Does the Early Bird Get the Worm? The Informativeness of Credit Watch Placements

Sugato Chakravarty

Purdue University
West Lafayette, Indiana 47906

Chiraphol N. Chiyachantana
Yen Teik Lee

Singapore Management University
50 Stamford Road, Singapore 178899

First Draft: January 2008 This Draft: October 2008

Comments Welcome

JEL Classification: G10

Keywords: credit rating agency, credit watch, bond rating, institutional trading, abnormal returns, volatility, bond rating change, Reg FD

Acknowledgements: We are grateful to Abel Noser Corporation for providing us with institutional trading data and to Judy Maiorca for related discussions. We would like to acknowledge the helpful comments and suggestions by Jeremy Goh, John Griffin, Harrison Hong, Paul Malatesta, Pankaj Jain, Lakshmanan Shivakumar,Vidhan Goyal, Sandy Lai, Rina Ray and seminar participants at Chulalongkorn Accounting and Finance Symposium. Chakravarty is at Purdue University and can be reached at *sugato@purdue.edu* Chiyachantana and Lee are at Singapore Management University, Lee Kong Chian School of Business, and can be reached at *chiraphol@smu.edu.sg* and *yt.lee.2006@mf.smu.edu.sg* respectively. Chiyachantana acknowledges the financial support from Singapore Management University. We remain responsible for any remaining errors in the paper.

Does the Early Bird Get the Worm?
The Informativeness of Credit Watch Placements

Abstract

This study examines the informational role of credit watch placements in the overall bond rating process, using a comprehensive database of Moody's Watchlists and bond rating changes. We show that the act of a company's bond being put on a credit watch is, in itself, associated with significant abnormal returns. Institutions are also active in the company's stock around credit watch placements – more so than around the actual event of the bond rating change itself. Furthermore, institutions appear to take advantage of a significant stock price run up prior to the company's bond issue being included on a positive watch list by buying the stock at a lower price and selling it around the positive watch announcement. By contrast, prior to a company's bond being included on a negative watch, the corresponding stocks lose almost a fifth of their value and institutional investors appear to pare down their stock holdings in those companies. Overall, Institutions earn economically and statistically significant profits from their trades around credit watch events.

1. Introduction

For almost a century, credit ratings agencies (CRAs), exemplified by Moody's and Standard and Poor's, have served an important credit monitoring role in the financial markets.[1] While many avow the importance of credit ratings, critics cast doubt on the importance of the ratings system accusing them to be a follower, rather than a leader, of investor opinion.[2] This growing skepticism is amplified by the financial scandals involving Enron and, more recently, the burgeoning subprime mortgage crisis in which law makers and market participants question whether the CRAs were slow to react to credit deteriorations and failed to give investors adequate warning of the risks associated with borrowers' creditworthiness.

Such criticisms notwithstanding, there exists a large body of empirical research investigating whether bond rating revisions convey new information by examining market reactions at the announcement of bond rating changes.[3] Overall, these studies have concluded that a bond downgrade conveys new information while a bond upgrade does not result in a significant price reaction. A notable recent exception is Jorion, Liu and Shi (2005) who report a small, but significant, market reaction for bond upgrades after the implementation of Reg FD. While this body of literature has undoubtedly provided a better understanding on the impact of bond rating changes on security prices, it has failed to examine the overall process of bond rating changes which includes the act of including a credit issue on the watchlist and its subsequent rating change.

Beginning in 1991, Moody's initiated an interesting practice as part of formal bond rating process. Prior to an actual rating revision, it began putting a credit issue on

[1] CRA assigns credit ratings for issuers of certain types of debt obligations. Credit rating measures credit worthiness, the ability to pay back a loan, and affects the interest rate applied to loans. It helps to reduce informational asymmetry between issuers and investors, increase market liquidity and, in the process, increase market efficiency. CRAs continue to review the credit worthiness of an issue after the initial rating. In the circumstances in which an issuer's and, by extension, the issue's financial health, contradicts the underlying assumptions, or data, supporting the current rating, the existing rating is revised to reflect current fundamental credit quality and announced to the public.

[2] As Boot, Milbourn and Schmeits (2006) argue, there appears to be a lack of consensus as to whether ratings play an important economic role and whether, at its core, ratings changes are informative. For example, in a recent *New York Times* article ("Triple-A Failure", April 27, 2008), columnist Roger Lowenstein lays out how Thomas Friedman once opined that there were two superpowers in the world – the United States and Moody's bond rating service and that it was not clear which was more powerful. In the late nineties Moody's ventured into the exotic business of rating securities backed by pools of residential mortgages. While this proved phenomenally successful for Moody's the question that has been asked in recent months is: Who was evaluating these securities? Two key questions are whether the credit agencies enjoyed too much official protection and whether their judgment was tainted.

[3] See, for example, Holthausen and Leftwich (1986), Hand, Holthausen and Leftwich (1992), Glascock, Davidson and Henderson (1987), Goh and Ederington (1993, 1998), Hite and Warga (1997), Dichev and Piotroski (2001) and Beaver, Shakespeare and Soliman (2006).

a "watchlist" in order to provide investors with an indication of the likely direction and the timing of future credit rating changes. Subsequently, over the past almost two decades, the act of including a particular credit issue on the watchlist has been used extensively as an indicator of a potential directional change in credit rating associated with that credit instrument. The underpinning of a corporation's bond being put on a credit watch is to inform investors of the rating agency's opinion that the credit quality of an obligation, or obligor, may be changing, thereby aiming to reduce the company's stock price volatility by moving its credit ratings in a gradual, even predictable, fashion in response to changes in the fundamental credit quality of the credit obligation.

This study's contribution to the literature is that it is the first to comprehensively study the impact of credit watch placements on security prices and institutional trading behavior. Specifically, one of our contributions is to perform an event study of having a publicly traded company's credit issue put on a watchlist by a CRA and attempting to better distinguish the information content of bond rating revisions conditional on the issue being on credit watch. Our working hypothesis is that we should observe significant market reactions over the window surrounding the company's bond issue being included on the watchlist itself if credit watch placement provides new information to the markets.[4] By the same token, we would see relatively little, or no, market reactions in the window surrounding the actual rating change since most of the new information inherent in the event of being included on the watchlist should already have been incorporated in the stock price by then.

We conduct an out-of-sample test of the results reported in previous studies on the market reactions around credit watch placements and subsequent bond rating changes using a comprehensive database of Moody's credit watch placement and bond rating change over an approximately 8-year period from January 1997 to September 2004. The Moody's dataset is unique because it contains information on credit watch placements and their resolution. The resolution (in terms of ratings changes), following a bond being placed on the credit watchlist, is important for it allows us to accurately link credit watch placements to subsequent bond rating changes. This is especially important in understanding how investors react to bond rating changes preceded by the issue being put on the credit watch list (defined as "expected rating changes") and instances of

[4] Note that the events of the *announcement* of being included on the watchlist and the actual event of being put in the watchlist occur on the same day. The same is true for the actual rating change announcement and the actual bond rating change itself.

ratings change not preceded by the issue being on the credit watch list (defined as "surprised rating changes"). [5]

Our main findings are summarized as follows. First, we show that credit watch is used extensively by the CRA prior to actual changes in bond rating as a signal of future rating revision [42.4% (56.1%) of actual bond upgrades (downgrades) are preceded by a positive (negative) credit watch]. Credit watch also appears to be an accurate predictor of a future rating change [89.4% (85.1%) of positive (negative) watches result in actual upgrades (downgrades)]. More importantly, we document the importance of a publicly traded corporation's bond being included on a CRA watchlist as an informative event. We find that the act of being put on a positive (negative) credit watch is associated with an average cumulative abnormal return of 2.74% (-6.34%) over 7-day period centered on the event of credit watch placement compare to that of actual rating upgrade (downgrade) of 0.61% (-6.28%). Instances of linked positive credit watch followed by an upgrade are associated with abnormal returns of 2.87% when the bond is included on the positive watch and 0.47% on actual bond upgrade. Similarly, Instances of linked negative credit watch in a company's bond followed by a bond downgrade are associated with abnormal returns of -7.10% when the bond is included on the negative watch and -4.95% on the actual bond downgrade.

A second contribution of the paper is to examine how institutional investors trade in the stock of the company's credit issue that is being included on the credit watchlist and subsequently either upgraded or downgraded using proprietary data of institutional trading. Our investigation is motivated by voluminous research that identifies institutional investors as informed traders.[6] Our hypothesis is that if the event of an issue being put on a watchlist is an informative event about the underlying firm, institutional trading activity in the company's stock should clearly be consistent with the direction of the eventual (bond) rating change (i.e., institutions buying stocks before the company's bond ratings upgrades and selling stocks before the company's bond ratings

[5] Furthermore, we utilize the information inherent in credit watch resolutions to examine market reactions during the transition period prior to actual rating revisions conditional on the issue being on credit watch.

[6] See, for example, Lo and MacKinlay (1990), Lakonishok, Schleifer and Vishny (1992), Meulbroek (1992), Cornell and Sirri (1992), Kim and Verrecchia (1994), Chakravarty and McConnell (1997, 1999), Sias and Starks (1997), Koski and Scruggs (1998), Chakravarty (2001), and Hansch and Choe (2006).

downgrades).[7] We find that institutional trading activity around the event of the corresponding bond being placed on credit watch is dramatic with the highest activity occurring around negative watch placements. Moreover, trading activity around the event of being included on credit watch is significantly greater than those around the actual bond rating changes.

In terms of stock trading direction, institutions appear to adopt a different trading strategy at the announcement of good (versus bad) news. For instance, for credit issues that are put under positive watch, which are then subsequently upgraded, we observe strong institutional selling of their existing positions at positive watch and insignificant buying around the actual bond upgrade. Institutions seem to be taking advantage of a significant stock price run up prior to the company's bond issue being included in the positive watch list by buying the stock at a lower price and selling it around the event of the bond being included on the positive watch to absorb profit from the stock price appreciation. By contrast, prior to a company's bond being included on a negative watch, the corresponding stocks lose almost a fifth of their value and institutional investors appear to pare down their stock holdings in those companies. That is, beginning seven days before negative credit watch announcements, institutional stock sales rise sharply parallel with the observed steep decline in share prices and institutional stock sales peak on the day of the corresponding bonds being included on the watchlist and continue to the actual bond downgrade.

