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DETERMINANT OF BOND AND FIRM CHARACTERISTICS, MACROECONOMIC FACTORS TO CORPORATE BOND RETURN IN INFRASTRUCTURE, UTILITIES AND TRANSPORTATION SECTOR

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ABSTRACT

Issuing bond is one of corporate action for finance beside retained earnings, bank loans, and stock. In Indonesia, the development of bond issuing as a corporate financing is showing a positive trend in outstanding value, number of bond issuer and number of sheet that issued. However, the volume and frequency of trading is still fluctuating. The purpose of this paper is to analyze the influence bonds characteristics (coupon, yield to maturity or YTM, duration and bond rating), firm characteristics (total assets and debt to equity ratio) and macroeconomic factors (Bank Indonesia rate, exchange rate, inflation and Jakarta Composite Index or JCI) on the return of Indonesia corporate bond in infrastructure, utilities, and transportation sector. The approach involves a panel data regression with quarterly data from 13 bonds in 2010-2014. The data collected from Indonesia Capital Market Library (ICAMEL) for bonds characteristic, Corporate Annual Report for firm characteristics, and Central Bank of Indonesia (Bank Indonesia or BI) for the macroeconomic factors. The regression analysis that used Fixed Effect Model (FEM) shows that bond and firm characteristics as well as macroeconomic factors significantly influence bonds return. The significant factors are coupon, YTM, total assets, exchange rate and JCI. The findings have implication for bond corporate issuer that should consider bond characteristics and firm characteristics. The paper provides useful information for designing bond features for the issuer.

KEYWORDS

bonds characteristics, bonds return, firm characteristics, infrastructure, utilities and transportation sector, macroeconomics factor.

INTRODUCTION

Issuing bond is one of corporate action for finance beside retained earnings, bank loans, and stocks. Levinger et al. (2014) stated that bond is an effective source of financing for the company due to rapid growth of bond market. In Asian corporate bond market, Hong Kong, Singapore and Korea are comparatively advanced and liquid, but Indonesia, China, India and Thailand are still at an early stage of development. Bond characteristics that issued in Indonesia are mostly fixed rate coupon, short term maturity and the size of outstanding only 5.9% of GDP in 2013.

The government policy about bank loan have significantly influence the corporate financial decision. By issued bonds, the company can get cheaper fund than bank loan. Financial market provide long term debt for companies so it can increase the number of bond issuer. The increasing of bond issuer is affected by supply and demand in bond market. On the other hand, growth of pension fund, insurance and others financial institutions also support the growth of bond market.

This study focused on corporate bond as long term debt. To get fund from financial market, the companies need to analyze the cost of capital. Cost of capital of bond for company is interest payment or coupon to investors (Rahardjo 2003). The amount of coupon is affected by the variables that exist on bond characteristics (Fama and French (1993), Gebhardt et al. (2005), Herlambang (2015), Hammami and Bahri (2016), and macroeconomic factors (Sihombing, 2010). Therefore, analysis of bond return may be a consideration for the corporate for issuing bonds. The issuer should consider the costs incurred to obtain funds through bond issuance.

Gebhardt et al. (2005) investigated bond return in U.S bond market found that YTM positively significant influence bond return but bond rating negatively significant. In emerging market, such as Tunisia, Hammami and Bahri (2016) revealed the evidence that rating is an important bond characteristic with negatively significant to return. Both of researches used the cross-sectional regression. While in Indonesia, Herlambang (2015) used panel data regression. It show that YTM and BI rate negatively significant but duration positively significant to bond return.

INDONESIA BOND MARKET

In Indonesia, bond market dominated by government bond, mostly Indonesia T-bill (SUN) about 69.66%, and corporate bond about 30.34% (Indonesia Bond Market Directory 2014).The development of corporate bond trading in Indonesia can be seen in Table 1.

