

Bond Rating Change Announcement and the Effect on Stock and Bond Return

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Abstract. This research uses event study method in order to examine the difference in abnormal returns for stocks (average abnormal return) and bonds (spread yield). The sample used is listed companies in Indonesian Stock Exchange for the period 2007-2011 which issue corporate bonds and have bond rating changes issued by PT Pefindo. The analyses of this research were performed using one sample t test, paired t test, and multiple regression method. The results showed that: 1) There is no significant difference on average abnormal stock returns and abnormal bond returns before the announcement, during the announcement, and after the announcement of bond rating changes, 2) Cumulative return of stock increases following bond rating upgrades and decreases following bond rating downgrades although both are insignificant. In contrast, the cumulative return for bonds decreases significantly following bond rating upgrades and increases insignificantly following bond rating downgrade, and 3) The magnitude of bond rating changes gives no significant positive effect on average abnormal stock returns and spread yield.

Keywords: abnormal return, bond rating changes, event study, spread yield

Abstrak. Penelitian ini menggunakan metode event study untuk menguji perbedaan abnormal return untuk saham (average abnormal return) dan obligasi (yield spread). Sampel yang digunakan dalam penelitian ini adalah perusahaan yang terdaftar di Bursa Efek Indonesia periode 2007-2011, mengeluarkan obligasi korporasi, dan mengalami perubahan peringkat obligasi yang diterbitkan oleh PT Pefindo. Analisis data dilakukan dengan menggunakan uji one sample t, paired t, dan metode regresi berganda. Hasil penelitian menunjukkan bahwa: pertama, tidak terdapat perbedaan yang signifikan pada average abnormal stock return dan abnormal bond return baik sebelum pengumuman, saat pengumuman, dan setelah pengumuman perubahan peringkat obligasi; kedua, imbal hasil kumulatif untuk saham meningkat ketika pengumuman upgrade peringkat obligasi dan menurun ketika pengumuman downgrade peringkat obligasi, sementara itu, imbal hasil kumulatif untuk obligasi menurun ketika pengumuman upgrade peringkat obligasi dan meningkat ketika pengumuman downgrade peringkat obligasi; dan ketiga, besaran perubahan peringkat obligasi berpengaruh positif (tetapi tidak signifikan) terhadap average abnormal stock return dan average bond return.

Kata kunci: abnormal return, bond rating changes, event study spread yield

INTRODUCTION

Bond as an alternative tool for corporate finance is the preferred securities given its lower issuing cost compared with stock issuing. In addition, bond also provides tax shield for the company, reducing tax burdens due to interest-bearing securities to be distributed to the subscribing investors (Keown, 2005).

In addition to being an alternative funding for the company, it is apparent that investors begin to prefer bond as a form of prospective investment. Bond is rated as an attractive investment for investors for higher stock volatility compared with those of bond as a consequence the attractiveness of stock declined and on the other hand, bond also offer positive return and fixed income. This is unlike stock investment where there is no guarantee of dividend to the shareholder (Faerber, 2000).

Bond comprise two categories of return, realized return and expected return that has not been realized

but expected to occur in the future (Jogiyanto, 2003). Jones (2004) further explained that total return is the measurement of percentage of all cash flow of stocks with the purchase price. Expected return is predictable through pricing models like market model, capital asset pricing model, factor model and et cetera.

The value of bond can be described as a sum of money or the rate of return to be earned by investors including other particular assumptions. Reilly and Brown (2003) expressed that the valuation can be made through yield model approach measured through yield spread. Yield spread, the interest rate risk structure. Yield spread is defined as the relationship between yield bond with specific characteristics of the bond, such as callability, coupons and (marketability). The amount of yield spread is affected by factors. First, the difference in quality, i.e. to identify the quality of bond, the quality of bond by risk of default can be observed. Second, the difference in call provision, i.e. any callable bond will produce higher

yield to maturity (YTM) than noncallable bond. Third, the difference in interest rate, i.e. bond that gives relatively lower coupon will likely generate higher capital gain. Fourth, the difference in marketability.

Moreover, when investors decide to invest capital in bond, information as to the bond and issuing company primarily related to the company's ability to pay its obligations is absolute. This information describes the level of risk to investors. One of the indicators investors can use to describe information relevant to bond is the rating published by rating agency.

Bond rating reflects the risk scale or security level of the issued. Information relevant to rating agency may affect the price of the bond issued. Low bond rating will affect the price bond and possibly affect other stock issued by the company. Capital market participants will respond before, on and after the bond rating announcement. Responses from investors to bond rating announcement can be observed either on the stock return or bond price and yield.

