

CHAPTER 3

LITERATURE REVIEW

Through the years many researchs have been conducted on bonds rating as well as its effects on the stock markets. There are researchs, which shows that there is some level of relation between stocks and bonds, some have low impact and some have high impact.

3.1 RATING CHANGES AND STOCK RETURNS

HOLTHAUSEN AND LEFTWICH (1985) their research they suggest that downgrades are associated with negative abnormal stock returns in the two-day window beginning the day of the press release by the rating agency. Significant negative abnormal performance can still be detected after eliminating observations containing obvious concurrent press release. Based on their research they believe that the significant level on abnormal returns for upgrades announcement was not strong. Their research uses daily data surrounding press release dates to examine abnormal returns of the common stock of companies experiencing bond-rating changes. They believe the use of daily data has two advantages, first it provides more powerful tests, assuming the exact event date can be identified. Secondly the use of daily data and narrow announcement window of two days reduces the likely hood that the effect of the other disclosures is included in the measured announcement effects. The research also investigates potential determinants of the cross sectional variation in the price impact for rating changes such as the magnitude of the rating change whether the rating change effects a bond's investment grade status, whether the rating change closely follows a similar change by the other agency and whether the rating change is a resolution of credit watch.

Holthausen and Leftwich, also uses the market model as **their** methodology in estimating the returns of the markets. The **sample** consists of 1014 rating changes over the period 1977-1982. The **rating** changes were categorized whether they are within or across **rating** classes the sample contains 456 downgrades across classes and **183** downgrades within class. There are 243 upgrades across classes **and** 132 within a class.

Their result suggests that rating agencies provide information **to** the capital market. Previous studies have either failed to find **significant** price response to rating change announcement, or found **price** response using monthly data. Using monthly data, instead of **daily** data, increase the probability that the pre- response is due to **other** information released during the month.

The faster the agency responds the more likely the **observation** is eliminated. In some cases the company changes its intended **actions** because of the rating change. Those observations are contaminated **if** news of the intended action is released around the time of the **rating** change. An expectation model of rating changes could be based **on** yields to maturity of bonds of a given class. Differential yields **within a** given class might imply which rating changes are more or **less** expected.

Past studies on the impact of bond rating changes have **focused** on bonds or stock and the information content of rating **change** announcement. JANIS K ZAIMA AND JOSEPH McCARTHY, 1988, examines both bonds and stocks and investigates the **wealth** redistribution effects as well as the existence of information content.

Earlier studies, on the impact of rating reclassification on **the** stock prices provide somewhat conflicting results. Pinches **and** Singleton examine the reaction of common stock prices to bond **rating** changes and finds that the information content of bond rating **change**

announcement for stock prices is very small. Griffin and Sanvicente(1982) reexamine the effects of rating changes on common stock and their results did not fully support the result of Pinches and Singleton (1978). Their test supports the hypotheses that bond-downgrading announcement provide significant information: however bond-upgrading announcement do not provide significant information. Katz and Grier (1974) suggest that there may be moderate excess returns when trading rules are used on downgrading of industrials bonds. Whereas Hettenhouse and Sartoris (1976) suggest that prices have already reacted to the information that preceded the bond rating reclassification. The above results lack consistency and suggest that there may be more to a rating change than a information effects. The bond rating changes may also signal wealth redistribution between stockholders and bondholders. To summarize, this paper produce two hypothesis, the effects of the both hypotheses are separately examined for an upgrade and downgrade. For upgrades information content hypothesis implies that both securities increase in value, whereas a wealth redistribution hypothesis implies that stock value decreases while bond value increases. For downgrades, an information content hypothesis implies that both securities decrease in value, whereas a wealth redistribution hypothesis implies that the stock value increases while the bond value decreases.

Forty-one firms with bond rating reclassification are identified from January 1981 to June 1981. The bond of firms without rating changes are paired with bonds of firms with rating changes in order to find a relative measure of the latter group.

The results from the excess returns analyses and wealth difference returns analysis provide three significant insights about market reaction during the bond rating reclassification period; a) The market perceives downgrading reclassification announcement as significant information and stock and bonds returns decline. Furthermore decline more than bonds. b) There is however no information content for upgrades c) the market appears to react to wealth redistribution between bondholders and stockholders for

upgrades. These results suggest that the weak information content provided by upgrades announcement may be due to a confounding effect caused by the wealth redistribution effect.

