Dana Campuran II; (6)

Manulife Pendapatan Bulanan II; (7) Manulife Obligasi NegaraIndonesia II; (8) BNP Paribas Pesona; (9) BNP Paribas Ekuitas; (10) BNP Paribas STAR; (11) BNP Paribas Infrastruktur Plus; (12) BNP Paribas Solaris; (13) BNP Paribas Equitra; (14) BNP Paribas Prima II; (15) Danareksa Anggrek; (16) Schroder Dana Prestasi Plus; (17) Schroder Dana Istimewa; (18) Schroder 90 Plus Equity; (19) Schroder Dana Terpadu II; (20) Schroder Dana Kombinasi; (21) Schroder Dana Prestasi; (22) Schroder Dana Mantap Plus II; (23) Schroder Dana Andalan II; (24) Mandiri Investa Atraktif; dan (25) Mandiri Investa Aktif.

There are 25 sample portfolio investment options mutual funds managed by bank cimb niaga that there are 11 species of stock mutual funds, 9 a kind of mutual funds balanced and 5 species of mutual funds fixed income, it will be forming the function of the purpose of maximizing: $Z = 11A + 9B + 5C$ (equation 1-1), where Z is Function of the purpose portfolio optimal managed by bank, A is Equity Mutual Funds, B is Balanced Mutual Funds and C is Fixed Income Mutual Funds

2.3 Technical and Tools Analysis Data
2.3.1 Operational definition and measurements variables.
Optimize investment portfolio mutual funds is optimize an assemblage of investment of several species of mutual funds stock, mutual funds fixed income, and mutual funds mix with composition effect stock, bonds and money market that uses linear programming method simplex.

Purposes function with n variable: $f(x1, x2,... xn)$, The function of this objective can be formulated as follows:

$$Maximum = \sum_{j=1}^{n} a_j \cdot x_j, \text{ With Constraints is } \sum_{i=1}^{m} \square \sum_{j=1}^{n} a_j \cdot x_j \; > = < \; b_j \text{ and xj} \geq 0$$

(j=1,2….n); bj $\geq$ 0 (i=1,2..n)

To find out whether investment has been done optimal, but determined return of some variable is namely: (a) equity composition, bonds and money market mutual funds from investment portfolio. (b) NAB equity mutual funds, balanced mutual funds, fixed income mutual funds of investments mutual funds banking portfolio. With   n variable, a simplex method of Linier programming shows equation is maximum investment returns, which formula is $a_1A + a_2B + a_3C$, With Constraints :   A,B dan C $\leq$ IDR.

a. performance banking

Financial performance banking is feasibility financial performance bank can be measured by management CAR, LDR, LDR , BOPO and NIM a healthy based on the level health banking set by the bank indonesia .

$$Y = b_1 CAR + b_2 LDR + b_3 NPL + b_4 BOPO + b_5 NIM$$

where notation is : $CAR = \dfrac{Equity}{Assets\,Weighted\,According\,to\,Risk}$, CAR is Calculation capital and assets weighted according to risk done under the terms of obligation provision of capital minimum prevailing. $LDR = \dfrac{Credit}{Third-Party\,Funds}$, With stage measurement as follows: (i) LDR is the total of loan that given to a third-party (not including loans from a bank other. (ii) third-party funds includes giro, savings, and deposit (not including inter bank). $NPL = \dfrac{Non\,Performing\,Loans}{Total\,Kredit}$, (i) NPL is credit granted to a third-party (excluding credit to other banks). (ii) credit defaults is credit with the quality of lacking smoothly, doubtful and jammed. (iii) loan defaults counted in gross (not reduced ppap). (iv) numbers is calculated per position (not annual data) . $BOPO = \dfrac{Operational\,Cost}{Operational\,Revenue}$, $NIM = \dfrac{Net\,Interest\,Income}{Average\,Asset\,Productive}$, With stage measurement as follows: (i) NIM is reduction from interest income and interest burden; (ii) calculation net interest income annual data. (iii) the average assets productive: (iv) assets productive is taken into consideration is assets of productive interest-bearing (interest bearing assets).

2.3.2 Technique Analysis

The technique analysis used in this research was linear programming with the methods simplex to which the functions the goal is optimize portfolio mutual funds through performance banking.

1. [1] Technique analysis optimize investment portfolio mutual funds with stage measurement as follows: (i) includes the percentage composition effect stock , bonds and money market of any kind of mutual funds [1] (equity mutual funds balanced, mutual funds and fixed income mutual funds) that examined from company sample. Composition it can be obtained from portfolio effect mutual funds financial report quarterly company sample audited. Use linear programming method simplex whose equation regression to optimize investment portfolio mutual funds as follows: $Z = C_1 A + C_2 B + C_3 C$, Which : Z is Function the purpose

portfolio optimal managed by bank; C_1 is Z/Unit Equity Mutual Funds; C_2 is Z/Unit Balanced Mutual Funds; C_3 is Z/Unit Fixed Income Mutual Finds; A is Equity Mutual Funds; B is Balanced Mutual Funds; C = Fixed Income Mutual Funds, With Constraints :

$A_{i1}A + A_{i2}B + A_{i3}C \leq b_i$; A_{i1} is Equity Composition; A_{i1} is Bonds Composition, A_{i1} is Money Market Composition; b_i is Return Reksadana- i, Return Of Mutual Funds =

$$\frac{NAV_t - NAV_{t-1}}{NAV_{t-1}}$$

2. Technique analysis performance banking by forming the regression equation is linear. Dependent variable that equation is banking with an indicator the measurement of the net book value. Based on as attachments 14 circulars bank indonesia number 3 / 30 / DPNP the 14 december 2001, so the determination of the net book value obtained from the net book value fixed asset the company it was outlined in a financial filing quarterly audited. And the independent variable of the regression equation is banking performance among other: CAR, LDR, NPL, BOPO, and NIM where tally reference measurements from appendix 14 circulars Bank Indonesia number 3/DPNP/30december 14 december 2001 which stated in the quarterly financial audited report. Hence the liniear regression equation of the banking performance:

Financial Performance Banking = $\alpha + \beta_1 CAR + \beta_2 LDR + \beta_3 NPL + \beta_4 BOPO+ + \beta_5 NIM$

3. Technique analysis optimize investment portfolio mutual funds through performance mutual funds, it is done by seeking fit property of the superior test the model significant between performance banking to portfolio mutual funds (viewed of the value of aktive in net participation products equity mutual funds, balanced mutual funds and fixed income mutual funds) optimal $Y_1 = \alpha + \beta_1 CAR + \beta_2 LDR + \beta_3 NPL + \beta_4 BOPO+ + \beta_5 NIM$; $Y_2 = \alpha + \beta_1 CAR + \beta_2 LDR + \beta_3 NPL + \beta_4 BOPO+ + \beta_5 NIM$; $Y_3 = \alpha + \beta_1 CAR + \beta_2 LDR + \beta_3 NPL + \beta_4 BOPO+ + \beta_5 NIM$. Where : Y_1 is Net Asset Value Per Equity Mutual Funds unit; Y_2 is Net Asset Value Per Balanced Mutual Funds unit; Y_3 is Net Asset Value Per Fixed Income Mutual Funds unit.

3. Results

Testing normality error done with normality error fulfilling goodness of fit according to standard provisions required in the model OLS, which is making the ratio skewness and kurtosis on the -2 until + 2. The ratio skewness and kurtosis on all the equation

1-3, equation 1-4, equation 1-5, and equation 1-6 located on the -2 until + 2 or less than 2. Only the ratio skewness and kurtosis on the ldr and BOPO that is not in a position to + -2 2 or less than 2. The results of testing multicollinearity in table 2. produce value VIF for each variable independent smaller 10 (VIF < 10). All variable independent it has value VIF smaller than 10, so that it can be concluded that all variable independent (CAR, LDR, NPL, BOPO and NIM) that is put in the model regression is free from problems multicollinearity.