We also go a step further and compute institutional trading profits to further investigate if the flurry of institutional activity, based on the information from the corresponding bond credit watch placements, necessarily results in significant economic profits for them. Using the technique employed by Irvine, Lipson and Puckett (2007), we show that institutions' stock trading profits are economically and statistically significant when trading around credit watch placements. For the sample of positive watch followed by bond upgrades, there is no evidence of institutional trading profits by following the strategy of buying stocks around the corresponding bond being included on a positive watch and selling them later. This coincides with strong institutional selling at positive watch. Institutions seem to adopt the right trading strategy by dispersing their

[7] Prior researches examining institutional trading prior to major events yield mixed results. For example, Irvine, Lipson and Puckett (2007) examine trading of institutions and trading profit prior to the release of analysts' recommendations. They report that institutions trade in the same direction as analyst recommendation and earn significant profit from their trades. On the other hand, Griffin, Shu and Topaloglu (2008) report evidence that institutional investors are *not* net buyers in takeover target firms and general institutional investors are small and statistically insignificant sellers prior to large price drops, but large and statistically significant *sellers* before large price increases.

positions and absorbing profit from the stock price runup at the inclusion of the corresponding bond on positive watch. In the case of the sample of negative watch and subsequent bond downgrades, institutions' short term trading profits are economically and statistically significant when institutions sell stocks around the corresponding bonds being put on negative watch. For surprised upgrades (downgrades), institutions' trading profit results from buying (shorting) the stock around the corresponding bond ratings.

A third contribution of the paper is to investigate whether there is a significant change in stock volatility surrounding the company's bond issue being put on the watchlist and subsequent bond rating change. If being included on a credit watch is an effective tool, we should expect to see a significant reduction in volatility at the time of the actual rating change of an issue (that is preceded by its inclusion on credit watch) as investors have significant amount of time to react to rating information prior to actual rating change. Employing a similar approach used in Lee, Ready and Seguin (1994), we find that being put on the watchlist is indeed an effective tool to reduce stock price volatility around actual bond rating changes. The usefulness of credit watch in reducing the underlying stock volatility is especially important for bad news. The difference in the abnormal volatility between bond downgrades that are preceded by their inclusion on credit watch and surprised bond downgrades is large and statistically significant.

Lastly, we extend a study of Jorion, Liu and Shi (2005) who examine the impact of Reg FD on abnormal stock returns around bond rating changes. We do so in two major ways. First, we examine market reaction around both the inclusion in the watchlist as well as around the actual bond rating change itself -- both before and after the passage of Reg FD. Second, we examine institutional trading behavior over the same two windows. The introduction of Reg FD has prohibited corporate issuers from releasing material nonpublic information to specific entities unless the issuer also simultaneously releases such information broadly to the public -- with an exemption granted to CRAs. Thus, the CRAs have access to confidential information that's no longer available to the public, which could potentially increase the value of the information content of the CRA announcements following the implementation of Reg FD. We find that the magnitudes of changes in abnormal stock returns and institutional trading activity for both credit watch placements and bond rating changes are economically and statistically significant after the implementation of Reg FD. With respect to stock volatilities, we find no compelling evidence that Reg FD has resulted in increase in stock

volatility around rating actions in the Post-FD period, regardless of how volatility is measured.

The remainder of this study is organized in five sections. Section 2 describes background and hypothesis. Section 3 describes data and sample characteristics. Section 4 discusses the empirical methodologies and provides our findings. Section 5 reports robustness checks. Section 6 provides concluding remarks and some directions for future research.

2. Background

There exists a large body of research investigating the role of the credit rating agencies (CRAs) in financial markets. For example, Katz (1974), Grier and Katz (1976), Hettenhouse and Sartoris (1976), Pinches and Singleton (1978), Griffin and Sanvicente (1982), Holthausen and Leftwich (1986), Glascock, Davidson and Henderson (1987), Hand, Holthausen and Leftwich (1992), Goh and Ederington (1993, 1998), Hite and Warga (1997) and Dichev and Piotroski (2001) Beaver, Shakespeare and Soliman (2006) , among others, examine stock and bond prices around the announcement of bond rating changes. The general conclusion is that a bond downgrade conveys new information while a bond upgrade does not result in a significant price reaction and, by extension, is not informative. Two possible explanations have been provided by Ederington and Goh (1998) to explain the asymmetry of market reactions to good versus bad news. First, firms voluntarily release good news to the market prior to a rating announcement Second, CRAs could expend more resources in detecting a deterioration in credit quality rather than reporting just on the improvements in credit quality.

More recently, Jorion, Liu and Shi (2005), hereafter JLS, examine the change in information content after Regulation Fair Disclosure (Reg FD). They report a small, but significant, market reaction for bond upgrades and a stronger market reaction for bond downgrades after the implementation of Reg FD. They argue that Reg FD allows CRAs access to confidential information that's no longer available to equity analysts. Thus, it potentially increases the information content of the credit rating agency announcements.

While the body of prior research has, no doubt, provided a better understanding on the role of CRAs in financial markets, and on the impact of bond rating changes on

security prices, they fail to analyze the overall process of bond rating changes. Since the early 1990s, the CRAs have adopted the use of Credit Watch as a part of the formal rating process. Prior to an actual rating revision, issues are put under a credit watch list to signal to market participants of a possible near term rating change.

However, despite the significant use of placing bond issues on the credit watchlist prior to their actual rating revisions by the CRAs, most prior academic studies examining whether bond rating changes convey new information, do so by investigating market reaction *only* at the announcements of actual bond rating changes. There are, however, a few exceptions. For instance, Holthausen and Leftwich (1986) and Hand, Holthausen and Leftwich (1992) have both examined the impact of credit watch placements on security prices in parts of their studies. They report small and statistically insignificant market reactions of -0.33% when a bond is put on positive watch and small but significant market reactions of -0.79% for negative credit watch. The empirical evidence on the impact of credit watch placements on the financial markets is limited due to a lack of data. Apart from being over 20 years old, they suffer from other important shortcomings. They are both based on a small sample of firms (127) being put on the Standard and Poor's credit watch list. It is not clear if the conclusions from such studies can be generalized to the current markets which have undergone a sea change in the intervening 25 years. More importantly, the data used by these and other past researchers cited above have no information on credit watch resolutions[8]. The resolution (in terms of ratings changes) following a bond being placed on the credit watchlist is important in that it allows the researcher to measure the relative impact and effectiveness of credit watch placements compared to actual bond rating changes. We incorporate this important information in the current analysis.

3. Data and Sample Characteristics

3.1 Data

[8] As Holthausen and Leftwich (1986) note: "*... Reliable inferences about resolutions contrary to the indicated direction are hampered by small sample sizes. Larger sample sizes available with the passage of time will provide more insight into the announcement effect of those resolutions.*"

We use three databases in the current study: Moody's Default Risk Service database, institutional stock trading data from Abel Noser Corp. and daily stock price data from Center for Research in Security Prices.

Specifically, we have access to a large sample of credit watch placements and bond rating changes from January 1, 1997 to September 30, 2004, from Moody's Default Risk Service Database. The objective of a credit watch placement is to offer indications of the likely direction and the timing of future credit rating changes. Accordingly, the database provides information on the beginning date, indications and the ending date of a credit watch placement, as well as its subsequent rating change. A credit watch is designated either "positive" (possible upgrade), "negative" (possible downgrade) or "developing" (uncertain direction, insufficient available information or this to be currently assessed)[9]. We confine our sample to US domestic taxable corporate bonds, excluding bonds issued via private placement and Yankee bonds.

Second, we obtain proprietary institutional stock trading data from the Abel Noser Corporation (hereafter, Abel Noser). The data includes stock purchases and sales transactions compiled by Abel Noser's institutional clients as part of their advisory services. Abel Noser provides consulting services to 776 domestic clients who collectively transact over $20 trillion over period of 1997-2004. The institutional trading data provide comprehensive information on institutional trading orders and actual transactions and contain information on institutional decisions about what stocks Abel Noser's institutional clients trade, direction of trade (buy or sell), transaction price, quantity of shares traded, and the execution date.[10] Third, we collect information on stock returns, value weighted index returns, volume and shares outstanding from the CRSP database.

We apply several filters to the dataset of credit watch placements and bond ratings changes in order to remove potentially contaminating factors. First, each bond rating change and credit watch announcement constitutes one observation. This is referred to in subsequent discussions as a "linked sample". Second, in cases where

[9] In this study, we exclude credit watch announcements associated uncertainty implication. Credit watch with uncertainty implication is very rare. We delete less than 1% of the sample.

[10] Data on Institutional transactions data from Abel Noser have been used in studies of institutional trading behaviors and transaction costs [Goldstein, Irvine, Kandel, and Weiner (2006), Chemmanur and Hu (2007), Irvine Lipson and Puckett (2007), Puckett and Yan (2008) and Chiyachantana and Jain (2008)].

Moody's issued interim credit watches, we consider only the first credit watch that leads to a subsequent rating change because watches in the interim are likely to be

uninformative.[11] Third, if a rating change and a credit watch relate to multiple bond issues by the same issuer, we consider only that issue with the largest magnitude of the rating change and subsequent rating change for credit watch, respectively, since that particular bond issue is likely to impact stock prices the most.

3.2 Sample Characteristics for Credit Watch Placements and Bond Rating Changes

Panel A of Table 1 reports statistics on number of credit watch placements and bond rating changes. Panel B presents a linked sample of credit watch placements and bond rating changes based on credit watch resolutions. We highlight four notable aspects of our credit watch sample. First, as we argue earlier, putting an issue on their credit watch list is a frequently used tool by the CRAs. The annual frequency of issues on Moody's credit watch ranges from 121 (in 1997) to 228 (in 2001). The tendency to warn investors against bad news is evident over all years in our sample. Negative watches are more than twice as prevalent as positive watches in our sample period (387 Positive Watch instances relative to 1,096 instances of Negative Watch). Similarly, the deterioration in aggregate credit quality that occurred during market downturns during 2000-2002 is also reflected in the credit watch placements: More credit issues were put on a negative watch over this period. Second, the total number of credit watch and bond rating changes are negatively skewed. Of the total sample, 74% (67%) are negative watches (bond downgrades). Third, credit watch appears to be used extensively by the CRA as a signal in order to reduce market reactions prior to actual changes in bond rating. For instance, 42.4% (56.1%) of actual bond upgrades (downgrades) are preceded by a positive (negative) credit watch. Finally, being put on a credit watch appears to be an accurate predictor of a future rating change. For example, 89.4% (85.1%) of positive (negative) watches result in actual upgrades (downgrades).[12]

[11] An Interim credit watch occurs when Moody's issues a new watch on the watch end date and issues a temporary confirmation of the existing credit rating while acknowledging that the uncertainties around the initial placement on the watch list remain unresolved. It enables them to keep the watch duration short but continue the watch designation with a new watch. There are 47 interim credit watches in our sample. For robustness, we repeat all analyses including these observations. The overall results are qualitatively similar.

