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**Effects of Insider Trading on the Bond Market**

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## **Abstract**

The bond market is affected by many of the same things the stock market is. When insiders trades stock of their own firm, Investors take this as a signal. Insiders are assumed to have an advantage by their position in the firm to know how well the price of the stock is going to do. Insiders are also assumed to take advantage of this information in trading for their account around the laws dictated by the Securities and Exchange Act of 1934. When significant news is going to be announced about a company, the stock price may begin changing prior to the announcement. This study examines the bond market to see if insiders make abnormal returns. It was found that there is some significant insider trading around the announcement date of insiders trading stock at the eight percent level for buyers and at the five percent level for sellers.

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## **EFFECTS OF INSIDER TRADING ON THE BOND MARKET**

Insider trading has captured the headlines over the past several years with the celebrated criminal prosecutions of Ivan Boesky, Michael Milkin, and Dennis Levine. They were involved in transactions where they had access to non-public information. They were also involved with other people who had access to inside information. With this inside information, they made staggering returns on investments in short periods of time. This form of insider trading is considered illegal by the Securities and Exchange Act of 1934 (Gadsby 2-17). Insiders are, however, allowed to make trades of their own firm's stock if proper disclosure rules are followed.

This paper examines the detail of what constitutes an insider, and what insiders are allowed to do while trading their own firm's stock. The paper discusses how insiders affect the market, both negatively and positively. The purpose of the research is to determine whether or not there is a correlation between the trading of stock by corporate insiders and the change in market price of the firm's bonds.

## DEFINITION OF AN INSIDER

According to the Securities Act of 1933, a corporate insider is anyone who:

1. Owns or controls 10 percent of any type of the firm's outstanding securities, (This technically applies to bondholders but was designed for stockholders (Schifrin 38))
2. sits on the Board of Directors,
3. is an officer of the firm,
4. has the ability to significantly influence the operating policies of the firm, or
5. has a close enough relationship with the firm to presume an access to non-public Information. (Born 40)

Insiders include those people who have the ability to significantly influence the firm, or have special knowledge of non-public information about the firm (Fosberg 83). Individuals sitting on the Board of Directors are in this category because they make policy for the company. If there are any mergers or acquisitions in the works, the board of directors makes the decision. Officers are also privy to any information of mergers or acquisitions, as well as have knowledge of the profitability and cash flow of the firm. Top managers often have similar information on the profitability of the firm. They also have a good feel for the industry and how the economy is affecting it. In addition, key employees and technical specialists, such as scientists and engineers know product innovations that are underway that even top management may not know much about yet. Friends and relatives of insiders, although they are not associated with the firm, have access to non-public information through their associations with people who are in the company. The wife of Toys R Us CEO Charles Lazarus was accused of illegal insider trading when she sold a portion of her private stake in the company to open a new office for her business. Mr. Lazarus had just exercised a stock option a few months before.

These two transactions were considered made by the same person because of their ties through marriage even though they each had their own accounts and the trade was not made in bad faith. They are appealing the decision requiring them to surrender the profits back to the company on the basis of having separate accounts (Giltenan 138). As of spring 1991, insiders who have stock options must hold the option six months after they are granted instead of the old rule where the stock must be held for six months after the option is exercised. Now, once an option is exercised the stock can be sold immediately as long as the option has been held for the required six months (Saunders).

People who bribe anyone listed above include many of the high flyers who are now serving prison sentences for illegal insider trading such as Ivan Boesky. These people paid insiders for providing them with the inside information to make trades resulting in excessive abnormal returns.

## **SECURITIES AND EXCHANGE ACT**

An attempt was made after the Great Depression to deal with fraud and manipulation in the securities markets (Arshadi 30). Congress passed the Securities and Exchange Act of 1934 for that purpose. The act addresses problems through strict disclosure requirements, and through restrictions on the transactions of "registered insiders (Arshadi 30)." Registered insiders are corporate officers, directors and shareholders with greater than 10 percent of outstanding equity described on page two. According to court interpretations, illegal insider trading breaches the insider's fiduciary duty to the stockholder as well as improperly utilizing corporate property for private purposes. Trading in a fraudulent manner such as Boesky and Levine bring big fines

A leak of an impending merger by the investment banking firm violates the fiduciary duty to the client. It has been argued that instead of a criminal indictment by the government, the proper course of action should be a civil suit for damages by the injured party or parties (Bandow 37). During merger negotiations, so many people are involved it is difficult not to have a leak of the impending merger. The directors of the two merging companies are involved, two or three law firms, investment bankers, public relations people, financial printers, and everybody's secretary (Keown 85). Bandow also says:

Insider trading is based on envious feelings, not economic facts. Most insider deals neither wrong individuals nor de-stabilize markets. The government jails insider traders as a matter of politics, not justice.