Bond rating is an indicator of punctuality in the payment for the principal and interest on bond debt reflecting the scale of the risk of the bond traded (Faerber, 2000). This scale shows how secure bond to the investor represented by the ability to pay interest and principal. Security is represented by the ability to pay interest and principal when due. Corporate bond rating is expected to provide guidance to investors about the quality of the bond investment they would prefer.

Bond rating in Indonesia is carried out by the two agencies, PT Pefindo (Pemerintah Efek Indonesia) and PT Kasnic Credit Rating (Moody's Indonesia). Pefindo publishes bond rating monthly, while Kasnic does not. In addition, the number of companies using the services of Pefindo's bond rating services is larger than those of Kasnic. Bond rating by PT Pefindo consists of two classes, namely investment grade and speculative grade (non-investment). Investment grade is the category in which the company is considered to have adequate ability to repay in full its debts so that for investors seeking for secure investment will generally choose the investment grade rating. The ratings included in the investment grade are AAA, AA (none,-), A (none,-), and BBB (none,-). Speculative grade (non-investment) is a category in which a company is deemed to have the dubious ability in fulfilling its obligations. These types of companies usually will likely find difficulties to obtain funding. Ratings included in the speculative grade include BB (none,-), B (none,-), CCC, and D.

In general, bond rating changes include upgrade and downgrade. Rating change may in the same class or across the class. The classification is divided into three categories (1) in class, (2) across class and (3) across investment grade. Change in class refers to the change of bond rating in the same class, for example from AA to AA-(downgrade) or from BB-to BB (upgrade). bond rating change across class refers to the change of bond rating from one class to another class, for example AA

to A (downgrade) or BB to B (upgrade). Whilst, changes across bond investment grade refers to change from investment grade to speculative grade or vice versa, e.g. BBB to BB or A-to BB.

Information derived from bond rating has been the subject of debate in the last few years, especially as related to the stock return and bond spreads measured using the proxy abnormal return. Some experts like Wakeman (1990) expressed that no valuable information can be obtained from the bond rating announcement since the rating agency only summarizes public information. Other studies have been performed to identify the effect of bond rating change in stock prices in the United States market. Hand et al. (1992) examined the changes in rating and announcements on additions to the list of Standard and Poor's CreditWatch without inclusion of change unexpected by the market. Based on this research, it was discovered that unexpected downgrade will bear negative effect on stock return.

In general, the results from the previous research suggested that bond downgrade is a negative information for shareholder and bondholder, however, debt rating upgrade will only provide low information for stock price and return (Manurung and Karyani, 2006). There are exceptions when announcement is made publicly to the market allowing opportunity for the public to give feedback. Purda (2001) expressed that bond rating change will provide useful information for the shareholder and bondholder. Creighton et al. (2007) examined the response of debt value and corporate equity towards credit rating change announcement in Australia financial markets. The hypothesis by Creighton et al. (2007) shows that announcement by rating agencies should not relate to the effect on the value in the market. The analysis model applied is Ordinary Least Square (OLS) and Multiple Regression. The result of the research shows that there is clear evidence that the rating change announcement provides new information and affect the bond price and equity in Australia. Spread bond has increased in response to negative rating announcements and on the contrary to positive rating announcement. Equity price has the tendency to decline on the negative change date and to increase on positive change date.

Meanwhile, Abad-Romero and Robles-Fernandez (2006) performed an analysis of the effect of bond rating undertaken by international agencies on stock return in the Spain Stock Market. The analysis was performed applying event study. This research embodied the performance of return around the day of the event followed by the expected return based on market risk. The period of time taken in the analysis of the research was the day of bond rating change announcement (day 0), 114 days before the bond rating change announcement and 15 days after bond rating change announcement. The results of this research suggests that international rating agencies are capable of fulfilling different public information to investors. In general, the results showed that negative abnormal return

around the date of downgrade announcement, indicating the effect from information related to the downgrade. In the case of upgrade, the research is consistent with the redistribution of assets of creditors and owners for findings of significant decline in the return. In particular, there is a significant difference related to the sectors of the company and in the case of downgrade, there are also differences as to the rating change.

Based on the above, the research aims to discuss three matters: first, analyzing the differences between the abnormal stock return before the announcement date, at the date of announcement, and after the date of announcement of bond rating upgrade and downgrade; Second, analyzing the differences in spread bond before the date of announcement, at the date of announcement and after the date of announcement of bond rating upgrade and downgrade and third, analyzing the effect of bond rating change on the abnormal stock and bond return (spread yield) around the dates of bond rating change announcement.