[12] Only a small proportion of credit watches (10.6% of the positive watches and 14.9% of the negative watches) results in no changes in the existing rating while less than 2% of the credit watches actually results in a reversal of the direction of the actual rating changes. As a robustness check, we examine 41 (163) occurrences of positive (negative) watches which result

[Insert Table 1 about here]

4. Empirical Results

We present our empirical findings in five stages. First, we examine cumulative abnormal stock returns surrounding the company's bond from being included on credit watch and subsequent bond rating changes. This allows us to link our findings with those of prior studies and to test for the differences in market reactions of credit watch and bond rating changes. Second, we provide evidence on institutional investors' stock trading strategy around the event of the corresponding company's bond being placed on a credit watch and around the event of the actual bond rating changes as well as during the interim, or transition, period. Third, we estimate institutional stock trading profits resulting from their trading around these events. Fourth, we report additional results on stock volatility surrounding credit watch placement and bond rating changes as well as stock returns and institutional trading during transition period. Finally, motivated by extant research, we also examine market reaction and institutional stock trading around these events before and after the passage of Reg FD.

4.1 Information Content of Credit Watch Placement and Bond Rating Changes

To ascertain whether a credit watch placement is an informative event related to the underlying company, we examine market response around both credit watch placements and bond rating changes using a standard event study methodology. Cumulative stock abnormal returns, CARs, are calculated over the 7-day event window (-3, +3), where day 0 is the date of the corresponding company's bond being placed on a credit watch and the resultant bond rating change. Excess, or abnormal, stock returns are computed as the difference between the daily raw stock return and the concurrent value weighted NYSE/AMEX/NASDAQ index return. To verify that our findings are robust to alternative estimation methods, we repeat the analysis using alternative benchmark (equally weighted market index), standardized CAR, Fama and French 3-factor plus momentum and matched firm approach by size, industry and volatility. The choice of benchmark index and model specifications does not alter the significance of our results. In order to facilitate comparisons of our results with those from existing studies

in no change in existing rating. The market response to being put on a credit watch without a subsequent rating change is associated with a relatively smaller market impact and is not statistically significant.

on bond rating changes, we report our findings based on the value weighted index. Additional results are available upon request.

Our choice of the examination windows reflects the fact that we analyze abnormal market returns running parallel to the extant research on institutional trading. For example, Keim and Madhavan (1994, 1995), Chan and Lakonishok (1995, 1997) Chakarvarty, Panchapagesan and Wood (2004) and Chiyachantana, Jain, Jiang and Wood (2004) all show that the mean duration of seller-initiated and buyer-initiated trades is 1.65 and 1.80 days, respectively. Institutions minimize the price impact of a large order by breaking it into several smaller orders and the duration of execution is positively related to the ratio of order size to shares outstanding. As institutions need time to execute their stock orders around the CRA's announcements, a wider window better captures institutional trading behavior and its relationship to contemporaneous stock returns. A potential downside of using a bigger window is that we may pick up institutional stock trading activity unrelated to the event in question. As a robustness check, we repeat all analyses using alternative window periods (-1,+1) and (-5,+5). The results are similar.

[Insert Table 2 about here]

In Panel A of Table 2, we divide our sample into four subsets with respect to credit watch placements (positive and negative watches) and subsequent bond rating changes (bond upgrades and downgrades). If the act of being included on a credit watch conveys new information to the market, we should observe a significant reaction on stock price corresponding to the bond's placement on credit watch. We find that market reaction at credit watch placement is striking. Abnormal stock returns associated with positive and negative credit watch inclusions are economically and statistically significant at +2.74% and -6.34%, respectively. A comparison of the abnormal returns in our study with those in prior literature highlights an important contribution of our paper. Hand, Holthausen and Leftwich (1992) reported CARs of o.44% for positive watch and -0.83% for negative watch. There are very large differences in market responses to credit watch placements in our study. The evidence on abnormal returns strongly supports the importance of credit watch placement in providing essential information to market participants.

The abnormal stock returns surrounding the event of actual bond downgrade of -6.28% is large and statistically significant while the positive abnormal stock returns surrounding actual bond upgrade (+0.61%) is consistent with the recent findings by JLS and is likely due to the fact that a significant proportion of our sample is after the implementation of Reg FD which allows CRAs access to confidential information that's no longer available to the equity analysts. Thus, it potentially increases the information content of CRA announcements.

Comparing market responses to the inclusion on credit watch and the actual bond rating revisions, non-parametric tests (Wilcoxon Rank-Sum Test) show that the stock-related CARs around a positive watch are significantly stronger than the CARs around actual bond upgrades. By contrast, the CAR for a negative watch is comparable to that around bond downgrades, suggesting that being put on a negative watch is as informative as the actual bond rating downgrade itself.

Table 2 panel B reports the average stock CARs during event periods for a linked sample based on credit watch resolutions (i.e., bond rating changes that are expected by virtue of their being put on the watch list first) as well as the surprised bond rating changes (without the issue being put on a prior credit watch). If being put on credit watch serves its purpose of informing market participants of upcoming rating changes, and helps in reducing stock market reaction to the actual information content underlying the forthcoming rating revision, we should expect smaller market reactions surrounding the event of the actual bond rating changes following the event of being put on credit watch relative to those cases with surprised bond rating changes.

For our linked sample of negative watches followed by bond downgrade, the market reaction surrounding a bond rating downgrade is -4.95% compared to -7.98% in the case of a surprised downgrade. This difference of about 3% in CAR suggests that being put on credit watch appears to have the effect of attenuating the market impact associated with the corresponding stocks surrounding the event of the actual bond rating change itself. Similarly, there is strong and significant market reaction surrounding a positive credit watch (CAR of +2.87%) but *not* surrounding the actual bond upgrades (CAR of +0.47%) for the sample of positive watches followed by bond upgrades. The CAR surrounding a surprised bond rating upgrade is small but significant (+0.71%).

The asymmetry in market reaction to good versus bad news is large. Several explanations have been provided by prior researches. First, firms tend to release good news prior to actual bond upgrades but hold on to bad news prior to bond downgrades [Goh and Ederington (1993)].[13] Second, CRAs expend more resources in detecting deterioration in credit quality rather than reporting on the improvements in credit quality. We propose an alternative explanation that could help explain the small market reaction at bond rating upgrades. It is the very act of including a bond on a positive watchlist by a CRA that appears to play an important role in diminishing, or attenuating, market reaction at the time of the actual bond rating upgrade. Market participants react strongly at the event of the inclusion of the bond on a positive watch, and the underlying information gets absorbed in the stock price at that very point in time. Hence, the subsequent bond upgrade is itself associated with a small positive abnormal return since most of the information inherent in the rating change has already been absorbed in the stock price at the earlier date.

4.2 Institutional trading activity

A natural experiment that we perform in the current paper is to examine how institutions (i.e., informed traders) trade in a company's stock around the event of its bond being put on a credit watch as well as around the subsequent bond rating change. Toward that end, we report raw trading imbalances as well as abnormal trading imbalances. A raw trading imbalance is the difference between the number of shares bought and sold by institutions, over a given window, obtained from the Abel-Noser database of institutional trading, standardized by the total number of shares outstanding. Such standardization avoids the practice of institutions trading in large firms from dominating our results and also lessens the cross-sectional variation in firm-size-related trading activity. Abnormal trading imbalance is the trading imbalance in an event period relative to the corresponding benchmark period.

For the univariate credit watch and rating change analyses, institutional trading activity is benchmarked against -80 to -61 days *before* and 61 to 80 days *after* issue being put on the watchlist or the actual rating change, for comparison purposes.[14] For

[13] Verrecchia (1983) argues that firms may withhold private information if there are sufficiently large costs of disclosing such information. The tendency of firm to release good news and withhold bad news has been widely studied in accounting research (see, for example, Skinner (1994), Soffer, Thiagaragan and Walther (2000), Hutton, Miller, and Skinner (2003), Anilowski, Feng, and Skinner (2005), and Kothari, Shu and Wysocki (2007)).

[14] As robustness check, we repeat all analysis using only pre and post event benchmark period, the overall results are quantitatively similar but slightly stronger using post-event period.

the linked sample, the pre-event is the period -80 to -61 days before a bond is put on the watchlist while the post-event is the period 61 to 80 days after the actual bond rating change. The diagram below illustrates our benchmark periods relative to the two events and the transition period in between the two event periods.

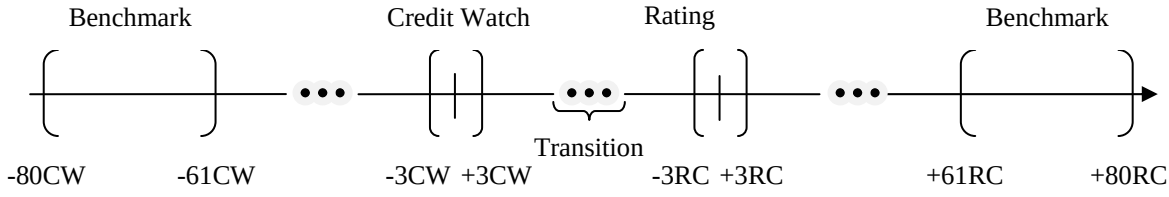


Table 3 presents stock trading activities by institutional investors around the corresponding company's bond being placed on credit watch and the resultant bond rating changes. We report the mean (median) of total share volume, and the total share volume normalized by the CRSP daily trading volume (Volume Adjusted).

We find that institutional investors trade the company's stock heavily around both its bond being placed on credit watch and around the subsequent bond rating change. In fact, institutions' stock trading activity around credit watch placements is dramatic with the highest occurring around negative credit watch placements. The average institutional stock trading volume during the event period of the corresponding bond being included on credit watch is 3.8 million shares, and that over the event of the bond rating change is 2.4 million shares.[15] This evidence suggests that institutions are fully aware of the informational value of the corresponding bond being included on credit watch.

[Insert Table 3 about here]

4.3 Trading Imbalance

Table 4, panel A, presents the trading imbalance upon being put on a credit watch and the subsequent bond rating change. The pattern of institutional stock trading around positive watch and bond upgrade, as well as around negative watch and bond downgrade, provide important insights on how institutions trade around the release of good, versus bad, news. For instance, we find that institutions are net sellers of stocks

[15] For benchmarking purposes, the institutional trading captured by the Abel-Noser data accounts for approximately one-fifth of all trading volume surrounding rating events.

around positive watch. The raw (abnormal) trading imbalance of -0.13 (-0.16) is large and statistically significant. Our evidence suggests that institutions use the event of a company's bonds being included on positive watch as occasions for profit taking with the company's stock. While there is a significant positive abnormal return in the company's stock when its bond is included in the positive watchlist, institutions appear to be contemporaneously and aggressively shedding their stock positions. By the same token, we observe a small but significant buying of stocks at corresponding bond upgrades with a raw (abnormal) imbalance of +0.09 (+0.06).

As expected, institutions collectively sell stocks upon the announcement of bad news with regard to the corresponding company's bond. Raw (abnormal) trading imbalance is -0.22 (-0.22) for negative watches compared to -0.22 (-0.18) for bond downgrades.