Tabel 2. Testing Result Of Clasic Assumption equation 1-3, equation 1-4, equation 1-5, and equation 1-6

Variabel Independen	equation 1.3		equation 1.4		equation 1.5		equation 1.6	
	Multic ollinea rity (VIF)	Autocorr elation DW-Test	Multic ollinea rity (VIF)	Autocor relation DW-Test	Multic ollinear ity (VIF)	Autocor relation DW-Test	Multicol linearity (VIF)	Autocor relation DW-Test
CAR	1.244	1.408	1.244	2.095	1.244	2.125	1.244	2.008
LDR	1.173	1.408	1.173	2.095	1.173	2.125	1.173	2.008
NPL	1.892	1.408	1.892	2.095	1.892	2.125	1.892	2.008
BOPO	1.573	1.408	1.573	2.095	1.573	2.125	1.573	2.008
NIM	1.281	1.408	1.281	2.095	1.281	2.125	1.281	2.008

Source : The Processed Data, SPSS

Testing whether there were any symptoms autocorrelation on the model regression done by test durbin-watson. On equation 1-3, Value dw = 1.408, equation 1.4 value dw = 2.095 , equation 1.5 value dw = 2.125 , equation 1.6 value dw = 2.008 , all value dw this than the value t table significance 5 percent, the sample of the 18 (n) and the number of independent variable 1 (k = 1 and obtained value dl = 1,16 and value du = 1,39 . Value dw = 1.408, Value dw = 2.095 , dw = 2.125 , and dw = 2.008 situated between du = 1,39 and (4-du = 4-1.39 = 2,61) .So if du = 1,39 & lt; dw = 1,408, du = 1,39 & lt; dw = 2.095 , dw = 2.125 , and dw = 2.008 & lt; 4-du = 2,61 and all variable independent (CAR, LDR, NPL, BOPO dan NIM) that is put in the model regression free from problems autocorrelation.

Figure 2. *Scatterplot equation 1-3, equation 1-4, equation 1-5 and equation 1-6*
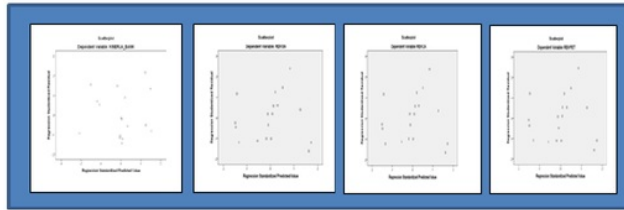
Source : The Processed Data, SPSS

Based on scatterplot above on figure 2, it can be seen that points spread and do not form a specific pattern clear. So that can be concluded that does not happen heteroskedasticity. If we are watching figure 3 mentioned above, so charts histogram equation 1-3, equation 1-4, equation 1-5, and equation 1-6 give the distribution pattern near normal. Hence, can be concluded that data distributed normal, means is according to the standard provisions required in the model OLS.

Figure 3. *Histogram dan normal probability plot equation 1-3, equation 1-4, equation 1-5 and equation 1-6*
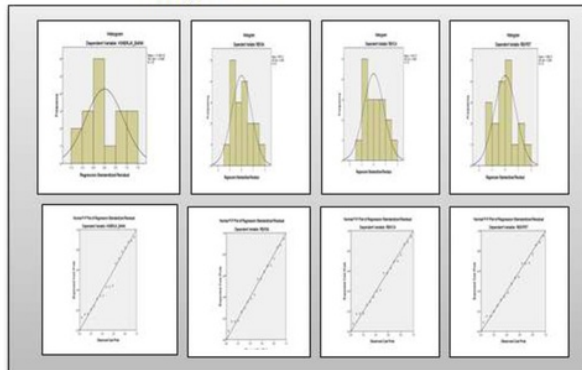
Source : The Processed Data, SPSS

And on a chart normal probability a plot look points spread around the diagonal line, and their distribution are followed the direction the diagonal line. Hence, can be concluded that CAR, LDR, NPL, BOPO DAN NIM distributed normal, means is according to the standard provisions required in the model OLS.

3.1 Optimize Investment Portfolio Mutual Funds

In this study found that the average largest stock composition portfolio mutual funds managed by investment managers there are on the equity of 60.2748 % and products mutual funds near the average score of equity composition is at Manulife Dana

Tumbuh Berimbang (59.51%), Mandiri Investa Aktif (54.42) and Danareksa Anggrek Fleksibel (58.55%). The average bonds and debts of 26.1512 %, and the average money market composition of 13.5740 %, and the average assets managed investment managers up to 6103.7140

In this study also found that maximum management composition of portfolio mutual funds the largest be on the equity mutual funds Mandiri Investa Atraktif sebesar 96.57 % with minimum 0%, and maximum composition stock at bonds or deposito on mutual fund of Manulife Obligasi Negara Indonesia II value at 92.99% with minimum 0%, and maximum stock composition at money market of mutual fund of BNP Paribas Equitra value at 70.07% with minimum 3.43% so maximum performance of mutual funds portfolio at Schroder Dana Prestasi reached net asset value management of 31173.47 with minimum 1049.47. The optimal investment portfolio mutual funds form the function of purpose to be maximizing by: $Z = 11A + 9B + 5C$ (equation 1-1).

By using output POM and QM linear programming, a simplex method used in this research provide solutions that the management of equity composition is 9.1964% and stock composition of money market is 31.8151% can optimize investment portfolio mutual funds up to value of 1346.001 optimal. And to manage stock composition of debts or bonds to 0%, thus optimization investment portfolio mutual funds form equation, as follows: $Z = 9.1964A + 31.8151C$ (equation 1-2).

3.2 Banking Financial Performance

Data financial performance banking look that the average CAR banking of 0.11, LDR banking of 1.2494, the average NPL of 2.5806 banking, the average BOPO banking of 0.5161, the average NIM banking of 0.2933 .

The results of testing in program IBM Statistical Product And Services Solusion Versi 21. which are presented in table 3. Presented data financial performance banking modeled in the equation formulated as follows:

$$Y = 0.732\text{CAR} - 0.040\text{LDR} + 0.004\text{NPL} - 0.199\text{BOPO} - 0.067\text{NIM} \quad (1\text{-}3)$$
$$Y_1 = 0.794\text{CAR} - 0.061\text{LDR} - 0.301\text{NPL} + 0.147\text{BOPO} - 0.007\text{NIM} \quad (1\text{-}4)$$
$$Y_2 = 0.795\text{CAR} - 0.057\text{LDR} - 0.305\text{NPL} + 0.148\text{BOPO} - 0.008\text{NIM} \quad (1\text{-}5)$$
$$Y_3 = 0.796\text{CAR} - 0.069\text{LDR} - 0.288\text{NPL} + 0.157\text{BOPO} - 0.001\text{NIM} \quad (1\text{-}6)$$

Where : Y is Financial Performance Banking; Y_1 is Net Asset Value Per Equity Mutual Funds unit; Y_2 is Net Asset Value Per Balanced Mutual Funds unit; Y_3 is Net Asset Value Per Fixed Income Mutual Funds unit.

On Equation 1-3 showed the value of the coefficients CAR 0.732 at the level of significance with less than 5% it means CAR against the influence of financial performance banking significant with the direction of a positive relationship. And value of LDR, NPL, BOPO and NIM each of the -0.040; 0.004; -0.199; and -0.067 with the level of significance larger than 5% it means the influence of partial evaluation each variable LDR, NPL, BOPO and NIM not significantly to banking financial performance.

On Equation 1-4 showed the coefficients CAR value at 0.794 with a significance less than 5% it means influence of CAR to investment portfolio equity mutual funds significant with of the relations a positive. And value of LDR, NPL, BOPO and NIM each of the -0.061; -0.301; 0.147; and -0.007 with the level of significance larger than 5% it means the influence of partial evaluation each variable LDR, NPL, BOPO and NIM not significantly to to investment portfolio equity mutual funds.

Table 3. Regression Coefficient Banking Financial Performance

MODEL	Y	Y_1	Y_2	Y_3
CAR				
Standardized Coef.	0.732	0.794	0.795	0.796
T-Value	3.789	6.445	6.485	6.316
T-Sign.	0.003	0.000	0.000	0.000
LDR				
Standardized Coef.	-0.040	-0.061	-0.057	-0.069
T-Value	-0.213	-0.509	-0.482	-0.562
T-Sign.	0.835	0.620	0.639	0.585
NPL				
Standardized Coef.	0.004	-0.301	-0.305	-0.288
T-Value	0.016	-1.983	-2.016	-1.854
T-Sign.	0.987	0.071	0.067	0.088
BOPO				
Standardized Coef.	-0.199	0.147	0.148	0.157
T-Value	-0.917	1.060	1.072	1.107
T-Sign.	0.377	0.310	0.305	0.290
NIM				
Standardized Coef.	-0.067	-0.007	-0.008	0.001
T-Value	-0.341	-0.056	-0.061	0.012
T-Sign.	0.739	0.957	0.952	0.991

Source : The Processed Data, SPSS

On Equation 1-5 showed The value of the coefficients CAR 0.795 at the level of significance with less than 5% it means CAR against the influence of investment portfolios significant balanced mutual funds with the relations which is positive. And value of LDR, NPL, BOPO and NIM each of the -0.057; -0.305; 0.148; and -0.008 with the level of significance larger than 5% it means the influence of partial evaluation each variable LDR, NPL, BOPO and NIM not significantly to investment portfolio balanced mutual funds.