RESEARCH METHODS

This research employs a quantitative approach for explanative objectives describing how social phenomenon occurs and test of the existing theories of prediction (Neuman, 2007). This research will explain the relationship of variables, bond rating change announcement as independent variable, stock return and spread yield bond being dependent variables and the firm size as control variable. Data collection technique will be quantitative namely existing statistics. Bond rating change announcement data are obtained from PT Pefindo whilst while daily stock price data are generated from Indonesia Stock Exchange (IDX). Meanwhile, the bond yield data are obtained from Indonesia Bond Pricing Agency (IBPA), Directorate General of Debt management (DJPU) of the Ministry of Finance of the Republic of Indonesia, the financial services authority (OJK) and corporate financial statement. This research employs cross-sectional data as it is performed in a certain period. The population in this research includes the company listed in the Indonesia Stock Exchange issuing bond and rated by PT Pefindo for the period from 1 January 2007 to 31 December 2011. The initial amount of bond rated in the research period was 114 bond. Based on the criteria of samples, there were 58 bond rating changes observed. However, there were some observations that could not be included due to incomplete financial data required so that the total observation this research was 54. After data test, there were 5 outlier observations and not included in the research. Thus, the total observations of the research were 49 bond rating changes comprised of 36 upgrades and 13 downgrades.

This research employed event study method. Referring to MacKinlay (1997), there are some steps taken in this research. First, event definition, the bond rating announcement of the company. Second, event window.

Event window applied in this research is the 111 exchange days consisting of 90 days as the estimation period (Jogiyanto, 2003) and 21 days of event period. Event period comprised 10-day pre-event period, event date, and 10 post-period days. Third, defining specific criteria in the event window. There are four types of data employed, i.e. bond rating change data, daily stock price data, bond yield data and firm size data. Fourth, designing framework test, the hypothesis and statistical test techniques to analyze the effect of bond rating change announcement on stock return. Test was performed by difference test (one sample t test and paired t test) and multiple regression. Fifth, measurement to assess the effect by the event. Measurement of dependent variables was carried out to compute the abnormal return rate cumulative abnormal return) for stock and bond. Sixth, analysis on the event effect. Statistical test was conducted to analyze the effect of the event during the period of research and causes of event effect.

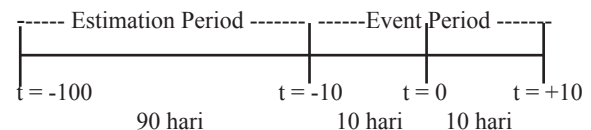


Figure 1. Research Estimation Period and Event Period

In this research, the variable bound was the average abnormal return/AAR of stock and change in spread yield bond (an abnormal bond return/ABR). Abnormal return is the difference between actual return and expected return. The calculation of expected return is made using market model (Reilly and Brown, 2003). Spread yield bond is the variable used in identifying the effect on bond return using a government bond with the same maturity. Change in spread yield (measured on the basis of points) provides a proxy ready for the performance of relative abnormal performance for overall market. Calculation of bond return is made by calculating the actual return during the previous holding period (Bessembinder and Maxwell, 2008). This calculation may also be made by not including accrued interest considering the unavailability of the relevant data. This research employed the model-mean adjusted model (Handjinicolaou and Kalay, 1984). In this model, abnormal return is calculated as the historical return of bond minus government bond return with the closest maturity (Bessembinder and Maxwell, 2008). Government bond being the benchmark employed in this research is the bond with the FR series, fixed rate bond. In addition, government bond has the closest maturity to the bond issued by the company. Model-mean adjusted model generates the expected return, which will in turn generate ABR value.

Furthermore, the free variables used in this research is the rating agency. The extent of rating change described how the shift of bond from rating before the rating change. The movement of rating may be in class, across class and across investment grade. When measuring rating

Table 1. Government Bond Benchmark

Tahun	Seri Obligasi Benchmark
2006	FR0030
2007	FR0043
2008	FR0048
2009	FR0030
2010	FR0031
2011	FR0053
2012	FR0061

Source: Indonesia Bond Pricing Agency (2013)

changes, scale notch (unit) was employed where in each movement in 1 cardinal scale of rating is considered a 1 notch movement, movement in 2 cardinal scale from the rating considered as movement of 2 notch and so on. In the calculation, the variable of change is positive in case of upgrade. On the contrary, in the case of downgrade, the calculation will be negative. This research also looked at the level of bond rating before and after the changes. This Level is divided into two groups in the investment grade or speculative grade category. Investment grade refers to the grade with default probability below 10%. Bond is within the investment grade rating from AAA to BBB while speculative grade refers to the grade with default probability above 10%. Bond is within speculative grade if is rated BBB D. This measurement uses dummy variable where if a company's bond is rated from AAA to BBB (included in investment grade) the dummy variable will have value 1 and will have 0 to the contrary (DINV). Dummy variables were also used to distinguish the corporate sector, financial and non financial (DSECT).