[Insert Table 4 about here]

Table 4, panel B, reports stock trading imbalances for linked samples. Buy (sell) imbalance solely around the event of the corresponding bond upgrades (downgrades), that are preceded by their placement on credit watch, are considerably less than the imbalance around the event of a surprised upgrade (downgrade). For example, the abnormal trading imbalance for a downgrade (which is preceded by the corresponding company bonds being included on the negative watch list) is -0.10, and not statistically significant, relative to an abnormal trading imbalance of -0.27 associated with a surprised downgrade. The comparatively small institutional stock trading around bond downgrades that were expected (in comparison to those bond downgrades that were unexpected) is not surprising when we consider the fact that institutions sell stocks strongly around the event of the corresponding bond being put on negative watch. Thus, by the time the bond is actually downgraded, the institutions appear to have achieved their (downward) target holdings. The abnormal trading imbalance at negative bond watch is -0.22 and is statistically significant.

Consistent with our univariate results pertaining to a bond being included on a positive watchlist, institutions appear to adopt a different stock trading strategy at the announcement of good news. For bonds that are put under positive watch, which are subsequently upgraded, we observe a strong selling of the corresponding stocks by institutions at positive watch and insignificant trading around the actual bond upgrades.

On the other hand, institutions are net buyers around surprised upgrades. The raw (abnormal) trading imbalance is 0.12 (0.10) and is statistically significant.

While, at first blush, such behavior might seem to be at odds with their being informed traders overall, consider the following. Figure 1a shows the daily abnormal stock returns and the abnormal trading imbalance between 60 trading days before the corresponding bond is included on credit watch and 60 trading days after the bond rating change, for linked positive watch and bond upgrades, as well as around surprised upgrades. For the linked sample of positive watch and bond upgrades, institutional investors start to accumulate stock positions early, before positive watch placements, while there is a significant price run-up of over 6% during the 60-days preceding the bond being put on positive watch. Institutions begin to unload their stock positions as early as one month prior to the watch with the highest institutional stock selling being observed at the announcement of the corresponding bond being put on positive watch. Such a pattern of institutional trading lends support to the finding in Hirshleifer, Subrahmanyam and Titman (1994) that institutions profit by selling stocks after a significant price run-up. By contrast, institutions are net buyers over the period leading to surprised bond upgrade; and such buying continues throughout the event period up until one month later.

Figure 1b reports the daily abnormal stock returns and the abnormal trading imbalances between 60 trading days before the corresponding bond is included on credit watch and 60 trading days after the bond's rating change for linked negative watch and bond downgrades, as well as around surprised bond downgrades. Prior to the negative bond watch placements, the corresponding stocks appear to lose almost one fifth of their values. Along with a stock price decline, institutional investors appear to pare down their stock holdings. Beginning with seven days before the corresponding bond being put on a negative watch, institutional stock sales in the corresponding companies rise sharply relative to normal trading level, parallel with the observed steep decline in share prices, and institutional sales peak on the credit watch announcement. Institutional stock selling continues at bond downgrades up until around one month later. A similar stock trading pattern is observed in case of surprised downgrades, though the magnitude around the event period is significantly larger.

[Insert Figure 1a and 1b about here]

In sum, institutions (through their stock trading) appear to behave opportunistically around the event of a publicly traded company's bonds being included on watchlists and around their subsequent upgrades or downgrades. This would be consistent with their role as informed traders. Next we examine the all important question of whether the institutional stock trading patterns documented above result in economic trading profits for them as a group.

4.4 Institutional trading profits

The last section revealed that institutions appear to be behaving consistently with their characterization in the literature as smart or informed traders. In particular, they seem to be taking advantage of a significant stock price run up over the 60 days prior to the company's bond issue being included in the positive watch list by buying the stock at a lower price and selling it around the event of the bond being included on the watch list when the stock price has run up. On the other hand, institutions appear to be net stock buyers at surprised upgrades.

Similarly, prior to a company's bond being included on a negative watch, and surprised downgrade, institutions start selling the company's shares which limits their losses. They then buy back some of those shares once the price has fallen to lower levels. In this section, we examine if institutions can profit from such stock trading strategies.

To do so, we rely on the institutions' actual stock execution prices and shares transacted at those prices in order to evaluate the actual profits that would be earned. And, to measure this, we follow Irvine, Lipson and Puckett (2007) by deriving the actual gains and losses associated with establishing their stock positions during the event period (-3,+3). We then acknowledge any gains over the subsequent holding period by applying CRSP returns to the net position at six different points in time.[16]

Table 5 presents institutions' stock trading profits derived from initiating positions around the corresponding bond being placed on credit watch for linked samples, and around the event of bond rating changes in the case of the surprised rating

[16] Specifically, we assume that the initial position for all institutions before the announcement date to be zero and compute the realized gains and losses during the trading window based on prices actually executed. For example, if an institution buys 100,000 shares on day -3 at $10 and subsequently sells 40,000 shares at $12 on day -2, the realized profit is $80,000 (40,000 x $2). Next, we mark to market the net position at the end of the trading period. If the price is $11 at the end of day -1 then the unrealized profit during the trading window is $60,000 (60,000 x $1). Finally, we take into consideration any gains or losses subsequent to the accumulation period. Thus, if the cumulative returns are 1% over the next 5 days, the total profit is $140,600 ($80,000 + $60,000 + $600). We express trading profit as a fraction of the position established at the end of day -3: $140,600/(60,000 x $11) = 21.3%.

changes. For the linked sample of positive watch and bond upgrade, there is no evidence of institutional trading profits by following the strategy of buying stocks around the corresponding bond being included on a positive watch and selling them later. This coincides with strong institutional selling at positive watch reported earlier. Institutions seem to adopt the right trading strategy by dispersing their positions at the inclusion of the corresponding bond on positive watch to absorb profit from the stock price appreciation. In contrast, the net buying position around surprised upgrades results in trading profits of +1.38% (60 days) and 2.30% (120 days).

In the case of the linked sample on a negative watch and subsequent bond downgrade, institutions' short term trading profits are economically and statistically significant when institutions sell stocks around the corresponding bonds being put on negative watch For example, institutions' trading profits from short positions around negative watch to 5 days after the ratings downgrades are 2.02%. There is no evidence of a long term trading profit beyond 60 days. Institutions also profit from shorting the stock around surprised downgrades. Their stock trading profit ranges from 2.70% over 5 days to 5.20% over 120 days after the corresponding bond rating downgrades.

[Insert Table 5 about here]

5. Robustness Checks

5.1 Stock price volatility around credit watch placement and bond rating changes

In this section, we work towards ensuring the robustness of our conclusion that being included on credit watch works to reduce uncertainty and informational asymmetry related to the event of a bond rating change associated with the underlying firm. We examine the effect of a company's bond being included on credit watch on its stock price volatility. Recall that the rationale of credit watch placement is to inform investors of the rating agency's opinion that the credit quality of an obligation, or obligor, may be changing, thereby aiming to reduce the company's stock price volatility by moving its credit ratings in a gradual, even predictable fashion. Hence, if credit watch is an effective tool, we should expect to see a significant reduction in stock price volatility at the time of the actual bond rating change, that is preceded by the

corresponding bond being included on credit watch, as investors have a significant amount of time to react to the rating information prior to the actual bond rating change.

We use three volatility measures. The first measure is the absolute differences between the highest ask price and lowest bid prices standardized by the lowest bid price during the event period (HILOW). The second measure is the absolute value of return (ABSRET) calculated as average daily absolute return during the event period. The third metric is the average square daily return during the event window (SPDRET). Our measures are similar to those used in Lee, Ready and Seguin (1994).[17] We then calculate the abnormal volatility, computed as the difference in each volatility measure over the event window minus its benchmark, discussed in Section 4.2.

Panel A of Table 6 presents descriptive statistics of the three measures of abnormal volatility around a company's bond being placed on credit watch and around the resultant bond rating change. We see clear evidence that volatility is high at credit watch placements as the information related to potentially forthcoming rating actions is released to the market for the first time. We observe a large and statistically significant increase in volatilities, with the highest occurring at credit watches with negative implications. In comparison, abnormal volatilities around actual bond upgrades and downgrades are significantly smaller. For example, the volatility measure HILOW is 0.34% (2.12%) for positive (negative) watches compared to -0.11% (1.63%) for bond upgrades (downgrades). The difference of 0.44% (0.48%) is statistically significant using Wilcoxon Rank-Sum test. Moreover, all three measures of volatility are higher for bad news (negative watch/bond downgrade) compared to good news (positive watch/ bond upgrade). This supports the notion that firms are likely to leak good news before their formal announcements.

Panel B reports results for our linked sample. Specifically, for our linked sample of positive watches followed by bond upgrades, there is a significant increase in stock price volatility at the time of the credit watch but it reverses at the actual rating change for all three volatility measures. We observe a similar pattern for paired negative watches followed by bond downgrades. It is worth noting that the usefulness of credit watch in reducing the underlying stock volatility is especially important for bad news. While there is no significant difference in abnormal volatility between bond upgrades that are preceded by their inclusion on the watchlist as well as surprised upgrades using a

[17] Lee, Ready and Seguin (1994) examine the price volatility around trading halts in the NYSE.

nonparametric test, the difference in the abnormal volatility between bond downgrades that are preceded by their inclusion on credit watch and surprised bond downgrades is large and statistically significant for all three abnormal volatility measures.

In sum, our results indicate that being put on credit watch is an effective tool to reduce stock price volatility around the event of the actual bond rating changes.

[Insert Table 6 about here]

5.2 Cumulative Returns, Stock Volatility and Institutional Trading Imbalance in the Transition Period

The objective of this section is to examine whether institutional stock trading behavior over the transition period is consistent with their behavior in the relatively small collective window around the corresponding company's bond being included on the watchlist and around the resultant bond rating change. Table 7 presents the stock-related CARs, volatility measured by the absolute differences between the highest ask price and lowest bid prices standardized by the lowest bid price during the event period (HILOW) and total abnormal trading imbalance during the transition period, excluding the event period window. In addition to presenting the overall results based on all credit watch placements, we also report results partitioned by transition periods of less than 90 calendar days and by transition periods lasting more than 90 calendar days. If the objective of a company's bond being included on credit watch is to signal possible near-term rating changes, we expect that credit watches with shorter transition periods (i.e., less than 90-days) are more likely to be informative.

The average number of days in the transition period reflects the overall short term nature of the bond being on credit watch. Specifically, the mean (median) duration for being included on credit watch, with a subsequent rating change, is 103 (87) and 95 (78) days for positive and negative watch lists, respectively. The majority of credit watches, i.e. 52% (58%) of positive watches (negative watches), are resolved within 90 days.