TABLE 1: THE DEVELOPMENT OF CORPORATE BOND TRADING IN INDONESIA IN 2010-2014

Year	2010	2011	2012	2013	2014
Outstanding (billion Rupiah)	115,347.66	146,968.58	187,461.10	218,219.60	223,463.60
Volume (billion Rupiah)	103,771.20	126,387.59	160,117.79	185,718.89	167,674.46
Frequency	17,272	18,078	25,301	19,989	22,153
Number of companies	188	199	210	225	231
Number of sheet	245	299	347	381	319

Source: Indonesia Financial Service Authority (2014)

Table 1 show that the value of outstanding, number of companies issuing bonds, and number of sheets of corporate bonds issued has increased, but the volume and frequency of bond trading is still fluctuating. This suggests that an increase in the issuance of bonds as a source of financing until 2014. Increasing volume of issued bonds required further analysis of bond market in corporate financing decisions (Miskhin, 2010).

Infrastructure, utilities and transportation sectors is the second largest after the financial sector based on outstanding value. This sector also will keep rising and thus require more funding to expand the business because it include in the Vision, Mission and Action Program of president and vice president Jokowi-Kalla 2014, this sector is contained in the nine priority agenda Jokowi-Kalla known as Nawa Cita. This sector will keep rising and thus require more funding to expand the business. Ammar and Eling (2015) states that infrastructure, energy, telecommunications and transportation are the foundation of the economy. The impact of good infrastructure can increase GDP growth (Esfahani and Ramirez, 2003) and increase economic activity (Mankiw et al. 2014). But the contribution of infrastructure and transport to GDP in 2005-2011 is still quite stable in the range of 3.5% - 3.8% and was predicted to keep rising. Indonesia's economic growth is still facing the barrier caused by unsupported infrastructure to economic activity meanwhile the infrastructure development would be increasing concomitant increasing population growth, and economic improvement (Susantono 2013). Data of bond issued value, outstanding value and its gap in the nine sectors based on corporate bond issuer in period 2010-2014 represent on Table 2.

TABLE 2: THE ISSUED VALUE, OUTSTANDING VALUE AND ITS GAP IN NINE SECTORS OF INDONESIA CORPORATE BOND MARKET

Sector	2010			2011			2012			2013			2014		
	a	b	c	a	B	c	a	b	c	a	b	c	a	b	c
Agriculture	1,975	1,975	0	2,005	2,005	0	3,505	3,505	0	4,205	4,205	0	3,400	3,400	0
Mining	2,340	2,340	0	5,340	5,340	0	6,927	6,927	0	8,187	8,187	0	6,900	6,900	0
Basic industry & chemicals	4,064	3,265	779	3,561	3,131	430	2,864	2,864	0	2,564	2,564	0	3,472	3,472	0
Miscellaneous industry	240	240	0	160	160	0	160	160	0	80	80	0	80	80	0
Consumer goods industry	5,260	5,224	36	5,260	5,224	36	4,910	4,910	0	6,010	6,010	0	6,650	6,650	0
Property, real estate, & construction	2,860	2,788	72	3,070	3,070	0	6,680	6,680	0	12,600	12,600	0	15,576	15,576	0
Infrastructure, utilities & transportation	36,120	36,031	89	34,833	34,761	72	37,675	37,599	76	41,592	41,517	75	40,345	40,270	75
Finance	60,702	60,702	0	90,901	90,901	0	120,220	120,220	0	138,251	138,251	0	140,467	140,467	0
Trading and services & investment	2,177	2,177	0	2,377	2,377	0	4,597	4,597	0	4,807	4,807	0	6,550	6,550	0
Total	115,738	114,742	976	147,507	146,969	538	187,538	187,462	76	218,296	218,221	73	223,330	223,364	75

*in Billion Rupiah, a: issued value, b: outstanding value, c: the gap of issued and outstanding value

Source: Idx Statistics 2010-2014

Table 2 shows that corporate bond trading for infrastructure, utilities and transportation sector were fluctuating during 2010 to 2014. Judging from the issued value (supply) and outstanding value (demand), there is a gap between them. The gap was found in the infrastructure, utilities and transportation sector from 2010 to 2014 about Rp72billion - Rp89billion. Its indicate that most of the bonds issued by companies in this sector has not sold out in bond market and these bonds unattractive for investors so that the company did not obtain sufficient funds appropriate with them financial plan (Prastowo and Chawwa 2009).