In the research, the control variable used was the firm size (firm size/SIZE). Firm size refers to scale of a company. The scale of firm size can be expressed in total assets, sales, and market capitalization. The company with substantial total assets will indicate that it has reached a stage of maturity where in this stage, the company has positive cash flow and is considered to have good prospect in the long term, besides, it also reflects that the company is more stable and more capable of generating profit compared with companies with small assets. Small-size company usually tends to have higher return compared with those of large size as small company is posed to greater risk compared with large-scale company. Fama and French (1992) discovered a negative connection between the firm size and stock return. Firm size is calculated by normal algorithm.

The research model was adapted from Creighton et al. (2007). Test was performed using multiple linear regression with the event window for 21 days (10, 1, 10) with a time estimate of 90 days (Jogiyanto, 2003) before bond rating change announcement. Regression was estimated separately for the entire sample of changes (upgrades and downgrades), sub-sample upgrade and sub-sample downgrade of bond rating.

Regression model 1 :

$$ABR = \alpha_0 + \alpha_1 RATING_i + \alpha_2 SIZE_i + \alpha_3 DINV_i + \alpha_4 DSECT_i + \varepsilon$$

Regression model 2 :

$$AAR = \alpha_0 + \alpha_1 RATING_i + \alpha_2 SIZE_i + \alpha_3 DINV_i + \alpha_4 DSECT_i + \varepsilon$$

where:

- ABR: abnormal return for bond i with window-10 (10 days before the announcement) up to 10 (10 days after the announcement)
- RATING_i: rating changes, old rating and new rating with scale 18 for AAA, and 0 for D.
- SIZE_i: firm size describing total assets owned by the company
- DINV_i: dummy variable of credit quality. Dummy = 1 if final rating (after the announcement) is investment grade (BBB-and above) or non investment grade (BB+ below) to downgrade and 0 if to the contrary
- DSECT_i: dummy variable of company's sector. Dummy = 1 in case of financial company or non-financial company for downgrade, and 0 f to the contrary.

Rating change announcement can be defined as positive and negative by investors. The information can be positive when bond rating is high or experiencing upgrade that reflects the financial condition of the company. If this rating is considered as new information to investors, they will have the opportunity for abnormal return.

- H_{a1} : There is a difference between the abnormal stock return and spread yield bond on the days before the announcement (t=-10), at the date of announcement (t = 0 and t = 1), and the days after announcement date (t = 10) upgrade of bond rating.

Unlike bond rating upgrade, information will be deemed negative by investors if bond rating is low or if downgrade occurs. This will make investors doubt the company's financial condition affecting the ability of companies in repaying its obligations thus investors will respond negatively to the announcement on bond rating downgrade.

- H_{a2} : There are differences between stock abnormal return and spread yield bond on the data available before the announcement (t=-10), at the announcement date (t=0 and t=1) and days after the announcement (t=+10) of bond rating downgrade.

Previous research has suggested that there is a relationship between bond rating change and stock return and bond yield. Wansley and Clauretie (1985), Holthausen and Leftwith (1986) and Cornell et al. (1989) made conclusion that negative market response to bond downgrade, presently no response for upgrades has been noted. Not a few other studies has drawn different conclusions. Matolcsy and Lianto (1995) and Elayan et al. (2001) suggested that bond upgrade and downgrade is associated with abnormal return around the dates of bond rating change announcement.

- H_{a3} : Bond rating upgrade announcement raises stock abnormal return and lowers bond spread yield.
- H_{a4} : Bond rating downgrade announcement lowers stock abnormal return and raises bond spread yield.

There is also research suggesting other contradictory results. Griffin and Sanvicente (1982) found the evidence stock price reaction against downgraded rating. Goh and Ederington (1993) found that rating downgrade is not always bad news for shareholders and investors.

- H_{a5} : The level of rating changes positively affect stock abnormal return around the dates of bond rating downgrade.

- H_{a6} : The level of rating changes negatively affecting the bond spread yield around the announcement an bond rating downgrade.

Jorion and Zhang (2007) expressed the relationship between the categories of bond rating and stock return. More specifically, it is shown that stock return are more affected on the bond rating change in the speculative grade compared bond rating in the investment grade.