Table 4. Goodness Of Fit Statistics Banking Financial Performance

MODEL	Y	Y_1	Y_2	Y_3
R-Value	0.800	0.924	0.925	0.920
R Square-Value	0.639	0.853	0.855	0.847
Adjusted R Square	0.489	0.792	0.795	0.783
F-Value	4.256	13.978	14.163	13.242
F-Sign	0.019	0.000	0.000	0.000

Source : The Processed Data, SPSS

On Equation 1-6 showed the coefficients CAR value at 0.796 with a significance less than 5 % it means influence car to investment portfolio fixed income mutual funds significant with of the relations a positive. And value of LDR, NPL, BOPO and NIM each of the -0.069; -0.288; 0.157; and 0.001 with the level of significance larger than 5%it means the influence of partial evaluation each variable LDR, NPL, BOPO and NIM not significantly to investment portfolio fixed income mutual funds.

The results of testing in program IBM Statistical Product and Services Solusion Versi 21 at table 4 showed data investment portfolio mutual funds and banking financial performance showing that R-Square of equation 1-3, equation 1-4, equation 1-5, equation 1-6 each of 0.639; 0.853; 0.855; and 0.847 and value F of equation 1-3, equation 1-4, equation 1-5, equatio 1-6 each of 4.256; 13.978; 14163; and 13.242 with a significance of equation 1-3, equation 1-4 , equation 1-5, and equation 1-6 of 0.000. So, variables CAR, LDR, NPL, BOPO dan NIM inserted in the model regression of equation 1-3 equation 1-4, equation 1-5, equation 1-6 each of have the ability elaborate on simultaneous financial performance banking, Financial Performance Banking through Net Asset Value Per Equity Mutual Funds unit, Financial Performance Banking through Net Asset Value Per Balanced Mutual Funds unit; Financial Performance Banking through Net Asset Value Per Fixed Income Mutual Funds unit, while the rest of their relation described by the other factors that not included in the model regression. Model regression which used in accordance with

empirical evidence meets goodness of fit model at the level of significance smaller than 0.5 percent.

3.3 Investment Mutual Funds Through Banking Financial Performance

In this study discovered that and non-performing loans of the car as part of financial performance could predict the management of investment portfolios mutual funds which was carried out by investment managers in partnership with banks. A maximum score CAR achieved in the period of TW I / 2010, TW II / 2013, TW IV / 2013, TW I / 2014 and TW II / 2014 as much as 12 % and the non-performing 30.6 % achieved in the period of TW I / 2010 as much as 3.06 in managing a total investment of portfolios mutual funds amounting to 1104187.22 achieved in the period of TW II / 2014.

The function of The optimal investment of mutual funds portfolio form of purpose to maximize: $Z = 9.1964A + 31.8151C$, Where : A is Portfolio Equity Mutual Fund, and B is Portfolio Fixed Income Mutual Fund, with constraints : $0.792X_1 - 0.301X_3 = 82888.91$; $0.795 X_1 - 0.305 X_3 = 43986.85$; $0.796 X_1 - 0.288 X_3 = 14655.95$; Where : X_1 is CAR and X_3 is NPL.

From the output POM and QM linear programming with a simplex method look provide solutions in optimizing investment portfolio mutual funds through financial performance banking that the management of investment portfolio mutual funds are on equity mutual funds with value assets in net participation IDR48.094,75 so that it can be reached value optimal investment portifolio mutual funds through financial performance banking at IDR 442.298,5.

4. Conclusion and Limitation

4.1 Conclusion

Analysis optimize investment portfolio mutual funds, portfolio equity mutual funds, portfolio mutual funds balanced and portfolio mutual funds fixed income with stock composition, debt or bonds and money market or deposits that is allocation stock composition a portfolio mutual funds. Optimize investment portfolio mutual funds the with the management of stock composition of equity is 9.1964 % and stock composition of money market is 31.8151 % can optimize investment portfolio mutual funds up to value of 1346.001 optimal. And manage composition of debts or bonds to 0 %.

Optimize investment portfolio with the constraints of financial performance banking stated that variable CAR, LDR, NPL, BOPO and NIM as the parts which able to predict financial performance banks to optimize investment the mutual funds portfolio.

Optimize investment portfolio mutual funds are on optimize investment portfolio equity mutual funds and portfolio mutual funds fixed income with the management of allocation stock composition of equity and management of allocation money market composition through management CAR and NPL done banking as a partner cooperation banking and investment managers in optimizing an investment portfolio mutual funds. CAR and NPL as part from the financial performance that can help predict performance portfolio equity mutual funds and fixed income mutual funds in optimizing an investment portfolio mutual funds through banking financial performance.

4.2 Limitation

Compliance allocation stock composition of portfolio mutual funds as portfolio mutual funds shares is supposed to have equity composition is 80% and money maket composition is 20% deposits or bonds, portfolio balanced mutual funds composition is 50% equity and 50% money market mutual funds and portfolio fixed income with the 20% equity composition and 80% money market attention should be given to allocation management composition portfolio mutual funds by any investment managers.

Compliance allocation stock composition portfolio mutual funds done by investment managers will reach optimize value a better investment when added with sophistication stock selectian and market a timing owned investment managers in choosing effects equity and effects money market mutual funds to the in their portfolios.

Investment portfolio mutual funds managed by investment managers it would be better if in partnership with banks in marketing the products to customers banking as one of the alternative investment customers .Expected through financial performance banking better be able to support level optimize an investment portfolio the mutual funds. And beside prediction CAR and NPL as part financial performance banking can be used as an indication the measurement of an increase in optimize an investment portfolio the mutual funds, needs to be done further research on measuring indicators financial performance banking that can be used as a base for the measurement of indicators level optimize investment portfolio mutual funds managed

by investment managers in partner the partnership as the manager increase optimize an investment portfolio the mutual funds.

Acknowlegment

References

Basso, A., & Funari, S. (2001). A data envelopment analysis approach to measure the mutual fund performance. European Journal of Operational Research, 135, 477–492.

Chanchai, M. (2012). Portfolio Choice toward Bank Related and Non Bank Related Mutual Funds in Thailand: A Case of Bangkok. *Procedia - Social and Behavioral Sciences, 40*, 726 – 730.

Cheng F Lee, G. M. (2001). Stock Expected Return and Volatility on China's Stock Market. *Journal of Finance, 24*, 523-543.

Christensen, Michael. 2005. *Danish Mutual Fund Performance: Selectivity Market Timing and Persistence.* Denmark: Finance Research Group, Departement of Accounting, Finance and Logistic.

Christoph Aymanns, J. F. (2014). The dynamics of the leverage cycle. *Journal of Economic Dynamics & Control, 50*, 155-179.

Darmadji, Tjiptono dan Hendy M.Fakhruddin. 2008. *Pasar Modal di Indonesia: Pendekatan Tanya Jawab.* Edisi 2. Jakarta: Salemba Empat.

Dennis, Jerry, Adler H. Manurung, dan D. Nachrowi. 2004. Analisis Determinasi Kinerja Reksadana Pendapatan Tetap di Indonesia Periode 1999-2003. *Jurnal Riset Akuntan Indonesia* (Mei): 225-250.

Ghozali, Imam. 2005. *Aplikasi Analisis Multivariate dengan Program SPSS.* Semarang: Badan Penerbit Universitas Diponegoro.

Hartono, Jogiyanto. 2003. *Teori Portofolio dan Analisis Investasi.* Edisi III. Yogyakarta: BPFE.

Huang, L.-H. C. (2009). Portfolio Optimization Of Equity Mutual Fund With Fuzzy Return Rate And Risks. *Expert System With Application, 36*, 3720-3727. doi:10.1016/j.eswa.2008.02.027

Hoffmann AO, Franken H, Broekhuizen (2011). "Customer intention to adopt a fee based advisory model". International Journal of Bank Marketing.

Jensen, M.C. 1968. The Performance of Mutual Funds in the Period 1945-1964. *Journal of Finance,* 23 (2): 389-416.

Litner, J. (1965). The valuation of risk assets and the selection of risk investments in stock portfolio and capital budget. The Review of Economics and Statistics, 13–37.

Pratomo, EP dan Ubaidillah Nugroho. 2005. *Reksadana: Solusi Perencanaan di Era Modern*. Jakarta: Gramedia Pustaka Utama.

Markowitz, H. M. (1952). Portfolio selection. The Journal of Finance, 7, 77–91.

Markowitz, H. M. (1959). Portfolio selection: efficient diversification of investments. New York: Wiley.

Marco Antonio Laes, M. E. (2014). Performance of mutual equity funds in Brazil –A bootstrap analysis. *Journal of Economia, 5,* 294-306.

Murthi, B. P. S., Choi, Y. K., & Desai, P. (1997). Efficiency of mutual funds and portfolio performance measurement: A non-parametric approach. European Journal of Operational Research, 98, 408–418.

Sharpe, W. F. (1966). Mutual fund performance. Journal of Business, 39, 119–138. January.