Data from Indonesia Stock Exchange (2015), showed that corporate bonds in infrastructure, utilities and transportation sector in the communications subsector some of company has ranked CC, and transport subsector has ranked D. Ranking CC indicate that company has unable fulfill financial obligations, while D rankings show that the company has a bad debt (Pefindo 2015). This led to the company issuing bond is considered unable to meet the obligation to pay bond debt. The Company as bond issuer had to analyze the factors taken into consideration in choosing a bond investor to be purchased. Analysis of financial instruments such as bonds is very important in relation to lack of information on the financial instruments (Widiatmodjo 2002). Information about bonds that contained in the bond market only the bond prices, coupon rate, maturity and bond ratings. In analysis of investment in bonds, corporate also need to make fundamental and macroeconomic analysis. Fundamental analysis is an assessment of macroeconomic report that covering macroeconomic indicators include economic growth as measured by GDP growth, monetary development which is calculated by money supply in circulation, rate of inflation, and exchange rate. The corporate bond trading was also influenced by global market conditions and sentiment. When bond prices rise, stock price will increase.

Some of macroeconomic factors was considered by investors in selecting Indonesian Retail Bonds (ORI) has been investigated by Sihombing (2014) on the market condition factor is Jakarta Stock Index. The Companies as bond issuer should consider these factors in issuing bonds, so that bonds issued can be sold out in bond market.

REVIEW OF LITERATURE

A bond is security that issued or sold by the issuer, which requires issuers to make specified payments to the bondholder / buyer on specified date (Bodie et al. 2014). According to Prastowo and Chawwa (2009), the development of capital markets (stock and bond) in Indonesia as one of the sources of corporate financing is still potential because it is still a very high demand from investors. Their study used data from 2005 to 2008 by panel data regression. The research results show that the big company has the great opportunity to issue bonds, so that the financing portion of bond increases, but debt to equity ratio has no influence on the issuance of corporate bond. Comer and Rodriguez (2011) stated that performance of corporate bond over government bond outperform compared to the level of risk-adjusted.

Bond return was initially investigated by Fama and French (1993), by time series regression method in corporate and government bond. The main factor in bond market is maturity and the risk of default. The average return on corporate bonds is higher in bonds with lower ratings. Long-term corporate bond have a greater return than government bond. According to Gebhardt et al. (2005), bond characteristics that consists of duration, rating and yield to maturity affected the return on average bond default after controlling for beta, but only yield to maturity has a positive influence return bonds. Systematic risk is very important to calculate bond return. According to Ammar and Eling (2015), the level high of leverage / company's debt resulting the high return of company.

Herlambang (2015) examined return of corporate bond in Indonesia at banking subsector with the method of panel data from 2010-2013. Variables that affected return are BI rate, yield to maturity and duration. Meanwhile, Pirenangtyas and Eko (2013) found that cumulative return of bonds decreases when announcement of bond ratings were upgraded. Chatrath et al. (2012), states that bonds with high yield more sensitive to macroeconomic news than rated bonds. Research of Sihombing (2014) with VAR / VECM method shows that variables influence bond yield are BI rate, exchange rate and volatility index S & P.

RESEARCH METHODOLOGY

SAMPLE

The sample includes all firm listed on Indonesian Stock Exchange in 2010-2014. The sampling method in this research using purposive sampling, and the samples was collected had certain criteria:

1. Corporate bonds in infrastructure, utilities and transportation was listed and actively traded in Indonesia Stock Exchange from 2010 to 2014, immature bond and unconvertible features.
2. Ranked by Pefindo (Pemeringkat Efek Indonesia)
3. Pay a quarterly coupon
4. Issuers have audited financial report and unaudited financial statement for quarterly data.