Bond ratings are the principal source of investor information about the quality and marketability of various bond issues. The capital market efficiency requires that the price fully reflect all available information. Studies have shown that the capital market for common stocks is highly efficient in that there is no significant price adjustment when new publicly available information is considered. Previous research on the information content of bond rating changes has produced conflicting and incomplete results.

GEORGE E PINCHES AND J CLAY SINGLETON (1978)_In their research, the question they examined are: 1) in a efficient market, does a bond rating change possess new information that investors have not already discounted; 2) what is the average rate changing lag, i.e the difference between the time investor's actions signify their recognition of significant changes in the prospects of the firm's and the time the rating agency changes the firm's bond rating: 3) is there a difference in the changing lag when a company -specific event(i.e , new debt or equity financing, retirement of debt, merger. etc) occurs simultaneously with the rating change?. Based on their research, they discovered, if bond-rating agencies possess the ability to predict changes in the financial and operating position of a firm before investors are fully aware of these changes, the publication of a rating change contains information not previously available. However, if there is a substantial lag between changes in a firm's financial and operating characteristics affecting the quality of the bond and the actual bond rating change, the change itself should possess little or no new information for investors. Given the concerns raised about the bond rating process and because of the reliance of many institutional investors on bond rating, both the information content of changes in

bond rating and the length of the rate changing lag are important areas of concern.

The Methodology was based on the following market model specification of the returns on the securities.

One hundred and eleven firms experienced bond rating upgrading while 96 firms experienced decreases in their bond ratings. (In all cases of their analysis the rating increased or decreased by only one rating). Seventy-nine months of consecutive stock price data was collected. In most cases data were for the period beginning forty-two months before the rating change and ending thirty-six months after the change.

As a result of their research, three hypotheses were presented: The first hypothesis was that where bond rating increases (decreases), abnormally high (low) common stock returns should occur before the announcement of the bond rating change. The second hypothesis was that where abnormally high (low) returns were expected before the change in the rating, normal returns were expected after the month of the bond rating change. The next question examined was the duration of the rate-changing lag. It was hypothesized that the lag would be longer in the absence of some company specific event that forced the rating agency to initiate a review of the rated firm's financial and operating condition. The rate-changing lag was estimated to be between one and one half years for all bond-rating increases. For decreases without company specific event occurring simultaneously with the rating change, the lag was estimated at 15 months: For decrease with company specific events it was estimated to be no more than six months. Thus the researcher rejected the third hypothesis. This study concludes that the information content of bond rating changes is very small: in fact the stock market appears to highly efficient is processing this type of information for both bond rating increases and decreases.

1.2 RATING DOWNGRADES AND THE EFFECTS

JEREMY C GOH AND LOUIS H EDERINGTON, 1993, their research analyses the acceptance of bond rating changes by investors. In most of the cases the equity market reacts negatively to news that a company's debt is being downgraded and that these downgrades have informational content with negative implications. This studies argues that though there are, cases where the above hypothesis is true but it is not likely to be true in all cases. First of all the studies argues that it is unlikely that all downgrades are a surprise since many follow news of an increase in the firm's riskiness. Secondly, more importantly, while surprise downgrades are clearly bad news for bondholders it is not necessarily bad news for stockholders. In particular, if the bonds are downgraded because the rating agencies foresee an increase in leverage that will transfer wealth from bondholders to stockholder, bond price should fall but equity price should rise. They focused on the downgrades of bonds whether there are surprises or a bad news and whether it all brings negative implications. Prior to this paper, Wakeman (1990) argues that the rating agencies summarize existing public information i.e. they lower information costs but don't provide new data. However most studies such as Griffin and Sanvicente (1982), Holthausen an Leftwich (1986), Wnasley and Clauriete (1985) finds a significant negative reaction to bond downgrades.

Using again the market model they have collected a set of 1078 rating changes announced for the period of 1984 to 1986.