Sharpe, W. F. (1967). A linear programming algorithm for a mutual fund portfolio selection. Management Science, 13, 499–510.

Sharpe, W. F. (1970). Portfolio theory and capital markets. New York.

Sekaran, Uma. 2000. *Research Methods for Business*. Thrid Edition. United States of Amerika: John Wiley & Sons, Inc.

Stephanus, R. (2010, Agustus-November). The Complementary Nature of Fundamental and Technical Analysis: Evidence from Indonesia. *Integritas-Jurnal Manajemen Bisnis, 3*(2), 167-184.

Treynor, J. (1965). How to rate management of investment funds. Harvard Business Review, 43, 63–75.

Wijaya, A. (2011). Pengantar Riset Operasional. Jakarta: Penerbit Mitra Wacana Media. Diambil kembali dari http//www.mitrawacanamedia.com

Xia, Y. S., Liu, B., & Lai, K. K. (2000). A model for portfolio selection with order of expected returns. Computers and Operations Research, 27, 409–422.

Xia, Y. S., Wang, S. Y., & Deng, X. T. (2001). A compromise solution to mutual funds portfolio selection with transaction costs. European Journal of Operational Research, 134, 564–581.

ICBM- 21
Performance Measurement Practices and Performance in Small and Medium-Sized Enterprises: A contingency Approach

Farhana Zaman [a]

[a] Graduate School of Management & Information of Innovation, University of Shizuoka, Japan
Email address: j15502@u-shizuoka-ken.ac.jp or zaman_farhana@yahoo.com

Daeyoung Yoon[b]

[b] Graduate School of Management & Information of Innovation, University of Shizuoka, Japan
Email address: yoon@u-shizuoka-ken.ac.jp

Abstract
1. Background/ Objectives and Goals

In recent years, it has been acknowledged that performance measurement is critical for the effective and efficient management of any business. From a research point of view we have some knowledge about the influence of many contextual factors on the use and implementation of performance measurement systems for large organizations. However, we have a less integrated knowledge about the influence of many contextual variables on the adoption and use of performance measurement systems and consequences of performance measurement practices on organizational performance for Small and Medium-sized Enterprises (SMEs). This paper is an attempt to extend the scant body of extant literature in this area.

2. Methods

This research will focus on the following research questions:

1. What is the association between contextual factors (size, strategy, perceived environmental uncertainty, business structure, managerial characteristics, and information systems) and adoption of integrated performance measurement systems in SMEs?

2. What is the association between contextual factors (size, strategy, perceived environmental uncertainty, business structure, managerial characteristics, and information systems) and extent of integrated performance measurement systems usage in SMEs?

3. What is the relationship between a business's performance measurement practices and its performance?

SMEs in Japan are selected as the experimental setting for this research. A questionnaire survey will be conducted to collect the necessary data and logistic regression modeling will be applied to analyze the survey data.

3. Expected results/ conclusion/ contribution

SMEs are regarded as an important factor in the development of modern economies worldwide. The result of the study will show the positive or negative association between contextual factors and performance measurement practices and explain the impact of performance measurement practices on organizational performance in SMEs. The results of this study will be useful to academics and practitioners supporting the owners of SMEs to adopt and use performance measurement practices that "fit" with their contextual factors in order to improve performance.

Keywords: Performance Measurement Systems, Small and Medium-sized Enterprises, Contingency Framework.

ICBM- 30
The Effect of Earnings Aggressiveness, Income Smoothing, Earnings Transparency on Cost of Equity with Earnings Informativeness as Moderating

Herry Sunarto

Trisakti University, Jakarta, Indonesia

Email: herry_sunarto@yahoo.com

Abstract

This study aimed to examine the effect of the earnings aggressiveness, income smoothing, and the earnings transparency to the cost of equity with earnings informativeness as moderating for the purpose of this research is expected to contribute an additional form of building knowledge about the cost of equity to provide empirical evidence that more comprehensive for his association with the earnings aggressiveness, income smoothing, earnings transparency, and earnings informativeness.

Test is using secondary data from financial statement data. The data sample was used 209 entities listed in the Indonesia Stock Exchange unless the company in addition to property and financial sector for the period 2011 to 2013 and processed using a multiple regression model.

The methodology of this research using casuality research with quantitative methods with the aim to see whether there is any relationship between variables. The results showed that earnings aggressiveness has positive influence on the cost of equity, income smoothing no significant effect on the cost of equity, earnings transparency have a positive effect on the cost of equity. Earnings informativeness that acts as a moderating variable weaken the positive relationship between the earnings aggressiveness to the cost of equity, and earnings in formativeness strengthen the positive relationship the earnings transparency to the cost of equity. While the earnings informativeness as moderating variable between incomes smoothing of the cost of equity is not significant.

Keywords: earnings aggressiveness, income smoothing, earnings transparency, cost of equity, and earnings informativeness.

A. Introduction

Companies in the face of competitive business climate demanded to become more creative and innovate to maintain the continuity of its business, innovation by making changes to the product by launching new products with one of his business is expanding by adding or expanding sources of business in order to increase market share and increase the company's revenue (Hanniarsa, 2013). Companies that want to be competitive and maintain the continuity of their business required additional capital with one of the alternatives is the company took his name in capital markets with the objective when the company needs additional funds the company can perform corporate actions so as to obtain additional funds from investors and creditors (Keown, 2002). Companies that are already listed on the capital market must pay attention to the cost of equity for the calculation of the cost of equity is useful to produce the right investment decisions so that these investments generate returns that can improve the welfare of its owner (Modigliani and Miller, 1958).

Companies that want to use the funding sources of equity would want the cost of equity is low, but in Indonesia there is a tendency cost of equity is still considered high, the trend of cost of equity is high due to the lack of information as well as a negative perspective on historical information company so that the stock market tends to illiquid (Pohan, 2005). If the capital market is not liquid, the cost of equity is high (Diamond and Verrechia, 1991). The cost of equity is the cost incurred by the company to obtain or retain equity in the form of return expected by investors on capital providers (Botosan, 2006). The relationship between the cost of equity peroxide by the required rate of return and the market beta is unidirectional (Sharpe, 1964; Lintner, 1965; and Coles et al., 1995). In accordance with the concept of high risk, high return, investors expect high returns with low cost of equity is reflected in the risk and market beta, so if the market beta risk and lower the cost of equity will be lower (Jones, 2004).

After the financial crisis (the Dot-Com Bubble), the transparency and quality of corporate disclosures faced concern among members of the business community, according to the publicity the World Bank and the Asian Wall Street Journal in 1999 that companies listed on the Asian countries are still grappling with the problem of low transparency (Yu Chih, 2007), Indonesia is no exception from mid-1998 that faced financial crisis, publicity financial transparency of companies listed on the Indonesian Stock Exchange (BEI) has become the focus of investors for increased transparency in accordance with accounting standards with international accounting standards.

This study focuses on accrual management, more specifically discretionary accruals. Discretionary policy is a policy management that is flexible by controlling the accounting numbers. Accrual of discretion by management should be tied to the phenomenon of economic enterprises. For example a company in the business sector given there are accounts of companies that experienced an increase or decrease in the provision for impairment of trade receivables are also likely to rise or drop corresponds accordance phenomenon economic company, meaning that if the condition of economic companies are down or the company's performance is down, especially in the certain business sectors, for example a textile manufacturing company in global conditions also tend to decrease the receivables business goes up will experience the provision for impairment of trade receivables is high, so if it turns out provision for impairment of trade receivables turns down then considered with the phenomenon of economic enterprises. But sometimes management makes discretionary accruals that do not fit the economic enterprise.

Based on the description above, has provided the motivation why the study was conducted, namely: 1. There are still differences in the results of studies linking earnings in formativeness, aggressiveness earnings, income smoothing, and earnings transparency, as well as the cost of equity, 2. Research on the transparency of income I'm looking from a variety of sources in Indonesia have not been investigated. Research carried out by the transparency of the new earnings Barth et al., in 2008 and 2013. 3. Based on research conducted Subramanyam (1996) and Kasanen et al., (1996) which shows that managers do accrual accounting manipulations required interpretation of the discretionary accruals useful for the benefit of the users of financial statements. Bernard et al., (2002) that discretionary accruals that are selected managers in improving earnings informativeness accounting. Earnings informativeness on this it can as a moderating variable with the argument that the policy of discretionary accruals made by management brought two consequences. First, if brought earnings informativeness, accrual policies will increase earnings informativeness, and thus gain more qualified and make the cost of equity is low. Second, if it does not bring earnings informativeness (uninformative earnings), will reduce the accrual policy earnings informativeness, thereby increasing the cost of equity. Top of this research is expected to contribute an additional form of building knowledge about the cost of equity to provide empirical evidence that more comprehensive for his association with the earnings aggressiveness, income smoothing, earnings transparency, and informativeness return on companies listed on the Indonesian Stock Exchange (BEI) and in line with publicity World Bank and the

Asian Wall Street Journal that the company is registered in Asian countries are still grappling with the problem of lack of information transparency (Yu Chih et al., 2007).