According to criteria we got 13 bonds that issued by five companies as sample of this research. There are four subsectors in infrastructure, utilities and transportation sector. The list of company can be seen in Table 3.

TABLE 3: THE LIST OF COMPANY IN THIS RESEARCH

No.	Company	Subsector	Bond code
1	PT PLN (Persero)	Energy	PPLN08A, PPLN08B, PPLN09A, PPLN09B, PPLN11A, PPLN11B,
2	PT Jasa Marga (Persero) Tbk	Toll, airport, harbor, and allied product	JMPD12Q, JMPD13R
3	PT Indosat Tbk	Telecommunication	ISAT05B, ISAT06B, ISAT07B
4	PT Smartfren Telecom Tbk	Telecommunication	FREN01
5	PT Arpeni Pratama Ocean Line Tbk	Transportation	APOL02

Source: Indonesia Stock Exchange

Data of bond characteristics was posted by Indonesia Stock Exchange (IDX) through the Indonesian Capital Market Electronic Library (ICAMEL). Data calculated from characteristics of the company financial report and quarterly unaudited annual financial report which have been audited in the year 2010 to 2014. Financial data was obtained from Indonesia Stock Exchange website (www.idx.co.id), while interest rates, exchange rates, inflation, and JCI data obtained from Bank Indonesia. Value of return, yield to maturity and duration are calculated from bond trading data.

VARIABLES

The purpose of this paper is to examine the determinants of bond characteristics, firm characteristics, and macroeconomic factor to corporate bond return in Indonesia especially in infrastructure, utilities and transportation sector. We categorize the variables into 3 factors. First, bond characteristics consist of coupon (COUP), Yield to Maturity (YTM), duration (DUR), and bond rating (RAT). Second, firm characteristics are total asset (TAS) and Debt to Equity Ratio (DER). The Third, Macroeconomic factor there are Bank Indonesia interest rate (BIR), exchange rate of USD to IDR (EXC), inflation rate (INF), and Jakarta Composite Index (JCI).

DATA ANALYSIS

In this research, data processed and analyzed by using panel data regression. Data obtained from the panel merging time series data and cross section data. Time series data used were quarterly data from 2010 to 2014. The cross-section data used were five companies that consist of 13 bonds. So data set used in the study consists of a matrix of 20 quarterly observations of 11 financial ratios for 13 bonds in five companies. Panel data analysis is expected to provide an overview of bond characteristics, firm characteristics and macroeconomic factors to corporate bond return.

Model of this research is Fixed Effects Method (FEM). In this method, intercept in regression can be distinguished between individuals over an individual is considered to have its own characteristics. There was differences intercepts between companies, but each company intercept did not differ between times. The regression model panel data according to Wooldrige (2009) is:

$$\mathrm{Y_{it}} = \beta_1 \mathrm{X_{it1}} + \beta_2 \mathrm{X_{it2}} + \beta_3 \mathrm{X_{it3}} + \beta_4 \mathrm{X_{it4}} + \beta_5 \mathrm{X_{it5}} + \beta_6 \mathrm{X_{t6}} + \beta_7 \mathrm{X_{t7}} + \beta_8 \mathrm{X_{t8}} + \beta_9 \mathrm{X_{t9}} + \beta_{10} \mathrm{X_{t10}} + a_\mathrm{i} + \mathrm{u_{it}} \quad (1)$$

Where : Y_{it} is quarterly return bond i in time t, X is dependent variabel, β_{1-10} is independent variable slope coefficient, a_i is coefficient intercept, u_{it} is error term in this research.

DESCRIPTIVE STATISTICS

The descriptive statistics for dependent and independent variables are displayed in Table 4.