- H_{a7} : difference of return rate in the company undergoing bond rating change in the investment grade and non-investment grade.

Manurung and Karyani (2006) in their research found that there are differences in the return rate of financial companies and non-financial both upgrade or downgrade. This research shows that the return rate of financial companies is higher than non-financial companies.

- H_{a8} : Differences in the return rate of financial and non-financial companies experiencing bond rating change.

RESULT AND DISCUSSION

The proportion of the overall upgrade is likely greater than 73.47% i.e. downgrade (36 sub-sample upgrade) and 26.53% (13 sub-sample downgrade). Table 2 shows the transition matrix for the sample overall rating changes. The matrix line shows old rating and column matrix shows new rating.

Based on statistical test t (t-stat) in Table 3, it is found that there is no significant difference between the average

Table 2. Bond rating change Matrix

Old/ New Rating	AAA	AA	A	BBB	BB	B	CC	SD	D	Total
AAA										-
AA	1	9	2							12
A		6	13	3						22
BBB			4	6	2		1			13
BB							1			1
B										-
CC										-
SD										-
D							1			1
Total	1	15	19	9	2	-	3	-	-	49

stock abnormal return before the announcement date and at the date of announcement and after the date of announcement. Average abnormal return before and after the date of announcement of the bond rating indicates that H_0 is rejected at significance level of 10% (t-stat = 1.955). These results indicate that there is a significant difference in average abnormal return before and after the date of bond rating announcement.

Based on paired sample test in Table 4, it is defined that there is no significant difference between an

Table 3. Test Results of Abnormal Stock Return of Bond rating Upgrade

	Mean	Std. Deviation	T	Sig. (2-tailed)
before and at the date	.005130250	.024733416	1.245	.222
at the date and after	-.000516972	.027759410	-.112	.912
before and after the date	.004613278	.014159710	1.955*	.059

Remarks: * showing significance level at $\alpha=10\%$

abnormal bond return before the announcement date and at the announcement date including before and after the date of announcement of the bond rating. Whilst, at the announcement date and after the announcement date, there is difference in the abnormal return (t-stat = 1.932; = 10%).

Based on the results of test on sub-sample downgrade in table 5, there is no significant difference between the

Table 4. Results of Abnormal Bond Return in Bond Rating Upgrade

	Mean	Std. Deviation	T	Sig. (2-tailed)
before and at the date	-.236960659	1.293430589	-1.099	.279
at the date and after	.382786587	1.189013667	1.932*	.062
before and after the date	.145825927	1.271611736	.688	.496

Remarks: * showing significance level at $\alpha=10\%$

average bond abnormal return before the announcement date and at announcement date, before and after the announcement date including after the announcement date.

Based on paired sample test in Table 6, there is no significant difference between an abnormal bond return before the announcement date and at the announcement date including after the announcement date. Meanwhile, an abnormal bond return before and after the announcement date of bond rating indicates there is a significant difference at the level of 10% (t-stat = -1.993).

Cumulative test of abnormal return showed that the average value of the t-test statistics is insignificant to the

Tabel 5. Test Results of Abnormal Stock Return of Bond rating Downgrade

	Mean	Std. Deviation	T	Sig. (2-tailed)
before and at the date	.001010428	.020557506	.177	.862
at the date and after	.000362132	.023801519	.055	.957
before and after the date	.001372560	.012940101	.382	.709

Remarks: * showing significance level at $\alpha = 10\%$

Tabel 6. Test Results on Abnormal Bond Return on Bond rating Downgrade

	Mean	Std. Deviation	T	Sig. (2-tailed)
before and at the date	-.165492455	.804185070	-.742	.472
at the date and after	-.746893849	1.638536660	-1.644	.126
before and after the date	-.912386304	1.650781539	-1.993*	.070

Remarks: * showing significance level at $\alpha = 10\%$

average number of CAAR-UP (t-stat = 1,663). On the other hand, with reference to hypothesis 3 (b), the t-test statistic value is significant at the level of 10% to CABR-UP (t-stat = -3,484). Based on this result, the bond rating upgrade announcement will only provide low information that will likely cause negative bond return negative yet not significant whilst bond rating upgrade announcement will provide no information for abnormal stock return. These results are consistent with those of Setiawan and Shanti (2009) where research also failed to prove that bond rating upgrade of an increase in bond rating provides positive abnormal stock return for investors.

Hypothesis test 4 resulting H0 was not rejected for CAAR downgrade during event window (t-stat = -0.020).