B. Research Problems

To demonstrate empirically the effect of the earnings aggressiveness, income smoothing and earnings transparency on the cost of equity and earnings informativeness as moderating which influence the relationship of aggressiveness earnings, income smoothing and earnings transparency on the cost of equity.

C. Motivation Research

There are some differences in the results of studies linking earnings informativeness, earnings aggressiveness , income smoothing, and earnings transparency, as well as the cost of equity, for example, research Bhattacharya et al., (2003); Francis et al., (2004) and Barth et al., (2001) which proved the existence of a positive relationship between the earnings aggressiveness and the cost of equity, but Chan et al., (2001) produced a study that has a negative association between earnings aggressiveness and the cost of equity, similarly, the results of research that indicates a link smoothing earnings and the cost of equity, such as research Bhattacharya et al., (2003) which produces a different positive relationship with research Francis et al., (2004); Tucker and Zarowin, (2006) and Kothari et al., (2005) which resulted in a negative relationship between income smoothing relations and cost of equity.

Barth et al., (2013) in his study of the relationship between income and the cost of equity transparency produces a negative relationship different from the results of research and Diamond and Verrechia, (1991) which resulted in a positive relationship.

Motivation is based on the argument that if the consolidated statements of earnings brought informativeness coming period, the earnings have high quality and leads to earnings informativeness. Where earnings are really informative, interaction between earnings aggressiveness and income smoothing and earnings informativeness as moderating variable of the cost of equity is able to reduce (weaken) the positive relationship earnings smoothing and the cost of equity, while the interaction earnings transparency to the cost of equity and earnings informativeness as moderating can strengthen the positive relationship.

D. Objectives, Benefits, and Contributions Research

To demonstrate empirically the effect of the earnings aggressiveness, income smoothing, transparency of fee income on equity and earnings informativeness as

moderating influence on the relationship of aggressiveness earnings, income smoothing, earnings transparency at the cost of equity. This research is expected to contribute an additional form of building knowledge about the cost of equity by providing more comprehensive empirical evidence on its relationship with the earnings aggressiveness, income smoothing, earnings transparency, and earnings informativeness.

This research is expected to contribute in a practical, so that all the companies that utilize funding sources of equity want a low cost of equity. It is caused by the tendency of the high cost of equity due to lack of information and a negative perspective on the company's historical information so that capital markets become illiquid (Diamond and Verrechia , 1991) . Or disclosure of the information could increase market liquidity and lower the cost of equity (Botosan , 1997) . Disclosure and cost of equity is the cause of asymmetry of information because investors are not able to predict the cost of equity by just to see it from other similar companies (Botosan, 1997).

E. Review of Literature.

Agency Theory

The owners and management are separated in a company is something that cannot be avoided. The separation between the owner as a principal and as agent manager who runs the company will bring the agency issues because each party will always try to maximize its utility function. Jensen and Meckling (1976) define an agency relationship as a contract in which one or more persons acting as principals (i.e. shareholders / shareholder) who appoint another person as agent (i.e. manager) to perform a service for the interest of the principal, including delegating powers in decision-making to agents. The agency relationship would cause a conflict when managers try to maximize their personal utility at the expense of the welfare of the owners.

Signalling Theory

Signal Theory explains how investors have the same information about the company's prospects as a manager of this company called asymmetric information. But in reality managers often have better information than outside investors. It is called asymmetric information, and this has a significant impact on the optimal capital structure (Brigham, 2005). Signaling theory also explains why companies have an incentive to provide information on the internal financial reports. The urge companies to provide such information because there is asymmetry of information between companies and

investors for companies to know more about the company and upcoming prospect than outsiders (investors and creditors).

Earnings Aggressiveness

Earnings Aggressiveness is defined as management actions that lead to the tendency to defer the recognition of income and profit recognition accelerates, and subsequent impact on earnings informativeness (Altamuro et al., 2005). Earnings aggressiveness is a management actions related to earnings manipulation (Bedard and Johnstone, 2004).

Income Smoothing

Income smoothing is defined as an attempt on the part of the firm's management to reduce abnormal variations in earnings to the extent allowed under sound accounting and management principles" (Tucker dan Zarowin, 2006).

Earnings Transparency

Barth and Schipper (2008) defines earnings transparency are extent to which financial reports reveal an entity's underlying economics in a way that is readily understandable by those using the financial reports.

Earnings informativeness

According to Tudor (2009) and Zarowin (2002) earnings informativeness definition is earning informativeness (or stock price informativeness) as the amount of information about future earnings or cash flows included in current period stock return.

F. Research Model

$$BE\ DIV_{i,t} = \alpha_0 + \alpha_1 AL_{i,t} + \alpha_2 PL_{i,t} + \alpha_3 TL_{i,t} + \alpha_4\ KL_{i,t} + \alpha_5 AL_{i,t}*KL_{i,t} + \alpha_6 PL_{i,t}*KL_{i,t} + \alpha_7 TL_{i,t}*KL_{i,t} + \alpha_8 SIZE_{i,t} + \alpha_9 ROA_{i,t} + \alpha_{10} LEV_{i,t} + \varepsilon_{i,t} \dots\dots\dots\dots\dots\dots\dots\dots\ (1)$$

Where:

BE DIV : Cost of Equity by Dividend Growth Model ; KL: Earnings Informativeness; AL: Earnings Aggressiveness; PL: Income Smoothing; TL: Earnings Transparency; SIZE: Size Firm; ROA: Return On Asset; LEV : Leverage; ε : Error term; i: Firm.; t: Year

G. Conceptual Framework
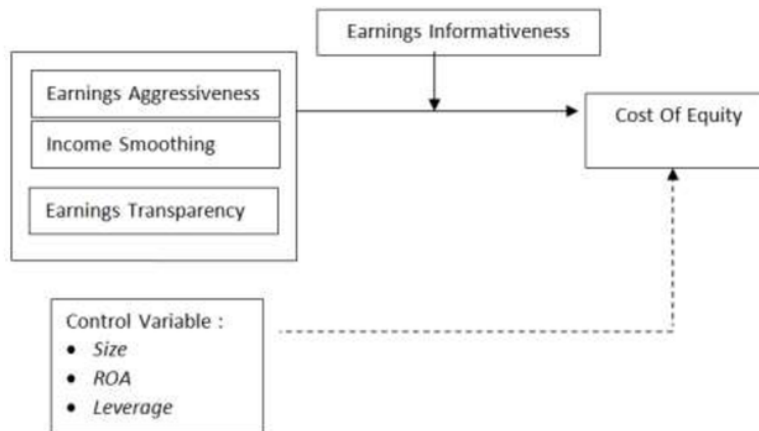
H. Research Hypothesis

Earnings aggressiveness is also a management actions related to earnings manipulation (Bedard and Johnstone, 2004) by increasing the components accrual and at the same time lowering costs, so profits are reported to be higher than the actual rate (Chan et al., 2001) , If companies do aggressive accounting, then the current book value (current book value) of assets and a higher profit, but forecast earnings to be low and the cost of equity increased (Kothari, 2001).

H1: Earnings aggressiveness positive effect on the cost of equity.

When dividend yields are used as the basis for measuring the cost of equity, it can be presumed that the earnings smoothing positive effect on the cost of equity. This is in line with research Francis et al., (2004) which uses price-earnings growth shows that earnings smoothing positive effect on the cost of equity or companies who tend earnings smoothing will result in high cost of equity.

H2: Income smoothing positive effect on the cost of equity.

Companies that do increase the earnings transparency will be associated with a lower cost of equity because it does transparency will mitigate the risks arising from information asymmetry and the low cost of equity is a commitment to improving the quality of financial statements, which means the company's focus in applying accounting standards (Leuz and Verrecchia, 2000; Leuz, 2003; Daske et al., 2008).

H3: Earnings transparency negatively affects the cost of equity.

In line with the research McCulloch and Black (2002); Dechow et al. (1995) and Kasznik (1999); and Dechow et al., (2002) which shows that the accrual which is a measurement of earnings aggressiveness (Bhattacharya et al., 2003) positively associated with earnings informativeness, expected earnings informativeness as moderating can weaken the relationship earnings aggressiveness and the cost of equity. Companies are reporting earnings informativeness that are expected to be weakened by earnings aggressiveness through discretionary accruals that economic factors so that the company will lower the cost of equity.

H4: Informativeness earnings has weaker the positive relationship between the earnings aggressiveness and the cost of equity.