We observe small positive (negative) CARs during the transition period for both the linked sample of positive watches and bond upgrades (negative watches and bond downgrades). Abnormal stock returns during the transition period for the linked sample of positive watch/bond upgrades and negative watch/bond downgrades are statistically significant at +1.46% and -1.71% respectively. Stock volatility continues to drift downward during transition period (-0.33% and -1.10% for positive watch/bond

upgrades and negative watch/ bond downgrade) Furthermore, consistent with our intuition above, credit watches with shorter transition periods are more likely to be informative. CARs for both positive and negative watches are larger and statistically significant only for the sample with transition periods of 90-days (or less) relative to the sample with transition periods of more than 90 days.

We now turn our attention to computing the trading imbalance during the transition period. Consistent with the observed pattern at positive watch and bond upgrades, there is no significant trading activity during the transition period. On the other hand, institutions continue to disperse their position after negative watches as stock prices continue to drift downward. The trading imbalance during the transition period associated with a negative watch and bond downgrades is -4.03. Furthermore, the length of the transition period following a negative watch contributes strongly to the observed patterns of institutional trading imbalance. Thus, for example, the trading imbalance is only statistically significant for the sample of negative watches lasting 90-days or less.

[Insert Table 8 about here]

5.3 Impact of Regulation Fair Disclosure (Reg FD)

The introduction of Reg FD has prohibited corporate issuers from releasing material nonpublic information to specific entities unless the issuer also simultaneously releases such information broadly to the public -- with an exemption granted to CRAs. Thus, the CRAs have access to confidential information that's no longer available to the public, which could potentially increase the value of the information content of the CRA announcements following the implementation of Reg FD. JLS examine the impact of Reg FD on abnormal stock returns around bond rating changes. They report a small but significant market reaction for bond upgrades and a stronger market reaction for bond downgrades after the implementation of Reg FD. We build on JLS by examining market reactions around both inclusion in the credit watchlist and the actual bond rating changes both before and after the passage of Reg FD. We also examine institutional trading behavior over the same two windows.

Following Reg FD, the value of the information possessed by the CRAs may have improved by virtue of their having access to information that is no longer accessible to equity analysts. Finally, we examine the impact of Reg FD on stock volatility at the

announcement of rating actions. Critics of Regulation FD argue that fair disclosure may undermine the role of the financial analysts and force companies to be more cautious about the release of information. This can potentially result in a "chilling effect" in that the issuers are likely to limit the amount of information given out to the investment community, which is likely to lead to higher market volatility when the information is eventually made public.

In order to examine the impact of Reg FD on market reaction, stock volatility and institutional trading behavior around bond rating changes conditional on credit watch placements, we repeat our analysis for two subsamples partitioned by the effective date of the passage of Reg FD, excluding the implementation month of Reg FD (October, 2000). Specifically, our Pre-FD period spans an approximately 3.5 year period between January, 1997, and September, 2000. Our Post-FD period spans a 4-year period between November, 2000, and December, 2004. The Pre-FD (Post-FD) period for linked samples consists of 526 (733) pairs of credit watch and rating changes. Similarly, 591 (600) instances of surprised bond rating changes are in Pre-FD (Post-FD).

Consistent with JLS, the abnormal stock returns around bond rating changes increase significantly Post-FD. Specifically, the CAR for stocks for corresponding bond upgrades (downgrades) is 1.28% (-7.04%) over the Post-FD period relative to -0.03% (-5.24%) in the Pre-FD period. We also observe changes in institutional trading activity Post-FD in line with the abnormal returns. The abnormal trading imbalances for upgrades (downgrades) in the Post-FD period is +0.26 (-0.39) compared to -0.03 (+0.10) in the Pre-FD period. Similarly, we observe larger stock CARs and larger abnormal trading imbalances for the corresponding bonds being included on the negative watch Post-FD of -6.67% and -0.27 relative to pre-FD of -5.13% and -0.16.

Interestingly, there seems to be a decrease in the abnormal stock returns around the corresponding bonds being included on a positive watch Post-FD which could be explained by a dramatic increase in institutional selling. While abnormal stock returns around positive watch decreases from 3.41% to 2.13% (both statistically significant), institutional selling Post-FD, is -0.28 (statistically significant at 1%) compared to -0.05 (not statistically significant) Pre-FD. Hence, it appears that institutions are indulging in a significantly greater degree of profit taking Post-FD relative to the Pre-FD period. This could be directly correlated with the increased information content of the CRA announcements following Reg FD.

We further extend JLS by separating our sample of rating changes into two groups conditional on the direction of credit watch placements (i.e., positive versus negative watch). The magnitudes of changes in abnormal stock returns for both bond upgrades and downgrades are economically and statistically significant after the implementation of Reg FD. Specifically, we observe a significant difference in CARs between Pre- and Post-FD for bond upgrades following the credit watch (+1.22%) and for surprised bond upgrades (+1.40%). Similarly, the difference in CARs for bond downgrades is -0.71% and -3.68%, respectively, for bond downgrades preceded by negative watches and for surprised downgrades. Consistent with the findings on abnormal returns by JLS, we observe significant changes in institutional buying (selling) around bond upgrades (downgrades). For example, the abnormal trading imbalances for surprised upgrades (downgrades) are +0.26 (-0.39) and statistically significant at 1% level compared to -0.03 (-0.10) during the Pre-FD period. In sum, our findings with regard to institutional trading before and after Reg FD help explain the findings reported by JLS.

With respect to stock volatilities, we find no compelling evidence that Reg FD has resulted in an increase in stock volatility around ratings actions in the Post-FD period, regardless of how volatility is measured. We observe a significant decrease in stock volatilities at positive watch, bond upgrades and downgrades with a slight increase at negative watch. For example, the stock volatility, measured by squared returns, in the Pre-FD period for positive (negative) watch is 0.26% (0.35%) compared to the Post-FD period of 0.07% (0.46%). Similarly, the stock volatility for bond upgrades (downgrades) is -0.04% (0.31%) and -0.11% (0.21%) in the Pre- and Post-FD periods, respectively.

6. Conclusion

We examine the informational role of being put on the Moody's "watchlist" using a comprehensive database of Moody's (a major credit rating agency, or CRA, in the United States) credit watch placement and the subsequent bond rating change using a large sample of stocks over almost an eight year period. We approach the problem from two different perspectives. On one hand, we examine the abnormal stock returns of the corresponding companies over the two windows associated with the bond being included on the watchlist and its subsequent rating change. On the other hand, we also examine the stock trading pattern of institutional investors over the same two periods in order to

better understand the role of informational transmittal in the financial markets since there is a voluminous literature documenting the role of institutions as informed traders.

We show that the act of being put on a credit watchlist is in itself an informative event. We also provide a potential explanation for a finding reported in the literature that the event of an actual bond upgrade is associated with a small abnormal return. In fact, we demonstrate that the same sample is associated with a large 7-day stock CAR of almost 3% around the event of being included on the watchlist. Hence, we argue that the actual information assimilation occurs around the corresponding bond being included on the watchlist and not around the actual event of the bond upgrade itself. Institutions also appear to be active stock traders around the corresponding bonds being placed on credit watch with the highest activity occurring around the bond being included on a negative watchlist. More importantly, institutional stock trading activity around the bond being included on credit watch is significantly greater than around the event of the actual bond rating change itself which lends further credence to the act of inclusion of the bond on the watchlist as a true information event. Furthermore, upon computing institutional trading profits based on their stock trading strategies based on information from credit watch placements, we show that the institutional stock trading profits are statistically and economically significant when they sell (buy) at positive watches (surprised bond upgrades) and sell at negative watches and bond downgrades.

In sum, we conclude that being included on the credit watchlist is a significant information event and one that should be focused on by researchers and practitioners rather than the event of the actual bond rating change itself. Institutions are also most active around the event of the company's being included on the credit watchlist.

References

Ali, A., Durtschi, C., Lev, B., & Trombley, M. (2004). Changes in Institutional Ownership and Subsequent Earnings Announcement Abnormal Returns. *Journal of Accounting, Auditing, and Finance , 19*, 221–248.

Anilowski, C., Feng, M., & Skinner, D. J. (2005). Is guidance a macro factor? The nature and information content of aggregate earnings guidance. *Journal of Accounting and Economics, forthcoming*.

Anilowski, C., Feng, M., & Skinner, D. J. (2007). Does Earnings Guidance Affect Market Returns? The Nature and Information Content of Aggregate Earnings Guidance. *Journal of Accounting and Economics , 44*, 36–63.

Baker, H, Mansi, S. A. (2002). Assessing Credit Rating Agencies by Bond Issuers and Institutional Investors. *Journal of Business Finance & Accounting , 29*, 1367–1398.

Barber, B. M., & Odean, T. (Forthcoming). All that Glitters: The Effect of Attention and News on the Buying Behavior of Individual and Institutional Investors. *The Review of Financial Studies.*

Bartov, E., Radhakrishnan, S., & Krinsky, I. (2000). Investor Sophistication and Patterns in Stock Returns After Earnings Announcements. *The Accounting Review , 75*, 43–63.

Beaver, W. H., Shakespeare, C., & Soliman, M. T. (2006). Differential Properties in the Ratings of Certified vs. Non-Certified Bond Rating Agencies. *Journal of Accounting and Economics , 42*, 303-334.

Boot, A., Milbourn, T., & Schmeits, A. (2006). Credit Ratings as Coordination Mechanisms. *The Review of Financial Studies , 19*, 81-118.

Brooks, R., Faff, R., Hillier, D., & Hillier, J. (2004). The National Market Impact of Sovereign Rating Changes. *Journal of Banking and Finance , 28*, 233-250.

Bushee, B. J., & Goodman, T. H. (2007). Which Institutional Investors Trade Based on Private Information about Earnings and Returns? *Journal of Accounting Research , 45*, 289-321.

Chakravarty, S. (2001). Stealth-Trading: Which Traders' Trades Move Stock Prices? *Journal of Financial Economics , 61*, 289-307.

Chakravarty, S., Panchapagesan, V. & Wood, R. A. (2005). Did Decimalization hurt Institutional Investors? *Journal of Financial Markets , 8*, 400-420.

Chakravarty, S., & McConnell J. J. (1997). An Analysis of Prices, Bid/Ask Spreads, and Bid and Ask Depths Surrounding Ivan Boesky's Illegal Trading in Carnation's Stock? *Financial Management , 26*, 18-34.

Chakravarty, S., & McConnell J. J. (1999). Does Insider Trading Really Move Stock Prices? *Journal of Financial and Quantitative Analysis*, 34, 191-210.

Chan, L. K. C., & Lakonishok, J. (1995). The Behavior of Stock Prices Around Insitutional Trades. *The Journal of Finance , 50, 1147-1174*.