Tabel 7. CAAR and CABR t-10,t+10 Bond Rating Upgrade

	t-stat	Mean	Std. Deviation	Sig. (2-tailed)
CAAR-UP _[t-10, t+10]	1.664	.02028742	.073133319	.105
CABR-UP _[t-10, t+10]	-1.729	-2.98462714	1.03570850E1	.093

During the event window it was also indicated that the majority of the CAAR value in the downgrade sub-sample was not significant. Insignificant CAAR value indicates that bond rating downgrade announcement bear no effect on abnormal stock return. The result of test is consistent with that of Setiawan and Shanti (2009). Similar to CAAR test, hypothesis test on CABR shows that H0 is not rejected (t-stat = 1.719). This result indicates that

Tabel 8. CAAR and CABR t-10,t+10 Bond Downgrade

	t-stat	Mean	Std. Deviation	Sig. (2-tailed)
CAAR-DOWN _[t-10, t+10]	-.020	-.00039734	.070430827	.984
CABR-DOWN _[t-10, t+10]	1.719	8.31479220	1.74361282	.111

bond rating downgrade bears no effect on abnormal bond return daily in which case as represented by the bond spread yield, below in table 8.

Based on the results of the regression test for Model 1 presented in Table 9, the effect of the RATING variables on AAR are not significant where the value coefficient for all samples of 0.000265 (t-stat = 0.408384), sub-sample upgrade-0.000556 (t-stat = -0.160087), and sub-sample downgrade 0.000748 (t-stat = 1.054212). Positive coefficient value will mean greater bond rating and AAR will be more positive and vice versa. From those results, then the magnitude of the positive effect of bond rating change is not significant for the whole sample and sub-sample downgrade, however insignificant negative effect for sub-sample upgrade. These result is consistent with that of Jorion and Zhang (2005) in which the value of abnormal stock return is positive when subjected to changes in bond rating upgrade and downgrade when subjected to negative bond rating. These results also indicate that market participants consider the bond rating change, in particular the downgrade announcement, as new useful information for investment decisions. The level of bond rating change is also a specific information to investors as a consideration in making decision in the capital market. The higher the rating changes, the greater the market will respond and vice versa. The upgrade or downgrade of bond rating unit is deemed to reflect the company's prospects in the future.

In DINV variable, significant results occur only in downgrade sub-sample with coefficient value of 0.014065 (t-stat = 3.73108). Whilst, all samples with coefficients value of 0.000706 have no significant results. DSECT variable showed no significant results, both all upgrade samples and sub-sample. Each has coefficient value of 0.00000578 for all samples and coefficient value of 0.001615 upgrade sub-sample. Furthermore, SIZE shows significant result only on downgrade sub sample (t-stat = 6.014039) on the level of 1%.

The result of test in Model 2 as presented in Table 10 shows insignificant results with coefficient value of RATING variable for all upgrade samples 0.138834, sub samples 0.165759, downgrade samples 0.377678. Looking at this result, the level of bond rating change bears insignificant positive effect on all upgrade samples, sub-samples and downgrade sub-sample.

DINV variable shows significant results for all samples with coefficients value of -1.132926 (t-stat = -2.415253) and insignificant for upgrade or downgrade sub-samples with coefficient value for 0.257917 and -0.471992. DSECT variable shows significant results for all samples with coefficient value of 1.130463 (t-stat = 2.2135), while the results for upgrade sub-sample results are not

significant. Furthermore, SIZE indicates insignificant as overall.

Generally, based on Table 9 and 10, the results in the event window for 10 days showed changes in average abnormal stock return and bond spread yield are more effected by major variables in the model compared with control variables. This is likely caused by the fact that control variable used is public information already in public domain as published in the financial statement of the company listed with BEI (Indonesia Stock Exchange) compared with the major variables with new and private information.

This research also indicates that the effect of bond rating change announcement on Stock and Bond Return have different results between the dependent variables i.e. average abnormal stock return and bond abnormal return (spread yield). Moreover, there are also differences in the

results for the overall upgrade samples, sub-sample and downgrade sub samples.

For different test, significant results are in the average abnormal stock return for upgrade sub-sample indicating the differences of abnormal return before and after the bond rating change announcement. Significant results are also shown by abnormal bond return on upgrade sub-sample at and after bond rating change announcement. With significant results for abnormal stock and bond return stock on upgrade sub-sample, it is shown that investors will likely be more attentive to upgrade announcements than downgrade announcement in their investment decisions where upgrade announcement shows improved performance of a company.