The finding concludes that the rating downgrades can be categorized to two; 1) due to deterioration in firm's financial prospects and 2) those due to an increase in leverage. The former has negative implications for the stockholders and the latter positive. The finding also reveals that the negative equity market reaction to the first group of downgrades but no reaction to the second. They conclude that the rating changes cannot be treated as homogeneous i.e., the cause must be considered.

3.3 MARKET REACTION TO BOND DOWNGRADING

BI KEQIAN AND LEVY, HAIN 1993 analyses the announcement effect of the first consistent downgrading of bonds on stock prices. A distinction is made between firms whose bonds are downgraded and those firms with identical downgrades. It is found that the market on average is able to distinguish between firms having identical downgrading when one subsequently.

They used event study methodology that is the daily mean adjusted excess return model to determine the impact of downgrading of bonds on stock prices. The event is defined as the first consistent downgrading of the bond. Over time, both upgrades and downgrades can be experienced for the same bond as the form of the company changes. In this study their focus is on situation of financial distress and the ability of rating agencies to capture all relevant information known to the market. They have selected a two-year period (510 business days) ending 11 days before the event as the comparison period. Thus the comparison period is 510 days to 11 days before the change in the bonds rating. The actual event, the change in the bond's rating, is taken as the 21-day period beginning ten days before and ending ten days after the downgrade announcement and the downgrade itself. To study the stock's' excess return as a company approaches bankruptcy, they selected a sample of bonds based on two criteria's. First the bond must be publicly traded and listed in S& P bond guide with a bond rating from either S& P or Moody's. Second the companies between September 1977 and October 1988. Fifty corporate bonds had rating and other available data from S & P

The response of the financial markets to a firm's bankruptcy is investigated. They examined how bond downgrading impacted the market as measured by the daily residuals of a company's stock rate of return. The main conclusion of this paper is that event study of the

stock market reveals that for firms subsequently filing for bankruptcy, a negative abnormal return exists in the event period and in particular on the event date. Therefore downgrading of bond on average conveys new information to the market resulting in negative excess return. In this respect the agencies provide important information to market. This implies that the rating agency services do not provide sufficiently refined rating, or are unable to distinguish between the two evolutionary patterns of financial distress. The market's interpretation may be ahead of the rating agencies only up to the second downgrading, because the rating agencies may reveal additional negative information about the firm in its second and further downgrading before the firms. Thus, the market may be ahead of the rating agency only during period between the first consistent downgrading and the next downgrading.

LOUIS H EDERINGTON AND JEREMY GOH, 1998, their primary focus was whether rating changes help predict earnings forecast and vice-versa. The hypothesis are 1) the differential response to downgrades and upgrades arises because companies voluntarily release favorable information but are reluctant to release unfavorable information; 2) the rating agencies expend more resources in detecting deteriorations in credit quality than improvement.

The study was conducted based on standard event study of the market reaction to an announcement of a rating change. The resulting sample consists of 494 downgrades and 310 upgrades.

The finding reveals that the market impounds downgrades information much more quickly and efficiently than analysts do since, while market returns show no post downgrade pattern, analysts are still revising the forecast months later. In contrast to downgrades,

upgrades appear to be purely a response to information that the market already has since there is no market response, since the upgrades follow both periods of positive returns and upward earning forecast revisions, and since there is no evidence that actual earnings rise following upgrades. Goh and Ederington find that most downgrades reflect a downward revision in the firm's prospective cash flows, which is bad news for both.

MICHAEL J HO; ROBERT S HARRIS, (1998) Their research study examined 3-, 4- and 5 level system and found that in all rating system, upgrades outnumber downgrades. Price reaction are more pronounced to multiple level than to single level recommendation changes and to recommendation upgrades to highest rating category. These price reactions confirm that market gleans new information form analyst research but suggest that investors at least partially recognize analyst tendency toward optimism and thus react strongly to downgrades. The price effects also show that adding more rating categories is not simply a way to portion out information in smaller bits. Some of the largest price reaction is to changes between the top 2 categories in a 5 level system, even though the descriptions of the categories would not signal a portfolio action.

Their study used 4436 recommendation changes from January 1989 to July 1992. They used daily return to obtain share returns data for the 241-day period centered on the publication date of the analyst report. To avoid confounding effect of multiple reports on the same company in a relative short time, they exclude all clusters of reports on a company when multiple reports occurred within a three-week period.