According to research Francis et al., (2004) which is uses price-earnings growth shows that earnings smoothing positive effect on the cost of equity. Companies that reported earnings to smooth that do not reflect the actual earnings are expected to be weakened by earnings informativeness through discretionary accruals so that the cost of equity will be lower.

H5: Earnings informativeness has weaker positive relationship between income smoothing and the cost of equity

Diamond and Verrechia (1991) produced a study that information asymmetry is positively related to the cost of equity. Earnings transparency is negatively related to the cost of equity if transparency is negatively related to accounting information. Francis et al., (2004) reported a negative relationship between the measurements of the cost of equity in earnings transparency. Barth et al, (2013) revealed that the earnings transparency is positively related to the cost of equity. Comier et al., (2009) proved that a web-based financial reporting (earnings transparency) positively associated with earnings informativeness and reducing information asymmetry.

H6: Earnings informativeness has stronger positive relationship between earnings transparency and the cost of equity.

I. Data Collection Methods

The data used for this research is secondary data which obtained from published financial reports issued by the Indonesia Stock Exchange (BEI). The data required are: (1) operating cash flow, (2) current asset, (3) depreciation expense, (4) debt to equity ratio, (5) the dividend payout ratio, (6) dividend yields, (7) short term debt, (8) tax

liability, (9) cash, (10) current liability , (11) earnings per share, (12) NIBE, (13) sales-net, (14) price to earnings ratio, (15) reinvestment rate ratio, (16) total assets.

J. Operational Definition and Measurement of Variables

1. Earnings informativeness

 Proxy measurements used earnings informativeness discretionary accruals, which in this study used a cross-sectional model of modified Jones (DeFond and Jiambalvo, 1994; Subramanyam, 1996). Discretionary accruals (DAC) presented a model Firth et al., (2006)

$$Daci, t = (ACI, t / Tai, t\text{-}1) \text{-}NACi, t$$

Where :

$$ACI, t / Tai, t = b0 (1 / TAI, t\text{-}1) + b1 (\Delta SALESi, t\text{-}\Delta ARi, t / TAI, t\text{-}1) + b2 (IETC, t / TAI, t\text{-}1)$$

$$NaCl, t = b0 (1 / Tai, t\text{-}1) + b1 (\Delta SALESi, t\text{-}\Delta ARi, t / TAI, t\text{-}1) + b2 (IETC, t / TAI, t\text{-}1)$$

AC = Accounting Accruals

TA = Total Assets

b0, b1, b2 = estimated slope coefficient

DAC = Discretionary Accruals

NAC = Non-discretionary Accruals

2. Earnings aggressiveness

Earnings aggressiveness is measured by the formula Bhattacharya et al., (2003):

$$Al_t = (\Delta CAt - \Delta CLt - \Delta CASHt + \Delta STDt - Dept. + \Delta TPt) / TAT - 1$$

Where:

EAT: Earnings aggressiveness period t;

ΔCat: Changes in Current Assets (Current assett - Current asset-1);

ΔCL: Change Current Liabilities excluding Short Term Debt (CLT - CLT-1);

ΔCasht: Changes in Cash (Casht - Casht-1);

ΔSTDt: Changes Short Term Debt (STDt - STDt-1);

Dept: Depreciation and Amortization period t;

ΔTPt: Change Tax Payable (TPT - TPT-1);

Tat-1: Total Assets period t-1;

3. Earnings Smoothing

Income smoothing was measured with a formula according to Norm Eckel (Eckel, 1981) which is calculated by the formula:

(CVΔI / CVΔS)
Where
CV = coefficient of variation;
ΔI = change in earnings (income); and
ΔS = change in sales.

The Company is classified as a smoother if the coefficient of variation of less than one (<1), and as a non-smoother if the coefficient of variation is equal to or more than one (≥ 1).

4. Earnings Transparency

Transparency is not mentioned as an explicit purpose in FASB or IASB, but Barth and Schipper (2008) noted that the conceptual framework produced by standard setters perspective, both the concept of "readily understandable" and "underlying economics".

Earnings transparency is measured by the formula Barth et al., (2013):

Calculating TRANSI:
$$Ret_{i, j, t} = \alpha_{I0} + \alpha_{I1} E_{i, j, t} / P_{i, j, t-1} + \alpha_{I2} \Delta E_{i, j, t} / P_{i, j, t-1} + \varepsilon_{i, j, t} \quad \text{.................... (1)}$$
Calculating TRANSIN:
$$Ret_{i, p, t} = \alpha_{IN0} + \alpha_{IN1} E_{i, p, t} / P_{i, p, t-1} + \alpha_{IN2} \Delta E_{i, p, t} / P_{i, p, t-1} + \varepsilon_{i, p, t} \quad \text{............... (2)}$$
Transparency ($TRANS_{i, t}$) is the summation $TRANSI_{j, t}$ with $TRANSIN_{p, t}$
Calculating TRANSI contained in the first model to get R^2 is estimated by the industry.

Calculating TRANSIN contained in the second model is to get the R^2 estimated by the portfolio. This portfolio is derived from the regression residuals industry (the first model) and then divided by 4 (four) portfolio each year.

Note:
j = industry
p = portfolio
RET = Annual Return is measured from the beginning after the company's fiscal financial year;
E = Earning / NIBE;
AE = Change Earnings / NIBE;
P = Price / Price beginning of the year;
ΔP = Change Price / Price;

The higher regression of the return-earnings as an indication of the magnitude of the earnings transparency (Barth et al., 2013).

5. Cost of Equity (Cost of Equity)
In this study, using the size of the cost of equity-based on Dividend Growth Model (Jones, 2004; Bhattacharya et al., 2003) which is calculated by the formula:

BE DIVt = The current dividend yield x (1 + g) + g
Where:
BE DIVt or re: The cost of equity-based Dividend Growth Model period t;
P0: The ex-dividend Current Market Price of a Share = (The Current Market Price per share x D0)
D0: The Current Dividend;

g: The Expected Future Dividend Growth Rate = [(D0 - D0-1) / D0-1];
The Current Dividend Yield = D0 / The Current Market Price per share

f. Control variables:
1) Size is measured by the logarithm of total assets (Francis et al., 2004)
2) Performance is measured by Return on Assets (ROA) = net income divided by total assets (Francis et al., 2008; Nikoomaram et al., 2011)
3) Leverage / Lev measured by total debt divided by the book value of equity and book value of debt (Mogdiliani and Miller, 1963; Ben-Nasr, 2015)

K. Result

Descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation
BE	521	-1.00000	6.52000	.5691389	1.18288505
AL	521	-.82050	6.24280	.0635881	.31428899
PL	521	-24.04988	42.80536	.1488454	3.29307094
TL	521	.03779	.75092	.2986467	.17492313
KL	521	-14.19462	2.00397	-.2390724	.77848377
AL_KL	521	-16.44	5.62	-.0240	.76398
PL_KL	521	-31.23	10.28	-.2546	1.75027
TL_KL	521	-.95	.64	-.0688	.15509
Size	521	8.53330	18.17340	13.8681203	1.72047117
ROA	521	-1.72300	9.74300	.0556276	.46287065
LEV	521	-1.70000	4.93000	.7471785	1.17740911
Valid N (listwise)	521				

Test Multicollinearity, Heteroskidastity and autocorrelation

Variabel	Multikolinearitas (VIF)	Heterokedastisitas (abs)	Autokorelasi
AL	1,151	0,912	
PL	1,012	0,467	
TL	1,361	0,355	
KL	7,856	0,571	
AL_KL	4,175	0,470	
PL_KL	1,143	0,985	
TL_KL	3,878	0,304	
Size	1,044	0,000	
ROA	1,013	0,104	
Lev	1,034	0,004	
Durbin-Watson			DW = 1,908
Uji Levene		0,237	

$$BE\ Div_{i,t} = \alpha_0 + \alpha_1 AL_{i,t} + \alpha_2 PL_{i,t} + \alpha_3 TL_{i,t} + \alpha_4 KL_{i,t} + \alpha_5 AL_{i,t} * KL_I,$$
$$t + \alpha_6 PL_{i,t} * KL_I, t + \alpha_7 TL_{i,t} * KL_I, t + \alpha_8 SIZE_{i,t} + \alpha_9 ROA_{i,t} + \alpha_{10} LEV_{i,t} + \varepsilon_{i,t}$$

Independen Variabel	Prediksi	Biaya Ekuitas diukur dengan *Dividend Growth Model*		
		Unstandardized Coefficients β	t-statistic	Signifikansi
Intercept	?	-3,310	-4,284	0,000 ***
AL	+	0,569	1,795	0,000 ***
PL	+	0,002	0,058	0,454
TL	-	0,679	1,098	0,015 ***
KL	-	-0,183	-0,548	0,137
AL*KL	-	0,203	0,817	0,052 **
PL*KL	-	-0,008	-0,142	0,389
TL*KL	+	1,006	0,854	0,044 **
Size	+	0,271	4,915	0,000 ***
ROA	+	0,099	0,491	0,164
Lev	-	-0,125	-1,558	0,001 ***
Adj R²		0,200		
F-Statistik		13,992		
Durbin Watson Stat		1,908		
Total Observasi		521		

*** Significance at the 1% level; ** Significance at the 5% level; * Significance at 10%

Note: BE DIV is the cost of equity-based Dividend Growth Model which is calculated The current dividend yield x (1+g)+g. AL is earnings aggressiveness is calculated by total accruals. PL is the smoothing of income calculated by the coefficient variation ∆Income divided the coefficient variation ∆sales. TL is the earnings transparency calculated from the sum (R2) industry transparency and (R2) the transparency of the portfolio. KL is calculated from the earnings informativeness discretionary accrual, Size is calculated from the logarithm of total assets. Return on Assets ROA is calculated from net income divided by total assets. Lev is leverage calculated on the total book receivables divided by total equity and book value of debt.