TABLE 4: STATISTICS DESCRIPTIVE OF VARIABLES

	Mean	Median	Max	Min	Std Deviation
RET	6.02	3.00	308.0	78.95	30.38
COUP	2.88	2.94	4.50	1.25	0.45
YTM	13.46	10.14	70.37	5.84	11.11
DUR	6.62	6.5	9.85	4.11	1.41
RAT	6.68	8.00	8.00	1.00	2.45
ln TAS	1.97	1.74	2.79	0.27	0.73
DER	1.33	1.82	13.11	-75.52	6.39
BIR	6.60	6.50	7.75	5.75	0.69
ln EXR	3.99	3.97	4.09	3.93	0.05
INF	5.72	5.67	8.40	3.43	1.55
ln JCI	3.60	3.61	3.72	3.42	0.08

The statistics descriptive data showed that return is relatively fluctuating than other variables. The standard deviation of return, YTM, and DER also indicated that the large range of data. Variation of data caused the high of variance data or heteroscedasticity. To solve this problem, we used cross section SUR in method. Data of total assets, exchange rate and JCI should be in logarithm natural.

RESULTS AND DISCUSSION

INFRASTRUCTURE, UTILITIES AND TRANSPORTATION SECTOR OVERVIEW

Infrastructure, utilities and transportation sector is the second largest sector of the issued bonds. The companies in this sector generally issue bonds with a maturity of more than five years, so its categorizes bond into long-term debt. Bonds traded in 2010 on this sector as much as 55 bonds and actively traded during the study period was 13 bonds. The par value and bond prices can be seen in Table 5.

TABLE 5: PAR VALUE, AVERAGE BOND PRICE, COUPON, MATURITY, AND TIME TO MATURITY OF BOND

No.	Bond code	Par value (billion Rupiah)	Average price (%)	coupon (%)	Maturity (year)	Time to maturity (TTM) (year)
Energy subsector						
1	PPLN08A	1,335	107.42	13.60	10	1.31
2	PPLN08B	865	107.92	13.70	15	6.31
3	PPLN09A	1,500	102.95	10.40	10	2.61
4	PPLN09B	1,200	103.71	10.90	15	7.61
5	PPLN11A	920	106.89	11.95	7	1.87
6	PPLN11B	1,783	106.96	12.55	10	4.87
Toll, airport, harbor & allied prod subsector						
7	JMPD12Q	1,000	101.14	13.50	10	2.31
8	JMPD12R	1,500	103.34	10.25	10	2.25
Telecommunication subsector						
9	ISAT05B	1.370	104,22	10.65	10	1.77
10	ISAT06B	320	102,70	10.80	7	2.04
11	ISAT07B	600	106,69	11.75	7	6.05
12	FREN01	675*	77,79	5.00;8.00;18.00**	10	1.31
Transport subsector						
13	APOL02A	276	72.69	12.00	9	2.61

Table 5 shows that the par value of the bonds issued by companies in the infrastructure, utilities and transportation sector range of Rp276 billion to Rp1,783 billion. The bond issuance is dominated by Perusahaan Listrik Negara (Persero) with bond code PPLN. During the observation period is known that the price of corporate bonds traded can be categorized into two categorizes, there are bonds at a price of more than 100 per cent and less than 100 percent. A total of 11 of the 13 bonds have an average price of more than 100 percent while the two bonds have an average price of less than 100 percent. Maturity of the bonds in this studied were ranged from seven to 15 years, so can categorized into long-term bonds.

Multicolinearity test results indicated that there is no correlation between independent variables in this research. Multicolinearity test are displayed in Table 6.