Chan, L. K. C., & Lakonishok, J. (1997). Institutional Equity Trading Costs: NYSE Versus Nasdaq. *The Journal of Finance , 52, 713-735*.

Chemmanur, T. J., & Hu, G. (2007). Institutional Trading, Allocation Sales, and Private Information in IPOS. *Unpublished Working Paper*.

Chen, Q. (2007). Discussion of Which Institutional Investors Trade Based on Private Information about Earnings and Returns? *Journal of Accounting Research , 45*, 323-331.

Chiyachantana, C. N., Jain, P. K., Jiang, C. & Wood R. A. (2004). International Evidence on Institutional Trading Behavior and Price Impact, *Journal of Finance , 59*, 869-898.

Chiyachantana, C. N. and Jain, P. K (2008). The Opportunity Cost of Inaction in Financial Markets: An Analysis of Institutional Decisions and Trades, *Unpublished Working Paper*.

Collins, D., Gong, G., & Hribar, P. (2003). Investor Sophistication and the Mispricing of Accruals. *Review of Accounting Studies , 8*, 251–276.

Conrad J. S., C., Johnson, K. M., & Wahal, S. (2001). Institutional trading and soft dollars. *Journal of Finance , 56*, 397-416.Cornell, B. & Sirri E. R. (1992). The Reaction of Investors and Stock Prices to Insider Trading. *Journal of Finance , 47*, 1031–1059.

Dennis, P., & Weston, J. (2001). Who's Informed? An Analysis of Stock Ownership and Informed Trading. *Unpublished Working Paper* .

Dichev, I. D., & Piotroski, J. D. (2001). The Long-run Stock Returns Following Bond Ratings Changes. *Journal of Finance , 56*, 173-203.

Ederington, L., & Goh, J. (1998). Bond Rating Agencies and Stock Analysts: Who Knows What When? *Journal of Financial and Quantitative Analysis , 33*, 569-585.

El-Gazzar. (1998). Predisclosure Information and Institutional Ownership: A Cross-Sectional Examination of Market Revaluations During Earnings Announcement Periods. *The Accounting Review , 73*, 119-129.

Ellis, D. (1998). Different Sides of the Same Story: Investors' and Issuers' Views of Rating Agencies'. *Journal of Fixed Income , 7*, 35-45.

Gande, A., & Parsley, D. (2005). News Spillovers in the Sovereign Debt Market. *Journal of Financial Economics , 75*, 691-734.

Glascock, J. L., Davidson, W. N., & Henderson, G. V. (1987). Announcement effects of Moody's bond ratings changes on equity returns. *Quarterly Journal of Business and Economics , 26*, 67-78.

Goh, J. C., & Ederington, L. H. (1993). Is a Bond Rating Downgrade Bad News, Good News, or No News for Stockholders? *The Journal of Finance , 48*, 2001-2008.

Goldstein, M., Irvine, P., Kandel, E., & Wiener, Z. (2006). Brokerage Commissions and Institutional Trading Patterns. Unpublished Working Paper.

Grier, P., & Katz, S. (1976). The Differential Effects of Bond Rating Changes Among Industrial and Public Utility Bonds by Maturity. *The Journal of Business , 49*, 226-239.

Griffin, P. A., & Sanvicente, A. Z. (1982). Common Stock Returns and Rating Changes: A Methological Comparison. *The Journal of Finance , 37*, 103-119.

Hakansson, N. H. (1977). Interim Disclosure and Public Forecasts: An Economic Analysis and a Framework for Choice. *The Accounting Review , 52*, 396-426.

Hamilton, D., & Cantor, R. (2005). Rating Transitions and Defaults Conditional on Rating Outlooks Revisited: 1995-2005. *Moody's Investors Service-Special Comment* , December.

Hand, J., Holthausen, R., & Leftwich, R. W. (1992). The effect of bond rating agency announcements on bond and stock prices. *The Journal of Finance , 47*, 733-752.

Hansch, O., & Choe, H. (2006). Which Trades Move Stock Prices? Stealth Trading Revisited. *Unpublished Working Paper*.

Hettenhouse, G., & Sartoris, W. (1976). An analysis of the informational value of bond rating changes. Quarterly Review of Economics and Business , 16, 65-78.

Hill, P., & Faff, R. (2007). Do Credit Watch Procedures Affect the Information Content of Sovereign Credit Rating Changes? *Unpublished Working Paper* .

Hirshleifer, D., Subrahmanyam, A., & Titman, S. (1994). Security Analysis and Trading Patterns when Some Investors Receive Information Before Others. *The Journal of Finance , 49*, 1665-1698.

Hite, G., & Warga, A. (1997). The Effect of Bond-Rating Changes on Bond Price Performance. *Financial Analysts Journal , 53*, 35-51.

Holthausen, R., & Leftwich, R. (1986). The effect of bond rating changes on common stock prices. *Journal of Financial Economics , 17*, 57-89.

Hong, H., Lim, T., & Stein, J. C. (2000). Bad News Travels Slowly: Size, Analyst Coverage, and the Profitability of Momentum Strategies. *The Journal of Finance , 55*, 265-295.

Hull, J., Predescu, M., & White, A. (2004). The relationship between credit default swap spreads, bond yields, and credit rating announcements. *Journal of Banking & Finance , 28*, 2789-2811.

Hutton, A. P., Miller, G. S., & Skinner, D. J. (2003). The Role of Supplementary Statements with Management Earnings Forecasts. *Journal of Accounting Research, 41*, 867-890.

Irvine, P., Lipson, M., & Puckett, A. (2007). Tipping. *The Review of Financial Studies* , 20, 741-768.

Jewell, J., & Livingston, M. (1998). Split Ratings, Bond Yields and Underwriter Spreads. *Journal of Financial Research , 21*, 185–204.

Jiambalvo, J., Rajgopal, S., & Venkatachalam, A. M. (2002). Institutional Ownership and the Extent to which Stock Prices Reflect Future Earnings. *Contemporary Accounting Research , 19*, 117–145.

Griffin, J. M., Shu, T., Topaloglu, S. (2008). How Informed are the Smart Guys? Evidence from Short-Term Institutional Trading prior to Major Events. *Unpublished Working Paper*.

Jones, C., & Lipson, M. (1999). Execution Costs of Institutional Equity Orders. *Journal of Financial Intermediation , 8*, 123-140.

Jorion, P., Liu, Z., & Shi, C. (2005). Informational Effects of Regulation FD: Evidence from Rating Agencies. *Journal of Financial Economics , 76*, 309-330.

Kaminsky, G. L., & Schmukler, S. L. (2002). Emerging Markets Instability: Do Sovereign Ratings Affect Country Risk and Stock Returns? *World Bank Economic Review , 16*, 171-195.

Katz, S. (1974). The Price and Adjustment Process of Bonds to Rating Reclassifications: A Test of Bond Market Efficiency. *The Journal of Finance, 29*, 551-559.

Ke, B., & Petroni, K. (2004). How Informed Are Actively Trading Institutional Investors? Evidence from Their Trading Behavior Before a Break in a String of Consecutive Earnings Increases. *Journal of Accounting Research , 42*, 895–927.

Ke, B., Ramalingegowda, S., & Yu, Y. (2006). The Effect of Investment Horizon on Institutional Investors' Incentives to Acquire Private Information on Long-Term Earnings. *Unpublished Working Paper*.

Keenan, S., Fons, J., & Carty, L. (1998). An Historical Analysis of Moody's Watchlist. *Moody's Investors Service, Special Comment , October*.

Keim, D. B., & Madhavan, A. (1994). The Upstairs Market for Large-Block Transactions: Analysis and Measurement of Price Effects. *Unpublished Working Paper*.

Keim, D. B., & Madhavan, A. (1995). Anatomy of the trading process: empirical evidence on the behavior of institutional traders. *Journal of Financial Economics , 37*, 371-398.

Kim, O., & Verrecchia, R. E. (1994). Market Liquidity and Volume Around Earnings Announcements. *Journal of Accounting & Economics , 17*, 41–67.

Kim, O., & Verrecchia, R. E. (1997). Pre-Announcement and Event-Period Private Information. *Journal of Accounting & Economics , 24*, 395–419.

Kim, Y., & Nabar, S. (2007). Bankruptcy Probability Changes and the Differential Informativeness of Bond Upgrades and Downgrades. *Journal of Banking and Finance* , forthcoming.

Koski, J. L. & Scruggs, J. T. (1998). Who Trade around the Ex-Dividend Day? Evidence from NYSE Audit File Data. *Financial Management , 27*, 58-72.

Kothari, S. P., Shu, S., & Wysocki, P. (2007). Do Managers Withhold Bad News? *Unpublished Working Paper*.

Lakonishok, J., Shleifer, A. & Vishny, R. W. (1992). The Impact of Institutional Trading on Stock Prices. *Journal of Financial Economics , 32*, 23-43.

Lee, C. M. C., Ready, M. J. & Seguin, P. J. (1994). Volume, volatility, and New York Stock Exchange Trading Halts. *The Journal of Finance, 49*, 183-214.

Lev, B. (1988). Toward a Theory of Equitable and Efficient Accounting Policy. *The Accounting Review , 63*, 1-22.

Lo, A. W., & MacKinlay A. C. (1990). When are contrarian profits due to stock market overreaction. *The Review of Financial Studies , 3*, 175-205.

Meulbroek, L. K. (1992). An Empirical Analysis of Illegal Insider Trading. *The Journal of Finance , 47*, 1661-1699.Moody's Investors Service. (2004). *Moody's Rating Symbols and Definitions*. New York.

Nofsinger, J. R. (2001). The Impact of Information on Investors. *Journal of Banking & Finance , 25*, 1339-1366.

Norden, L., & Weber, M. (2004). Informational efficiency of credit default swap and stock markets: The impact of Credit Rating Announcements. *Journal of Banking & Finance , 28*, 2813-2843.

Pinches, G. E., & Singleton, J. C. (1978). The Adjustment of Stock Prices to Bond Ratings Changes. *The Journal of Finance , 33*, 29–44.

Puckett, A., & Yan, X. S. (2007). The Impact of Short-Term Institutional Herding. *Unpublished Working Paper*.

Purda, L. (2007). Stock Market Reaction to Anticipated Versus Surprise Rating Changes. *Journal of Financial Research , 30*, 301-320.

Sias, R. W. & Starks L. T. (1997). Return Autocorrelation and Insitutional Investors. *Journal of Financial Economics , 46*, 103-131.

Skinner, D. J. (1994). Why Firms Voluntarily Disclose Bad News. *Journal of Accounting Research , 32*, 38-60.

Soffer, L. C., Thiagarajan, S. R., & Walther, B. R. (2000). Earnings Preannouncement Strategies. *Review of Accounting Studies , 5*, 5-26.

Standard & Poor's. (2005). *Corporate Ratings Criteria 2005*. New York.