Hypothesis 1

The first hypothesis states that earnings aggressiveness positive effect on the cost of equity. In the test results showed that the earnings aggressiveness shown to have a positive influence on the cost of equity. In the table above is shown by the regression coefficient on the variable earnings aggressiveness of 0.569 and is statistically significant at the level of 0,000 or 1% significance (t = 1.795; sig. 0.000). It concluded that the earnings aggressiveness significantly positive effect on the cost of equity.

Hypothesis 2

The second hypothesis stated earnings smoothing positive effect on the cost of equity. In the test results indicate that earnings smoothing has no significant effect on the cost of equity. In the table above is shown by the regression coefficient on the variable earnings smoothing of 0.002 and was not statistically significant (t = 0.058; sig. 0.454).

Hypothesis 3
The third hypothesis states the earnings transparency negatively affect the cost of equity. In the test results showed that the earnings transparency shown to have a positive influence on the cost of equity. In the above indicated by the regression coefficient on the variable earnings transparency of 0.679 and statistically significant of 0.015 or less at the 5% significance level (t = 1.098; sig. 0.015).

Hypothesis 4
The fourth hypothesis states that informativeness earnings has weaker the positive relationship between the earnings aggressiveness and the cost of equity. In the above table d shown the test results showed that the moderating variable earnings informativeness between earnings aggressiveness and the cost of equity has a coefficient of 0.203, which means decreased by 0.366 of moderating coefficient of 0.569 and statistically significant; with t-count equal to 0.817 and a significance level of 0.052 (t = 0.817; sig 0.052).Based on these test results, then earnings informativeness as a moderating variable able to weaken the positive relationship between earnings aggressiveness to the cost of equity, so that the fourth hypothesis are supported.

Hypothesis 5
The fifth hypothesis states that earnings informativeness has weaker positive relationship between income smoothing and the cost of equity. In the above table are shown the test results showed that the moderating variable earnings informativeness between earnings smoothing and the cost of equity has a negative sign and was not statistically significant; by t-test of -0.142 and significance level of 0.389 (t = -0.142; sig 0.389). Based on these test results, then earnings informativeness as a moderating variable cannot afford to weaken the positive relationship between earnings smoothing and the cost of equity, so the fifth hypothesis stated are not supported.

Hypothesis 6
The sixth hypothesis states that earnings informativeness has stronger positive relationship between earnings transparency and the cost of equity. In the above table

are shown the test results showed that the moderating variable earnings informativeness between earnings transparency and the cost of equity has a coefficient of 1.006 compared with a coefficient of 0.679 for moderating so as to increase the coefficient of 0.327 and statistically significant; by t-test 0,854 and the level of significance of 0.044 or less than 5% significance level (t = 0.854; sig. 0.044).Based on these test results then earnings informativeness as a moderating variable earnings transparency can strengthen the positive relationship of profit o the cost of equity. On the test results, then the hypothesis 6 which states that earnings informativeness reinforce positive relationship between earnings transparency and the cost of equity are supported.

L. Conclusion

1)   Aggressiveness earnings give positive effect on the cost of equity. For this result it can be concluded that companies tend to policy reporting profit that is too aggressive than it really so that the book value of current (current book value) of assets and profits are too high and the cost of equity increases, this is according to research Bhattacharya et al., (2003) ; Francis et al., (2004) and Barth et al., (2001) ..

2)   Income smoothing no positive effect on the cost of equity. It can be concluded that companies that income smoothing policy will not affect the cost of equity. This is consistent with research Bhattacharya et al., (2003); Francis et al., (2004) and Tucker and Zarowin, (2006).

3)   Transparency earnings positive effect on the cost of equity. Above it can be concluded that companies tend to make transparency earnings are high because there is a signal from the manager will conduct profit distribution in the form of dividends at very high risk on the future cash flows in the future so that companies need to be careful in the operation and the necessary monitoring cash flows and risks. This is in line with research Barth et al., (2013).

4)   Earnings informativeness able to strengthen the relationship positive relationship between the earnings aggressiveness and the cost of equity. It can be concluded that companies with accrual policies earnings aggressiveness where a management policy that can flexibly manage accounting numbers and therefore cannot describe the real economic profits can be enhanced by earnings informativeness through discretionary accrual.

5) Earnings informativeness moderate the relationship between income smoothing and the cost of equity is not significant. It can be concluded that the number of income smoothing increasingly smaller indicate that income smoothing has been increasing earnings informativeness, in line with research Tucker and Zarowin (2006) and Bao and Bao (2004) in which the income smoothing cannot be weakened in relation to the cost of equity the accrual policy.

6) Earnings informativeness significantly strengthens the positive relationship between the earnings transparency to the cost of equity. It can be concluded that companies tend to make low earnings transparency able moderated by earnings informativeness through the measurement of discretionary accrual although no signal from the manager will conduct profit distribution in the form of dividends. This is in line with the research of Barth et al., (2013).

M. Limitations Research

Sample only entity has paid dividend for measurement dividend growth model in cost of equity.

N. Recommendations for Further Research

1) For further research is expected that researchers use other variables as Corporate Social Responsibility and Corporate Good Governance to see the corporate governance practices that affect the disclosure of financial statements. In addition, it is recommended to add the observation period of more than five years and comparison samples can be taken from other countries.

2) Using Earnings Response Coefficient (ERC) in order to capture the factors that influence the market reaction to measure earnings informativeness.

References

Altamuro, J. Anne, L.B. & Joseph, W. 2005. The Effects of Accelerated Revenue Recognition on Earnings Management and Earnings Informativeness: Evidence from SEC Staff Accounting Bulletin No.101. *The Accounting Review*,Vol. 80, No. 2, 373-401.

Bao. B.H. Bao. D.H. 2004. Income Smoothing, Earnings Quality And Firm Valuation. *Journal of business Finance & Accounting Vol. 31. Issue 9-10.* 1525-1557.

Barth, M.E.; W.H. Beaver; and W.R. Landsman. 2001. *The Relevance of the Value Relevance For Financial Accounting Standard Setting: Another View*. *Working Paper*, Stanford University, January: 1 – 41. fbeaver@leland.stanford.edu.

Barth, M.E. and Schipper, K. 2008. Financial Reporting Transparency. *Journal of Accounting, Auditing & Finance*, 23, 173-190

Barth, M.E. Konchitchki, Y. & Landsman, W.R. 2013. Cost of Capital and Earnings Transparency. *Journal of Accounting and Economics*, 55, 206-224.

Bedard, J.C. and K.M. Johnstone. 2004. Earnings Manipulation Risk, Corporate Governance Risk, and Auditors' Planning and Pricing Decisions. *The Accounting Review*, Vol. 79, No. 2, April: 277 – 304.

Ben-Nasr, H. & A.M Al-Dakheel. 2015. The Impact of Earnings Quality on the Cost of equity: Evidence from Privatized Firms. *International Journal of Financial Research*, Vol. 6, No. 1.

Bhattacharya, U. H. Daouk. M. Welker. 2003. The World Price of Earnings Opacity. *The Accounting Review*, Vol. 78, No. 3, July: 641 – 678.

Botosan, C.A. 1997. Disclosure Level and The Cost of Equity Capital. *The Accounting Review*. Vol.72(3), 323-349.

Botosan, C.A. 2006. Disclosure And The Cost Of Capital : What Do We Know?. *Accounting And Business Research* 36 (sup1). 31-40.

Brigham, U.F. Besley, S. 2005. *Principles of Finance*. Third Edition. Southwestern.

Coles. J. Loewenstein. U. Suay. J. 1995. On Equilibrium Pricing Under Parameter Uncertainty. *Journal of Financial and Quantitative Analysis 30*. 347-364.

Cormier, D. Ledoux, M.J. Magnan, M. 2009. *Financial Reporting Transparency and Earnings Quality: A Governance Perspective*. Working Paper. ESG UQAM. Canada.