TABLE 6: CORRELATION BETWEEN INDEPENDENT VARIABLE

	COUP	YTM	DUR	RAT	Ln TAS	DER	BIR	Ln EXR	INF	Ln JCI
COUP	1.000									
YTM	-0.245	1.000								
DUR	-0.128	0.193	1.000							
RAT	0.351	-0.765	-0.217	1.000						
Ln TAS	0.299	-0.504	0.046	0.763	1.000					
DER	0.244	-0.191	-0.124	0.283	0.254	1.000				
BIR	0.064	0.003	-0.173	0.012	0.020	0.050	1.000			
Ln EXR	0.105	0.014	-0.271	0.014	0.053	0.127	0.717	1.000		
INF	0.024	0.073	-0.151	0.005	0.027	-0.021	0.675	0.585	1.000	
Ln JCI	0.104	0.014	-0.256	0.010	0.069	0.104	0.305	0.687	0.423	1.000

If there is heteroscedasticity between individuals coped with a cross section SUR indicated that the parameters are different among individuals. So that there are no heteroscedastisity on models produced and the resulting models are already qualified BLUE (Best, Linear Unbiased Estimated). Selection of the best model in this study obtained from the Chow test and Hausman test results showed that the best model used is the fixed effect model. The results of the panel data regression model testing in this research can be seen in Table 7.

TABLE 7: REGRESSION RESULT OF VARIABLES THAT INFLUENCE BOND RETURN

Variables	Prob.
a	0.4354
COUP	-0.0109*
YTM	-0.0486*
DUR	0.2542
RAT	0.0037**
ln TAS	0.5948
DER	0.0001**
BI*R*	0.2331
ln EXR	-0.0027**
INF	-0.9027
ln JCI	0.0000**

** significant at level of 1%, * significant at level of 5%

Panel data regression results showed that coupon and YTM, has a significant influence bond return at the level 5%, but bond ratings, DER, exchange rate and Jakarta Stock Index has a significant at the level 1%, meanwhile duration, asset, BI rate and inflation has no influence to bond return.

This result showed that coupons negatively affect to return bonds but in theory, coupon has positive effect on return. It is caused that the low coupon has a high price changes. Bond return influenced by high price changes than coupon rate. Bonds that have high price change were FREN01 in telecommunications sub-sector and APOL02A in transportation subsector. Both of bonds have a major contribution to bond return on the infrastructure, utilities and transportation sector.

The high price change on the telecommunications subsector and transport subsector influenced by the price of the bond is below 100% or underprice. The under-price were resulting in the company underwriter will suffer losses because it is only able to sell bonds at a cheap. Disadvantages of the underwriter will cause the issuers is mainly Smartfren Tbk. or FREN01 and PT Arpeni Pratama Ocean Line Tbk. or APOL02A issuing bonds will be low demand by the underwriters in the future. The cost of capital from bonds issued by companies would more expensive.

YTM have a negative influence on the bond return. This shows that increasing YTM causing decrease of bond price. The cheap bond prices led to decrease bond return. The negative relationship between YTM and return can be seen in the energy and transport subsectors. High YTM causing decrease of bond prices. When BI rate rises, then demand of deposits will increase, while demand for bonds decline. The decline in demand for the bonds led to a decline in bond prices and increased YTM.

On the other hand, bond ratings have a significant positively affect to return bonds. Its contrast with the theory that bond rating have negative affect to bond return. The high return processed from low rating bond (IDD) or non investment bond. The results of this research different from the results of Gebhardt et al. (2005) and Herlambang (2015) which indicated that bond rating did not affect bond return. If bond rating is low, the fluctuations in bond prices is high, so that higher-risk bonds and higher return. This can be seen in telecommunication sub-sector and transportation sub-sector has a high price fluctuations. Fluctuating prices led to higher return of bonds will be increase. The good rating of bond indicated the good fundamental of company. It impact to increasing the bond trading so the return could be increase. Meanwhile, bond which is low rating would have low price, because the declining market perception.