The result of regression test also shows differences in both dependent variables. Significant results for average abnormal stock return is only noted on size variable for downgrade sub-sample, bond class difference for downgrade sub-sample and difference in sector for all samples. These results suggest that on downgrade announcement, besides noting the change of the bond rating, investors also perceive that firm size, change of bond class and corporate business will affect the return gained resulting in significant abnormal stock return in the period of observation. This shows that there are other variables affecting the decisions of investors despite the announcement of major event. On the other hand for abnormal bond return, significant value is only found on the differences in corporate business for all samples. These results indicate that at the bond rating change announcement, other variables will not affect the investor's decision relating to abnormal bond return.

CONCLUSIONS

This research generates various findings and results. First, there is no significant difference in the average abnormal stock return and abnormal bond return before, at and after the bond rating announcement. These results are similar to changes in bond rating upgrade and downgrade. No difference is caused by factors for example, possibility of investors to have noticed the result of bond rating change announcement or investor consider that the announcement of bond rating upgrade or downgrade will not reflect the company's financial prospects in the future. Secondly, the cumulative stock return rises in case of bond rating upgrade announcement and lowers in case of bond rating downgrade announcement. While, cumulative bond return will lower in case of bond rating upgrade announcement and raises in case of bond rating downgrade announcement. This finding shows that the Indonesia capital market has no full capability to interpret the information in the bond rating change announcement. Third, the level of the positive effect of bond rating change bears insignificant positive change on the average abnormal stock return and average bond return.

This research, like other ones, has a number of limitations. Further research is expected to (1) not merely using rating announcement published by Pefindo as there are other rating agencies such as Moody's Indonesia (formerly PT Kasnic Credit Rating Indonesia). Due to

Tabel 9. Regression Test on Effect of Bond Rating change announcement on Stock Return

	Seluruh Sampel	Upgrade	Downgrade
Variabel Dependen:	Coefficient	Coefficient	Coefficient
AAR	(t-statistic)	(t-statistic)	(t-statistic)
Variabel Independen:			
<i>RATING</i>	0.000265 (0.408384)	-0.000556 (-0.160087)	0.000748 (1.054212)
SIZE	0.000653 (0.834208)	-0.000303 (-0.36399)	0.009394* (6.014039)
DINV	0.000706 (0.297196)	0.004913 (0.755044)	0.014065* (3.73108)
DSECT	-0.00000578 (-0.002235)	0.001615 (0.600629)	- -
Observations	49	36	13
R-squared (%)	3.58	4.40	80.74
Adj. R-squared (%)	-5.18	-7.93	74.32
F-statistic	0.408898	0.35701	12.58215
Prob(F-statistic)	0.801241	0.837164	0.001431

Remarks: * shows significance at the level of $\alpha = 1\%$.

Tabel 10. Regression test on Effect of Bond rating change announcement on Bond Spread Yield

	Seluruh Sampel	Upgrade	Downgrade
Variabel Dependen:	Coefficient	Coefficient	Coefficient
AAR	(t-statistic)	(t-statistic)	(t-statistic)
Variabel Independen:			
<i>RATING</i>	0.138834 (1.086115)	0.165759 (0.233406)	0.377678 (1.402928)
SIZE	-0.249034 (-1.611379)	-0.220272 (-1.295541)	-0.161817 (-0.2731)
DINV	-1.132926* (-2.415253)	0.257917 (0.194004)	-0.471992 (-0.330066)
DSECT	1.130463* (2.2135)	0.847119 (1.541611)	- -
Observations	49	36	13
R-squared (%)	27.99	7.78	32.63
Adj. R-squared (%)	21.44	-4.12	10.18
F-statistic	4.275981	0.653614	1.453368
Prob(F-statistic)	0.005215	0.628738	0.291197

Remarks: * shows significance at the level of 5%.

differences in the aspects of rating assessment and objects by both entities, the results generated can be compared and (2) it is suggested to consider other factors relating to Stock and Bond Return particular elements especially the elements attached to bond such as maturity and liquidity of bond. This needs to be performed given the research on effect of bond rating change on bond yield spread has not widely performed particularly in Indonesia.