Daske. H. Hail. L. Leuz. C. Verdi. R. 2008. Mandatory IFRS Reporting Around The World Early Evidence On The Economic Consequences. *Journal of Accounting Research 46*. 1085-1142.

Dechow, P.M.; R.G. Sloan; and A.P. Sweeney. 1995. Detecting Earnings Management. *The Accounting Review*, Vol. 70, April: 193 – 225.

Dechow and I.D. Dichev. 2002. The Quality of Accruals and Earnings: The Role of Accrual Estimation Errors. *The Accounting Review*, Vol. 77, Supplement: 35 – 59.

DeFond. M. Jiambalvo. J. 1994. Devt Covenant Violation And Manipulation Of Accruals: Accounting Choice In Troubled Companies. *Journal of Accounting And Economic 17*. 145-146.

Diamond, D. & Verrecchia, R. 1991. Disclosure, Liquidity, and The Cost of Capital. *Journal of Finance*. Vol. 46, 1325-1359.

Eckel, N. 1981. The Income Smoothing Hypotheses Revisited. *Abacus*, June: 28 – 40.

Firth. M. Fung. P.M.Y. Rui. O.M. 2006. Ownership, Board Structure, And The

Earnings informativeness-Evidence from An Emerging Market. SSRN.

Francis, J.; R. LaFond; P.M. Olsson; and K. Schipper. 2004. Costs of Equity and Earnings Attributes. *The Accounting Review*, Vol. 79, No. 4, Oktober: 967 – 1010.

Francis, J.; Nanda, D.; P.M. Olsson. 2008. Voluntary Disclosure, Earnings Quality, and Cost of Capital. *Journal of Accounting Research*, Vol. 46(1), 53-99.

Hanniarsa, P.A. 2013. Pengaruh Nilai Pasar Ekuitas Dan Risiko Sistematis Terhadap Cost Of Equity Capital. Fakultas Ekonomi Universitas Negeri Padang.

Jensen, M. and W. Meckling. 1976. Theory of the Firm: Managerial Behavior, Agency Cost and Ownership Structure. *Journal of Financial Economics*, (3): 305 – 360.

Jones, C.P. 2004. *Investments: Analysis and Management*. Ninth Edition. John Wiley & Sons, Inc.

Kasanen, E. J.Kinnunen. J. Niskanen. 1996. Dividend-Based Earnings Management: Evidence From Finland. *Journal Of Accounting and Economics.*

Kasznik R. 1999. On The Association Between Voluntary Disclosure And Earnings Management. *Journal of Accounting Research 37*. 57-81.

Keown, A.J. 2002. *Manajemen Keuangan : Prinsip dan Penerapan*. Jakarta. Salemba Empat.

Kothari, S.P; A. Leone; and C. Wasley. 2005. Performance Matched Discretionary Accruals. *Journal of Accounting & Economics*, (39): 161 – 197.

Leuz ,Christian., Verrecchia. R. 2000. The Economic Consequences Of Increased Disclosure. *Journal of Accounting Research, Vol.38:91-124*

Leuz ,Christian., Dhananjay Nanda, dan Peter D. Wysocki., 2003. Investor Protection and Earnings Management: An International Comparison. *Journal of Financial Economics, Vol.69*

Lintner. J. 1965. The Valuation Of Risky Assets And The Selection Of Risky Investments In Stock Portfolios And Capital Budgets. *Review Of Economics And Statistics 47*. 13-37.

McCulloch. B.W. Black. E.L. 2002. *Theoretical And Empirical relations Among Components OF Accruals Under earnings Management In A Multi-Period Setting*. Working Paper. New Zealand Treasury and Brigham Young University.

Modigliani, F. & Miller, M. 1958. The Cost of Capital, Corporation Finance, and The Theory of Investment. *American Economic Review*. Vol. 48(June). 261-297.

Modigliani, F. & Miller, M. 1963. Corporate Income Taxes and The Cost of Capital: A correction. American Economic Review. Vol. 53, 433-443.

Nikoomaram, H. Hamidreza, V.F. Fraydoon, R.R, Ghodratollah, T. & Peyman. A. 2011. Conceptual Model for Relationship Between Earning Quality and Cost of

Capital. *African Journal of Business Management*. Vol. 5(22), 9724-9733.

Pohan, B. 2005. Merekam Jejak Pasar Modal Indonesia. http://dokumen.tips/documents/merekam-jejak-pasar-modal-indonesiapdf.html.

Sharpe. W. 1964. Capital Asset Prices: A Theory Of Market Equilibrium Under Conditions Of Risk. *Journal Of Finance 19*. 425-442.

Subramanyam, K. 1996. The Pricing of Discretionary Accruals. *Journal of Accounting and Economics*. Vol. 22, 249-281.

Tucker, J.W. and P.A. Zarowin. 2006. Does Income Smoothing Improve Earnings Informativeness? *The Accounting Review*, Vol. 81, No. 1, January: 251 – 270.

Tudor. A. 2009. A Matter of Institutional Characteristics Or Accounting Standards?. Master Thesis.

Yu-Chih. L. 2007. The Relationship Between Information Transparency And The Informativeness Of Accounting Earnings. *The Journal of Applied Business Research*, Vol. 23, No.3.

Zarowin. P. 2002. *Does Income Smoothing Make Stock Prices More Informative?* New York University. Stern School of Business. Available at SSRN: http://ssrn.com/abstract=315099

The Effect of Credit Rating on the IPO Underpricing in Korea

Seung-Ki Seo[a], Hyung-Suk Choi[b]

[a] School of Business Administration, University of Seoul, Republic of Korea
E-mail address: skseo@nicerating.com

[b] Ewha School of Business, Ewha Womans University, Seoul, Republic of Korea
E-mail address: hyungsuk.choi@ewha.ac.kr

1. Background/ Objectives and Goals

The IPO funding for inducing the outside investment is an effective tool for increasing the capital required for the corporate growth. But it can be found from the past records that the newly issued shares were traded at a far higher price than the IPO price. So, if we assume that the price formed at the market reflects the true value of the companies, we can infer that the IPO price is formed at relatively low price. As the IPO underpricing may be considered as the cost from the viewpoint of the IPO companies, it has been studied both in financial businesses and colleges. There is a hypothesis on the cause of the underpriced IPO among others, which argues that the underpricing is caused by the uncertainty as it is hard for the potential investors to get precise information about IPO Company prior to the listing of the companies.

2. Methods

For the analysis of the effect of the credit rating on IPO underpricing, this study selected 706 IPO companies from the companies in financial business and SPACs (Special Purpose Acquisition Company) newly listed on Korea stock exchanges such as KOSPI and KOSDAQ from 2002 to 2014. It is found that there were 134 companies obtained the credit rating among 706 companies from the website research of domestic credit rating agencies. In this study, not only the characteristics of a company but also the IPO characteristics which affect the underpricing were controlled as the explanatory variables. The revision, which is the revision ratio for the IPO price means the ratio of update (revision) for the demand forecast period. It can be calculated as the ratio of offer price to the average initial filling price. Hanley (1993) discovered that there is the positive correlation between the revision public offering price and underpricing. This is called as the partial adjustment and it appears when the companies intentionally issue the new shares at underprice to show the positive information to the investors having information. In this study, the average in IPO public offering price band would be distinguished from the median in IPO

demand forecast which is subsequently proposed to forecast the demand for the professional investors for the analysis of the effects. Log (Proceeds) is the explanatory variable for controlling the size of IPO issues and is obtained by logarithm of total revenue from IPO. Float was obtained in the ratio of number of new shares from IPO over the number of total shares issued. The bigger float value is more likely to cause the fewer shares. So, as the scarcity of the shares would prevent the investors from shorting, the float is expected to show the negative relation with IPO underpricing.

3. Expected Results/ Conclusion/ Contribution

The study has the following implications: First of all, based on the hypothesis of information asymmetry, the empirical analysis found out that there are the difference in the IPO underpricing depending on the existence of credit rating. It was also found that the companies evaluated the credit ratings have less adjustment in offering price during the demand forecasting period, thus showing that if a company has the credit rating prior to IPO, the uncertainty on the value of the issuing company can be reduced. In addition, the study analyzed whether the credit information grade prepared by the credit research company, which is similar to the credit rating provided by the credit rating agency, alleviates the information asymmetry. In this case, the credit information grade was found to have the same effect as the crediting rating has. This may be caused by the fact that even though there is a big difference between credit rating and credit information grade, the credit information grade has some information effects as the people are confused about the difference between them due to its similarity in the form and that the credit information grade is often used in the bidding made by the public entities such as Public Procurement Service.

Keywords: credit rating, initial public offering (IPO), underpricing, Heckman model

JURNAL