Henry Manne eluded to this in 1966 when he wrote:

Prior to the year 1910 no one had ever publicly questioned the morality of corporate officers, directors, and employees trading in the shares of corporations.... Today an announcement that insiders are dealing in their own company's shares is sufficient to cause an almost audible gasp of public indignation. (Arshadi 30)

Public disapproval of insider trading prompted Congress legislation in 1988 doubling the maximum jail sentence to 10 years and increasing the maximum fine ten-fold to \$1 million for insider trading violations (Bandow 37).

Crovitz says lawyers and financial printers should be liable to their clients. If there is no legal duty to keep information confidential, there should be no crime.

An example, Raymond Dirks, a financial analyst, discovered massive fraud in a large insurance company. He instructed his clients to sell their shares of this company. He was convicted under SEC Rule 14e-3 because he had found non-public information. The U.S. Supreme Court overturned this, ruling that since the defendant, Dirks, had no fiduciary duty to the firm he committed no fraud (Arshadi 31). This ruling effectively



said a violation of fiduciary duty is needed to prosecute. Law does not require a buyer to tell the seller there may be oil under his land; why should it be illegal for a trader to sell his stock if he is the first to learn that the company is a fraud (Crovitz). There was never any indication Dirks received his information illegally.

Another case dealing with the vagueness of Rule 14e-3 is the one involving Robert Chestman. The story starts when Ira Waldbaum decided to sell the family grocery store chain in 1986. He told his sister to collect her stock certificates. The sister had one of her daughters drive her to the bank to collect the certificates. While the daughter was doing this, her kids needed to be picked up from school. The daughter asked her sister (daughter #2) to take care of the kids. Daughter #2 told her husband, Keith Loeb, the reason for the car pooling. Loeb calls his broker, Mr. Chestman, and told him of some accurate, definite but undisclosed information about Waldbaum's acquisition by A&P (Crovitz). Mr. Chestman was found guilty of 31 counts of insider trading of Waldbaum, Inc. stock in 1989 (Lambert). Prosecutors say Chestman violated Rule 10b-5 in aiding and abetting Mr. Loeb to violate his fiduciary duty. The Second Circuit U.S. Court of Appeals overturned the conviction because Mr. Loeb had no fiduciary duty to his family. Mr. Chestman could not be convicted under Rule 14e-3 either because he had not been told the information was confidential, just non-public, and he made no assurances that it would be kept confidential (Lambert). The appeals court judges said that, "after passing through several family channels, it cannot be said that the information was confidential to any degree or was any more than family gossip (Galen "Insider")."

The Second Circuit Court of Appeals, by throwing out the Chestman case, said it would stretch the laws no further (Galen "Insider"). This is an indication of the

ambiguity implicit in the regulations governing insider trading. Robert Chestman spent 11 months in Allenwood federal prison for a crime that does not even exist (Crovitz). Regulators would like to make it a crime simply to know something in the market that someone else does not. They are saying that, "If a passenger in a plane sees a big fire at a firm's main factory it should be a crime for him to sell the stock short (Crovitz)." John C. Coffee, professor at Columbia Law School, says this of the appeals court decision:

Its significance is to limit the expansion of the misappropriation theory. Under this decision, it can only be applied when the government can make a showing that the defendant knew the information was stolen. (Lambert)

Theodore Levine, a Washington attorney, says the appeals court decision shows "the clear need for the government to define what insider trading is (Lambert)." Many executives dealing with Wall Street analysts feel like they are "fencing on a tightrope" according to a New York judge (Foust). Business must strike a precarious balance when discussing their company's prospects with investment professionals. The vagueness of insider trading law leaves open the chance of individuals becoming "accidental Criminals" such as Chestman and Dirks (Crovitz). Crovitz also says that the Second Circuit Court of Appeals declared by overturning Mr. Chestman's conviction that not all of the Wall Street targets of the 1980s were obvious crooks such as Ivan Boesky. Congress does not seem to be interested in cleaning up the ambiguous insider trading regulations. Representative John Dingell, Democrat from Michigan, said in a 1987 speech to the Securities Industry Association: "I see no need to define insider trading further at this time and give fertile legal minds opportunities to exploit loopholes (Crovitz)." Michele Galen compares the definition of insider trading to pornography, it is not clearly defined, but prosecutors know it when they see it ("Insider").