REFERENCE

- Abad-Romero, Pilar dan Robles- Fernández, M. Dolores. (2006). Bond Rating Changes and Stock Returns: Evidence from the Spanish Stock Market. *Spanish Economic Review* 9, pp. 79-103.
- Bessembinder, Hendrik and William Maxwell. (2008). Markets: Transparency and the Corporate Bond Market. *Journal of Economic Perspectives*, pp. 217-234
- Cornell, B, Landsman, W, dan Shapiro, A. (1989). Cross-Sectional Regularities in The Response of Stock Prices to Bond Rating Changes. *Journal of Accounting Audit Finance* Vol. 4, pp. 460-479.
- Creighton, Adam, Gower, Luke, dan Richards, Anthony J. (2007). The Impact of Rating Changes in Australian Financial Markets. *Pacific-Basin Finance Journal* 15, pp.1-17.
- Elayan, FA, Hsu, WH, dan Meyer, TO. (2001). The Informational Content of Credit Rating Announcement for Share Prices in A Small Markets. *Journal of Economica and Finance* Vol. 27, pp. 337-356.
- Faerber, Esme. (2000). *Fundamentals of the Bond Market*. New York: McGraw- Hill.
- Fama, Eugene F. and Kenneth R. French. (1992). The Cross-Section of Expected Stock Returns, *The Journal of Finance*, Vol. 47, No. 2, pp. 427-465
- Goh, Jeremy C., dan Ederington, Louis H. (1993). Is a Bond Rating Downgrade Bad News, Good News, or No News for Stockholder?. *Journal of Finance*, Vol. 48, No. 5, pp. 2001-2008.
- Griffin, P. A., dan Sanvicente, A. Z. (1982). Common Stock Returns and Rating Changes: A Methodological Comparison. *Journal of Finance* Vol. 37, pp. 103-119.
- Hand, J.R.M., Holthausen, R.W., & Leftwich, R.W. (1992). The Effect of Bond Rating Agency Announcements on Bond and Stock Prices. *The Journals of Finance*, XLVII, pp. 733-752.
- Handjinicolaou, G., and A. Kalay. (1984). Wealth Redistribution or Changes in Firm Value: An Analysis of Returns to Bondholders and Stockholders around Dividend Announcements. *Journal of Financial Economics*, 13, pp. 35-63
- Holthausen, R.W., dan Leftwich, R.W. (1986). The Effect of Bond Rating Changes on Common Stock Prices. *Journal of Financial Economics*, 17, pp. 57-89.
- Jogiyanto, Hartono. (2003). *Teori Portofolio dan Analisis Investasi*, Edisi Ketiga. Jakarta: PT. Gramedia Pustaka Utama.
- Jones, Charles P. (2004). *Investment: Analysis and Management* (8th ed.). New Jersey: John Wiley and Sons.
- Jorion, P., dan Zhang, G. (2005). Nonlinier Effects of Bond Rating Changes. Working Paper. University of California.
- _____. (2007). Information Effect of Bond Rating Changes: The Role of The Rating Prior to The Announcement. *The Journal of Fixed Income*, Spring 2007, 16, pp. 45-59.
- Keown, Arthur J. (2005). *Financial Management* (10th ed). New Jersey: Prentice Hall, Pearson Education, Inc.
- MacKinlay, Craig. (1997). Event Studies in Economics and Finance. *Journal of Economic Literature*, Vol. XXXV, pp. 13-39.
- Manurung, Adler H., dan Karyani, Etikah. (2006). Pengaruh Pengumuman Perubahan Bond Rating Terhadap Return Saham Perusahaan di Bursa Efek Jakarta (Penelitian Periode 2003 s.d. 2005). *Jurnal Riset Akuntansi Indonesia*, Vol. 9, No. 3, pp. 282-306.
- Matolesy, Z.P., dan Lianto, T. (1995). The Incremental Information Content of Bond Rating Revisions: The Australian Evidence. *Journal of Bank Financial*, 19, pp. 891-902.
- Neuman, W. Lawrence. (2007). *Basic of Social Research: Qualitative and Quantitative Approaches*. USA: Pearson Education, Inc.
- Purda, Lynnette. (2001). A "Pure" Test of Effective Rating. Working Paper. University of Toronto.
- Reilly, Frank K., dan Brown, Keith C. (2003). *Investment Analysis and Portofolio Management* (7th ed.). South-Western.
- Setiawan, Edi Budiono dan Shanti. (2009). Reaksi Pasar Saham terhadap Pengumuman Perubahan Peringkat Obligasi Perusahaan yang Terdaftar di Bursa Efek Jakarta. *Modus* Vol. 21 (1), pp. 73-86.
- Wansley, J dan Clauretie, TM. (1985). The Impact of Credit Watch Placement on Equity Returns and Bond Prices. *Journal of Finance* Vol. 8, pp. 31-42.
- Wakeman, L. M. (1990). *The Real Function of Bond Rating Agencies : The Modern Theory of Corporate Finance*, 2nd ed. Edited by Smith, C. McGaw Hill, New York.