Variable DER positively effect to bond return. Its meant that the high DER of would increase the return. This result shows that companies that have a high DER capable of providing high price changes so they need more funds to issue bonds. This can be seen in the transport subsector in APOL02A and telecommunications subsector in FREN01 that once had great DER respectively between -19.51 to 10.78 and -75.52 to 13.11. DER value is different from the other companies in energy subsector, toll subsector, and telecommunication subsector in PT Indosat Tbk. with range of DER between 1.21 to 3.44. DER value that is too large will affect investor's decision to buy bonds. These bonds tend to be more risky, so the cost of capital in bond would expensive.

The exchange rate had a negative effect on the return, its meant that when Rupiah depreciated to US Dollar, bond returns will increase so it may improve an opportunity for the corporates to issuing bonds. When Rupiah depreciated, demand of bonds will increase so that the bonds issued sold more. Increased demand for bonds increase the price of bonds so the return increase too. On the other hand, when Rupiah depreciates, the company's financial performance will decline. The decline in financial performance could be due to increased cost of imported raw materials, and increased cost of corporate debt, so that corporate profits decline. The decline in corporate profits cause companies will use capital from bond issuance. This result consistent with the results of research by Sihombing (2014), which indicates that the exchange rate had a negative effect on bond return.

On other macroeconomic factor, that is JCI have positive effect to the return. If JCI increase, bond return would be increasing. This indicates that the positive effect on the stock market bond market. This result was different with research of Sihombing (2014) which showed that JCI has a negatively significant influence bonds yield. But according to Widoatmodjo (2007), and Nayak (2010) there is movement between stocks and bonds. Its can lead to in the increase to cost of capital.

MANAGERIAL IMPLICATIONS

For the company that issuing bond, the results of this study providing an overview of the factors that affect bond return, there are bond characteristic to be issued and the firm characteristics. Variables that to consider bond characteristics and firm characteristics include coupons, YTM, bond ratings, DER. Variables of bond characteristics will affect the amount of coupon rate, nominal bonds and the price of bonds to be issued, while the variable firm characteristics will influence the improvement of financial condition of the company in regulating DER so that costs incurred to issue bonds can be minimized.

Macroeconomic factors become important factors that need to be considered by the issuer. When country's economic conditions improved it will provide an opportunity for companies to issue bonds. Conversely, when the economic conditions in the country deteriorated characterized by increased inflation, a depreciating currency, increasing of interest rate and decreasing share price index, recession and other conditions that affect the capital market, there will be a decrease in economic growth which results in decreased investors interest to invest in the capital market so that bond trading volume will decrease. This will have an impact on the decline in demand and supply of bonds in the capital market so the return of bonds will decrease.

For investor and investment manager, the results of this study can be used as guidelines in analyzing the investment on bonds. Characteristics of bonds that need to be consider by investors are coupon rate, YTM, and bond rating. High returns can be obtained from bond with a low coupon rate, low YTM and high bond ratings. Investors should also choose bonds with good ratings that categorized in the investment, because bonds with good ratings will provide a high return.

For the goverment, the results of this study indicate that the government should be able to maintain of stability of economic conditions in order to increase the demand and supply of bonds. One of the efforts to maintain the stability of economic conditions particularly affecting the bond return is BI rate policy. When Rupiah has appreciated to US dollar, it is necessary for considerations BI rate policy. And also the government's policy to develop the capital market by providing complete information about bonds on the Stock Exchange, so that investors and bond issuers can find out information about bonds.

CONCLUSIONS

Variables bond characteristics and firm characteristics in infrastucture, utilities and transportation sector have an effect to return, compared to macroeconomic factors. In funding decision, the company may consider variable bond characteristics and firm characteristics than macroeconomic variables. However macroeconomic also important for bond issuer and investor especially change in exchange rate and JCI. The variables that have influence to bond return are coupon, yield to maturity or YTM, bond rating, and debt to equity ratio or DER, in macroeconomic factors the variables that influence bond return are exchange rate and Jakarta Composite Index or JCI. The variables are useful for bond issuers to minimize the cost of capital.

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