Firstly price responds to analyst recommendation changes. With the exception of the prepublication period (day 5 to 1) for four level system, all prices effect across the different time interval and rating systems are significantly different from zero. Price moves up with

the upgrades and down with the downgrades. Price responses are not confined to the release period but are spread out over a wider window as market adjusts. Secondly market responses to downgrades are typically larger than those to upgrades. Thirdly systems with more rating categories do not have smaller price responses for a one level change. This finding does not support the simple explanation that more rating categories simply carve up information into smaller bits. Whereas the multilevel changes do have significantly larger price impact than the single level changes.

ANTHONY RICHARDS AND DAVID DEDDOUCHE, 1999, their paper examines the performance of emerging market bank stocks around the time of rating changes by major international agencies. The study will focus on ; the extent to which bank rating changes followed periods when bank stocks had under performed or over performed other stocks within the same country ; and the movement of the bank stock prices around the time of the rating changes. In particular if rating agencies convey new and useful information's about bank health.

The study uses three types of standard event study test to examine the significance of the abnormal returns around the announcement of rating changes (i) tests on average abnormal returns (ii) tests on standardized abnormal returns: (iii) nonparametric test for the proportion of positive and negative abnormal returns around the event. Their rationale for the market adjusted returns rather than estimating a market model is based on the short estimation window. With only 32 and sometimes fewer observations, for estimating a market model, there is a possibility of substantial estimation error in the standard market model estimates of alpha and beta and accordingly substantial possibility of estimation error in the abnormal returns implied by market model estimates. Rating changes were defined as changes in a bank's long term debt or financial strength rating. The dataset included returns data for the week of the rating change and

where available up to 50 weeks around the change: 35 weeks prior to and 15 week following the event.

Their findings reveal that, their two samples of clean event suggest that abnormal returns tend to respond in the wrong direction immediately following the rating changes. In the case of upgrades, where the result appears statistically quite strong, they have to be cautious about their finding because of the small sample of events. They conclude by saying regardless of whether their results shows on shortcoming in the rating process or in the stock market valuation, it seems clear that regulators in emerging markets cannot rely too heavily on financial market participants to monitor the safety and soundness of banks. Regulators must instead improve their own prudential frameworks and examination skills.

3.3IMPACT OF UPGRADES AND DOWNGRADES

GOH, JEREMY C , EDERINTON AND LOIS H, (1999), their paper focuses on the market reaction to rating change varies across rating and bonds, where more observation is given to downgrades and particularly to the financial prospects sub sample. Their hypothesis; 1) whether or not the downgrade is a surprise and 2) the intrinsic importance of the information given that it is a surprise.

To test these hypotheses, regression is done on the two day announcement period CAR on the 45 day pre-announcement CAR. The surprise hypothesis implies a negative coefficient for CAR, while the importance hypothesis implies a positive coefficient for this analysis, they collected data on all corporate bond-rating changes between January 1st 1984 and December 31 1990, a total of 1526 of which 1043 were downgrades and 483 were upgrades.

Their study found that the stock market reaction to bond rating downgrades varies greatly depending on the nature of the downgrade. In general the market reacts more strongly to downgrades at the lower end of the rating scale. On the other hand, the market reaction is not strongly related to the number of levels the rating is reduced. For example the implication is that the stock market reaction to a downgrade from B2 to B3 is stronger than the reaction to a downgrade from A2 to A3, or even to a downgrade from AA3 to A3, and no weaker than the reaction to a downgrade from B1 to B3. They also found that the reaction to downgrades is stronger if the firm's pre-announcement abnormal returns have been negative and large. Since downgrades following periods of strong negative abnormal returns should not be as surprising as downgrades following periods of positive abnormal returns, they conclude that the stronger reaction is due to the nature of the information conveyed – that it is viewed as more important to stockholders. While not definitive, the fact that the market reaction is not dependent on the number of grades the rating is reduced. And the fact that the reaction is positively related to pre- downgrade CARs suggest that, the downgrades are viewed by the market as providing information on likely future earnings before interest charges – not just likely interest cost.