Weinstein, Mark. 1977. "The Effect of a Rating Change Announcement on Bond Price." Journal of Financial Economics 5: 329-350.

Verrecchia, R. (1983). Discretionary Disclosure. *Journal of Accounting and Economics*, 5, 365-380.

Table 1 Summary Statistics of Credit Watch Placements and Bond Rating Changes

This table presents the number of credit watch placements and bond rating by calendar year. Data on Moody's credit watch placements and bond ratings is obtained from Moody's Corporate Default Risk Service (DRS) database. The analysis covers time period from January 1997 to September 2004. Panel A reports total number of credit watch placements and bond rating changes and directions by calendar year. Positive (Negative) Watch occurs when bond is placed on review for possible upgrade (downgrade). Bond Upgrade (Downgrade) refers to actual credit rating change. Panel B reports linked sample of credit watch placements and bond rating changes. Linked sample is defined based on the resolution of credit watch. Positive-Upgrade (Negative-Downgrade) is defined as if bond is Upgrade (Downgrade) follows the placement of Positive (Negative) Watch. No Rating Change is defined as Credit Watch follows by no change of rating.

Panel A Credit Watch Placements and Bond Rating Changes

Year	Credit Watch			Bond Rating		
	Positive Watch	Negative Watch	Total	Bond Upgrade	Bond Downgrade	Total
1997	45	76	121	111	126	237
1998	70	114	184	132	180	312
1999	48	133	181	106	216	322
2000	37	181	218	75	209	284
2001	32	196	228	106	333	439
2002	25	186	211	56	293	349
2003	74	135	209	103	181	284
2004	56	75	131	127	126	253
Total	387	1,096	1,483	816	1,664	2,480

Panel B Credit Watch Resolution

Credit Watch / Bond Rating	Credit Watch	Bond Rating
Positive/Upgrade	346	346
Positive/No Rating Change	41	
No Credit Watch/Upgrade		470
	387	816
% of Positive Credit Watch follow by Upgrade	89.4%	
% Positive Watch to Total Upgrade		42.4%
Negative/Downgrade	933	933
Negative/No Rating Change	163	
No Credit Watch/Downgrade		731
	1096	1664
% of Negative Credit Watch follow by Downgrade	85.1%	
% Negative Watch to Total Downgrade		56.1%

Table 2 Cumulative Abnormal Return

The table presents cumulative abnormal return (CAR) around Moody's credit watch placements and bond rating changes. CAR is defined as stock return minus the contemporaneous return on the value-weighted market portfolio. Panel A reports the results for sample of univariate positive/negative credit watch placement and bond rating upgrade/downgrade. Panel B reports the results for linked sample of credit watch placements and bond rating changes. T-statistics are the test of whether the CAR in the event period (-3,+3), where day 0 denotes the day of the credit watch placements or bond rating changes announcement, is different from zero are presented in parenthesis below the cumulative abnormal return. The last two columns of Panel A show test statistics of CARs between positive (negative) watch and bond Upgrade (Downgrade) and last column of Panel B show the differences and test statistics of CARs between expected bond upgrade (downgrade) and surprised upgrade (downgrade) using Non-Parametric (Wilcoxon Rank-Sum Test). *, **, and *** indicate significance at the 10%, 5%, and 1% levels.

Panel A Credit Watch Placements and Bond Rating Changes

Credit Watch / Bond Rating	Obs	Cumulative Abnormal Return (%)	
Positive Watch	387	2.74%	***
		(4.39)	
Negative Watch	1096	-6.34%	***
		(-10.82)	
Bond Upgrade	816	0.61%	***
		(2.67)	
Bond Downgrade	1664	-6.28%	***
		(-12.00)	
Positive - Upgrade		*2.13%*	***
		(2.58)	
Negative - Downgrade		*-0.06%*	
		(-0.93)	

Panel B Linked Sample of Credit Watch Placements and Bond Ratings

Positive Watch and Bond Upgrade

Linked Credit Watch / Bond Rating	Obs	Cumulative Abnormal Return (%)	
		Credit Watch	Rating Change
Positive$_1$ / Upgrade$_1$	346	2.87% ***	0.47%
		(4.22)	(1.52)
Surprised Upgrade$_2$	470		0.71% **
			(2.20)
Upgrade$_2$ - Upgrade$_1$			*0.24%*
			(0.19)

Negative Watch and Bond Downgrade

Linked Credit Watch / Bond Rating	Obs	Cumulative Abnormal Return (%)	
		Credit Watch	Rating Change
Negative$_1$ / Downgrade$_1$	933	-7.10% ***	-4.95% ***
		(-11.1)	(-7.89)
Surprised Downgrade$_2$	731		-7.98% ***
			(-9.07)
Downgrade$_2$ - Downgrade$_1$			*-3.03%* **
			(-1.98)

Table 3 Institutional Trading around Credit Watch Placement and Bond Rating

The table presents summary information of institutional trading around Moody's credit watch placements and bond rating changes. Mean (Median) total Share Volume is the total share volume of institutions from Abel Noser Corp in event period (-3,+3) where day 0 denotes the day of the credit watch placements or bond rating changes announcement. Volume Adjusted is share volume normalized by CRSP daily trading volume.

Credit Watch / Bond Rating		Shares Volume	Volume Adjusted
All Credit Watch	Mean	3,764,824	0.18
	Median	433,630	0.14
Positive Watch	Mean	2,640,596	0.16
	Median	424,215	0.13
Negative Watch	Mean	4,161,791	0.19
	Median	434,340	0.14
All Bond Rating Change	Mean	2,398,576	0.19
	Median	225,800	0.14
Bond Upgrade	Mean	1,680,701	0.18
	Median	278,300	0.14
Bond Downgrade	Mean	2,756,635	0.19
	Median	199,665	0.14

Table 4 Trading Imbalance

The table presents raw and abnormal trade imbalance by institutions for event windows from days -3 to 3, where day 0 denotes the day of the credit watch placements and bond rating changes announcement. A raw trading imbalance is the difference between the number of shares bought and sold by institutions, over a given window, obtained from the Abel Noser database of institutional trading, standardized by the total number of shares outstanding. Abnormal trading imbalance is the trading imbalance in an event period relative to the corresponding benchmark period. For the univariate credit watch and rating change analyses, institutional trading activity is benchmarked against -80 to -61 days *before* and 61 to 80 days *after* issue being put on the watchlist or the actual rating change, for comparison purposes. For the linked sample, the pre-event is the period -80 to -61 days before a bond is put on the watchlist while the post-event is the period 61 to 80 days after the actual bond rating change. Panel A reports the results for sample of univariate positive/negative credit watch placement and bond rating upgrade/downgrade. Panel B reports the results for linked sample of credit watch placement and bond rating changes. T-statistics are the test of whether the mean is different from zero are presented in parenthesis below the trading imbalance. The last two columns of Panel A show test statistics of raw and abnormal trading imbalance between positive (negative) watch and bond Upgrade (Downgrade) and last column of Panel B show the differences and test statistics of raw and abnormal trading imbalance between expected bond upgrade (downgrade) and surprised upgrade (downgrade) using Non-Parametric (Wilcoxon Rank-Sum Test). *, **, and *** indicate significance at the 10%, 5%, and 1% levels.

Panel A Credit Watch Placement and Bond Rating Change

Credit Watch / Bond Rating	Obs	Raw Imbalance		Abnormal Trading Imbalance	
Positive Watch	387	-0.13	**	-0.16	***
		(-2.46)		(-2.97)	
Negative Watch	1096	-0.22	***	-0.22	***
		(-2.93)		(-2.79)	
Upgrade	816	0.09	***	0.06	*
		(2.61)		(1.77)	
Downgrade	1664	-0.22	***	-0.18	***
		(-4.17)		(-3.18)	
Positive - Upgrade		*-0.22*	*	*-0.22*	*
		(-1.64)		(-1.86)	
Negative - Downgrade		*0.00*		*-0.04*	
		(-0.17)		(-0.76)	

Panel B Linked Sample of Credit Watch Placements and Bond Ratings

Positive Watch and Bond Upgrade

Linked Credit Watch / Bond Rating	Obs	Credit Watch		Rating Change	
		Raw Imbalance	Abnormal Imbalance	Raw Imbalance	Abnormal Imbalance
Positive / Upgrade$_1$	346	-0.10 *	-0.13 **	0.04	0.01
		(-1.88)	(-2.35)	(1.22)	(0.30)
Surprise Upgrade$_2$	470			0.12 **	0.10 *
				(2.31)	(1.80)
Upgrade$_2$-Upgrade$_1$				*0.08* **	*0.09* *
				(2.13)	(1.76)

Negative Watch and Bond Downgrade

Linked Credit Watch / Bond Rating	Obs	Credit Watch		Rating Change	
		Raw Imbalance	Abnormal Imbalance	Raw Imbalance	Abnormal Imbalance
Negative / Downgrade$_1$	933	-0.24***	-0.22***	-0.13 **	-0.10
		(-2.92)	(-2.58)	(-2.05)	(-1.57)
Surprised Downgrade$_2$	731			-0.34 ***	-0.27 ***
				(-3.73)	(-2.87)
Downgrade$_2$-Downgrade$_1$				*-0.21* ***	*-0.17* **
				(-4.76)	(-2.09)

Table 5 Trading Profit

The table reports trading profits of institution trades during event period (-3,+3) to six different points in time. Trading profits are for linked sample of credit watch placements and bond rating changes. T-statistics are the test of whether the mean is different from zero. *, **, and *** indicate significance at the 10%, 5%, and 1% levels.

	Trading Profit											
Credit Watch / Bond Rating	**Day 0**		**Day 5**		**Day 10**		**Day 30**		**Day 60**		**Day 120**	
Positive Watch / Upgrade	-0.24		-0.15		0.49	*	0.87		-0.28		-4.20	
Surprised Upgrade	0.70		0.24		0.40		-0.21		1.38	***	2.30	***
Negative Watch / Downgrade	2.70	***	2.02	***	1.77	***	2.24	***	2.03		3.61	
Surprised Downgrade	3.41	***	2.70	***	2.52	***	3.03	***	4.32	***	5.20	***

Table 6 Abnormal Volatility

The table presents three measures of abnormal volatility around Moody's credit watch placements and bond rating changes. High Low Price (HILOW) is defined as the average daily difference between the highest ask price and the lowest bid price standardized by the lowest bid price during the event window. Absolute return (ABSRET) is defined as the average daily absolute return during the event window. Squared return (SQRDRET) is the average square daily return during the event window. The raw volatility measures are adjusted by their respective benchmark. Each benchmark is calculated over days -80 and -61 and +61 to +80. Panel A reports the results for sample of univariate positive/negative credit watch placement and bond rating upgrade/downgrade. Panel B reports the results for linked sample of credit watch placements and bond rating changes. T-statistics are the test of whether abnormal volatility in the event period (-3,+3), where day 0 denotes the day of the credit watch placements or bond rating changes announcement, is different from zero are presented in parenthesis below each volatility measure. The last two columns of Panel A show test statistics of each volatility measure between positive (negative) watch and bond Upgrade (Downgrade) and last column of Panel B show the differences and test statistics of each volatility between expected bond upgrade (downgrade) and surprised upgrade (downgrade) using Non-Parametric (Wilcoxon Rank-Sum Test). *, **, and *** indicate significance at the 10%, 5%, and 1% levels.