3.4 ANALYSIS ON INVESTORS REACTIONS

UTPAL BHATTACHARYA, HAZEM DAOUK, BRIAN JORGENSON AND CARL HEINRICH KEHR, (2000) their study examines the event studies which are used to measure the impact of an economic event on firm value. Assuming that the event will be reflected in traded asset price, these studies focus on how asset price respond to information released during a public announcement of the event. An interesting debate discussed by Fama (1997) rages on about the speed of stock price reaction to the information released during an announcement., on whether there is systematic over reaction or under reaction to information and whether the over reaction or under reaction

is inexplicably large. Though there exist many such disagreements on the reaction of stock price to information released during a public announcement, these disagreement arise in the first place because stock price do react.. This paper reviews an apparent example of a stock market where price do not react to firm specific news announcement. In this stock market, they find that returns in an event window, defined conventionally as the day before to two days after a firm specific public news announcement are in abnormal. Volatility, trading volume and bid-ask spreads in the event window is similarly typical. Two different types of test were used to test the impact of news announcement. The first series of test document that the return volatility of one series type, whose shares only citizen may hold, unambiguously leads return volatility of another series type, whose share can be held by foreigners, before the public news announcement, suggesting that there is an information spillover form one series to another. Secondly if the bid-ask spreads are ignored, economically and statistically significant returns can be made by applying simple technical trading rules that exploits this lead lag relationship.

The daily trading data are used for this study for the period of July 1994 to June 1997. The data were screened using the following process. The number of different types of securities they had ever traded in the market during the study period. The first screen that they applied was to select only common stock. Only 369 series survived this screen.

Using a data set of corporate news announcement from July 1994 to June 1997, their paper documents that nothing much happens to a firm' stock price on the day of an event. Returns volatility of returns, trading volume, bid-ask spreads are not typical in the event window. Further classification into A shares which only citizen may hold and B share which foreigners can hold, reveals that this lack of reaction

is mostly concentrated in the A shares, suggesting that foreigners are more surprised than the citizens. This finding, and the result that return volatility of A-shares leads to return volatility of B-shares, but not strongly enough for there to exist trading rules to arbitrage it away, insinuates that insider trading is responsible for the market's corporate news announcement to be a non-event.

3.5 MARKET REACTIONS

ARMONK, GLICKMAN AND MURRAY, (1994), they did a research on the efficient market which presents an image of information as something that exists objectively and ready for use. However in themselves, events are just isolated occurrences. They do not come read packaged as information. The second section of this article argues that financial information has an essentially dual nature in that financial events are characteristically open to interpretation at two levels: as potentially relevant to our understanding of real underlying condition and as suggestive of possible changes in the behavior of market participants. They argued that conventional tests of market efficiency, which consider only speed of market response and take no account of this duality, are inherently suspect. Efficient market purists would presumably take the view that this chain of events and reactions amounted to no more than a somewhat dramatic case of the market impounding new information in price as it became available, that it represented "efficiency"

The dual nature of financial information therefore undermines the possibility of testing for market efficiency purely on the basis of the speed of the market response to information concerning events in given class. What additionally required is a basis, independent of any price movement within the market for showing that events in that class were interpreted as information relating to underlying conditions in the context of that market.

The overall thrust of this discussion is that the efficient markets theory rests on the conceptual mistake of imagining that financial

information's is the type of entity that can unambiguously be characterized as being used either "efficient" or "inefficient"

GORDON, BARRY, RITTENBERG AND LIBBY (1995), their focus was to analyze the behavior of the Warsaw Stock Exchange in light of the efficient market hypothesis and alternative models of market efficiency. The analysis sheds light on the applicability of these theories to emerging markets and also provides policy insight on the structural issues in stock market organization in the emerging stock market.

Their analysis suggests that the theory of efficient markets does not adequately address the unique situation of Warsaw Stock Exchange. Their analysis suggests that in many cases the role of investor psychology on the Polish market appears more significant than the limited role conceded by efficient market proponents. The topic of investor's psychology in relation to market behavior has merit not only in regard to emerging markets but perhaps to more developed markets as well. In the case of the Polish market, it was shown that there is presently a noticeable relationship between the behavior of investors and actual market performance. Their results also indicate that although intended to encourage efficiency, certain regulations have actually had opposite the effect on market performance.