Panel A Credit Watch Placements and Bond Rating Changes

Panel A Credit Watch Placements and Bond Rating Changes

Credit Watch / Bond Rating	Obs	HILOW		ABSRET		SQRDRET	
Positive Watch	387	0.34%	***	0.49%	***	0.17%	**
		(4.03)		(5.76)		(2.39)	
Negative Watch	1096	2.12%	***	1.45%	***	0.41%	***
		(9.32)		(12.42)		(7.15)	
Bond Upgrade	816	-0.11%	*	-0.10%		-0.08%	**
		(-1.81)		(-0.83)		(-2.23)	
Bond Downgrade	1664	1.63%	***	0.43%	***	0.25%	***
		(6.64)		(3.37)		(3.53)	
Positive - Upgrade		*0.44%*	***	*0.59%*	***	*0.24%*	***
		(4.54)		(6.11)		(7.27)	
Negative - Downgrade		*0.48%*	***	*1.02%*	***	*0.16%*	***
		(6.85)		(9.50)		(9.10)	

Panel B Linked Sample of Credit Watch Placements and Bond Ratings

Positive Watch and Bond Upgrade

Linked Credit Watch / Bond Rating	Obs	Credit Watch			Rating Change		
		HILOW	ABSRET	SQRDRET	HILOW	ABSRET	SQRDRET
Positive / Upgrade$_1$	346	0.34% ***	0.52% ***	0.19% **	-0.23% **	-0.40% *	-0.18% **
		(3.97)	(5.64)	(2.38)	(-2.15)	(-1.84)	(-2.32)
Surprised Upgrade$_2$	470				-0.02%	0.12%	0.00%
					(-0.29)	(0.92)	(0.47)
Upgrade$_1$ - Upgrade$_2$					*-0.21%*	*-0.52%*	*-0.18%*
					(-0.80)	(-1.47)	(-1.13)

Negative Watch and Bond Downgrade

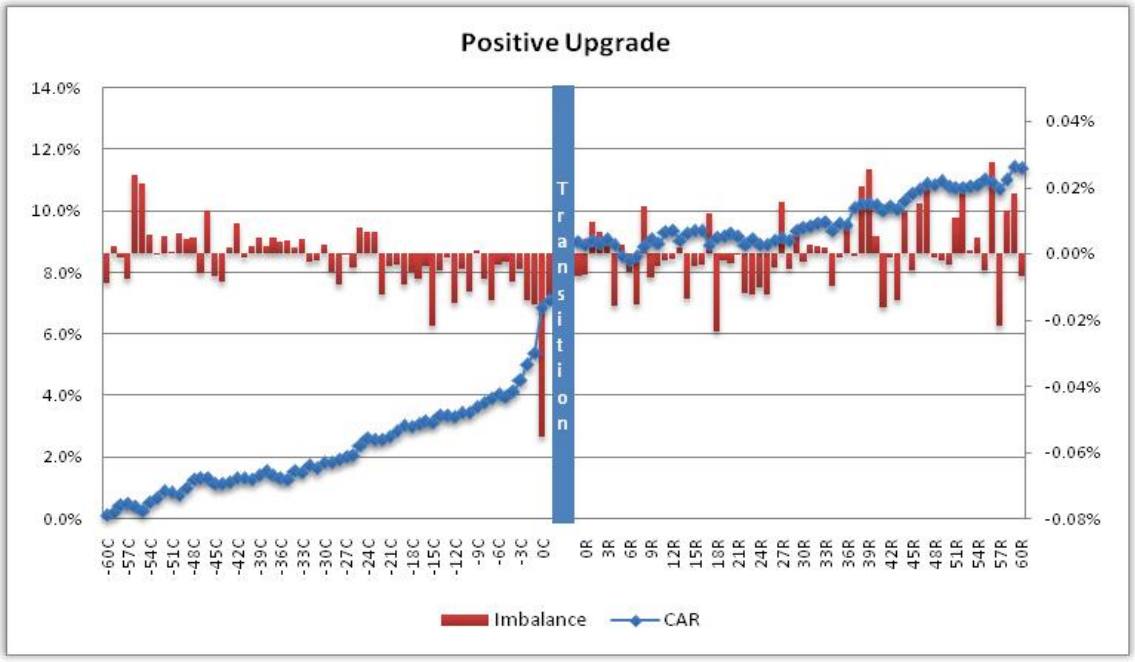
Linked Credit Watch / Bond Rating	Obs	Credit Watch			Rating Change		
		HILOW	ABSRET	SQRDRET	HILOW	SQRDRET	SQRDRET
Negative / Downgrade$_1$	933	2.27% ***	1.50% ***	0.44% ***	0.00%	-0.57% ***	-0.11%
		(8.64)	(11.52)	(6.64)	(-0.01)	(-4.24)	(-1.43)
Surprised Downgrade$_2$	731				3.73% ***	1.72% ***	0.71% ***
					(9.49)	(7.56)	(5.47)
Downgrade$_1$ - Downgrade$_2$					*-3.73%* ***	*-2.29%* ***	*-0.82%* **
					(-9.47)	(-10.20)	(-7.68)

Table 7 Credit Watch Transition Period

The table presents mean (median) number of days between the date of credit watch placement and its resolution, cumulative abnormal return (CAR), adjusted trading imbalance and abnormal volatility and during transition period. The results are reported separately for all credit watch sample, credit watch duration within 90 calendar days and more than 90 days. CAR is defined as stock return minus the contemporaneous return on the value-weighted market portfolio. Volatility (HILOW) is the average daily difference between the highest ask price and the lowest bid price standardized by the lowest bid price. Imbalance is the difference in number of share buys and sells over the event window normalized by number of share outstanding. T-statistics (in parenthesis) are the test of whether the mean is different from zero. *, **, and *** indicate significance at the 10%, 5%, and 1% levels.

Credit Watch/ Resolution		Days	All			Within 90 Days			More than 90 days		
		Mean (Median)	CAR	Trading Imbalance	Volatility	CAR	Trading Imbalance	Volatility	CAR	Trading Imbalance	Volatility
Positive Watch/ Bond Upgrade			1.46% *	1.41	-0.33% ***	1.53% **	1.51	-0.33% ***	1.39%	1.3	-0.31% **
	T-Stat	*103 (87)*	1.84	0.96	-3.99	2.29	1.01	-3.36	0.93	0.5	-2.38
	Obs		346	346	346	181	181	181	165	165	165
	% of Total					*52%*	*52%*	*52%*	*48%*	*48%*	*48%*
Negative Watch/ Bond Downgrade			-1.71% *	-4.03**	-1.10% ***	-1.91% *	-4.37 ***	-0.68% *	-1.46%	-3.62	-1.51% ***
	T-Stat	*95 (78)*	-1.64	-1.99	-4.58	-1.78	-2.87	-1.94	-0.75	-0.88	-6.55
	Obs		933	933	933	539	539	539	394	394	394
	% of Total					*58%*	*58%*	*58%*	*42%*	*42%*	*42%*

Figure 1a shows daily abnormal return and adjusted trading imbalance over the window (-60,+60) around positive watch/bond upgrade and surprised upgrade. Daily abnormal return is defined as stock return minus the contemporaneous return on the value-weighted market portfolio. Adjusted imbalance is the trading imbalance, defined as difference in number of share buy and sell obtained from the Abel-Noser database of institutional trading, standardized by the total number of shares outstanding minus the benchmark trade imbalance.



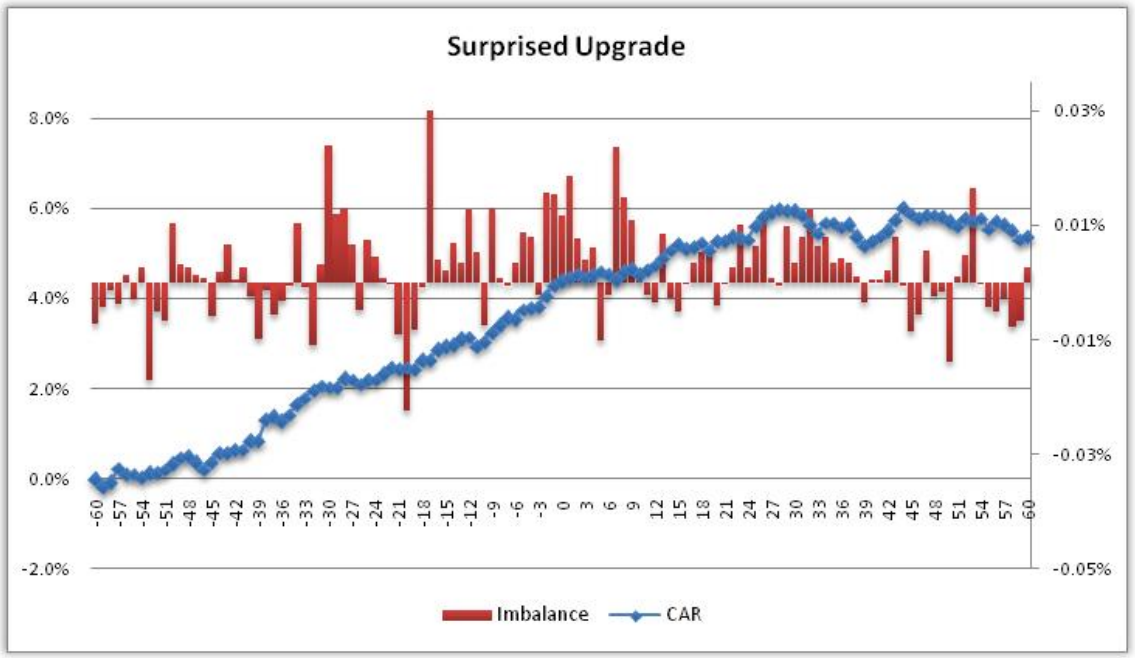


Figure 1b shows daily abnormal return and adjusted trading imbalance over the window (-60,+60) around negative watch/bond downgrade and surprised downgrade. Daily abnormal return is defined as stock return minus the contemporaneous return on the value-weighted market portfolio. Adjusted imbalance is the trading imbalance, defined as difference in number of share buy and sell obtained from the Abel-Noser database of institutional trading, standardized by the total number of shares outstanding minus the benchmark trade imbalance.