Cases of insider trading prosecution include the case of John Joseph, a typesetter at Business Week, who was caught trading on information from advance copies of Business Week magazine. He settled with the SEC paying \$30,000 back in profits and a \$14,000 fine. There was no admission of guilt, but the payment left him with a net worth of -\$15,000 (Abramson).

Dennis Levine started out innocently enough in 1978 when he met Bob Wilkis at Citibank, where they both worked. Wilkis had access to sensitive information about mergers Citibank might finance. As his contacts grew, so did his fortune. He eventually ran into Ivan Boesky. Their relationship was one of many that Boesky developed. Levine supplied Boesky with information for which he was supposed to be compensated. Levine was arrested before he was ever paid by Boesky but his personal fortune amassed through insider trading was over \$11.5 million. Dennis Levine was responsible for bringing down Ivan Boesky (Levine 83-85). Michael Milkin also was arrested during this time.

Milkin was accused of "parking" stocks with Boesky (selling stocks to Boesky while agreeing to repurchase them at a set price in the future). He manipulated stock prices. He arranged insider deals in the leveraged buy out of Storer Communications, the merger between Phillips Petroleum and Diamond Shamrock Corp., and several other transactions (Bandow 38).

## MARKET EFFICIENCY

Should insider trading be illegal? Efficient markets require information as fast as possible. Vague insider-trading laws hampers this information dispersion (Crovitz).

Insider trading increases market efficiency. Shaw says:

The originator of the information (the individual or corporation that spent hard-earned bucks producing it) owns and controls this asset just as it does other proprietary goods -- securities, real estate, patents, or copyrights. This assignment of ownership and exclusive use is essential to encouraging the production of additional information. (34)

Individuals do little innovation except when they are given an opportunity to share in the value created by the innovation. The easiest way for that to happen, according to Ausubel, is through insider trading (1025). Insider trading increases market efficiency. As is written in *The Economist*: stock markets, as all markets are machines for processing information. The faster information reaches them, the sooner prices can adjust to it, and the better they work. When an insider knows something the market does not, and acts on the strength of that knowledge he moves share prices closer to their actual value and where they will be when the news eventually gets out. As prices move closer to where they should be, decisions on the allocation of capital become more efficient. On this view, insider dealing acts as an economic lubricant. ("Cheating")

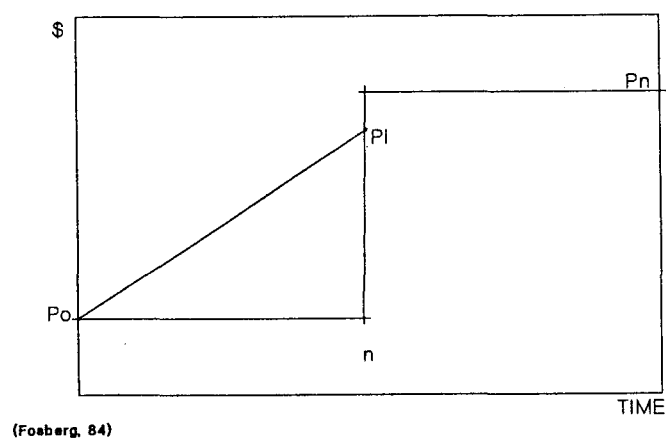
According to Henry Manne:

The insiders' gain is not made at the expense of anyone. The occasionally voiced objection to insider trading--that someone must be losing the specific money the insiders make--is not true in any relevant sense. (Ausubel 1025)

It is relevant to a few. Between the time the insider starts trading, and the time the information with which the insider is using becomes publicly disclosed is relevant. The line between points  $P_0$  and  $P_1$  in Exhibit 1 illustrate the relevant time. As can be

seen, the line connecting point  $P_0$  to point  $P_1$  shows the increase in stock price as a result of a series of trades by the insider forcing the price up. Point  $n$  is where the information becomes public. Anyone who sells during this time whether the insider forced the price up or not would benefit from the actions of the insider. If it were not for the insider, the seller would sell for  $P_0$  instead of somewhere between  $P_0$  and  $P_1$ . For someone buying, the opposite would hold true. They would pay more than the  $P_0$  they would have had to pay if it were not for the insider causing the price to increase. This buyer would be the victim of this so-called victimless crime (Fosberg 84). This victim might be the small odd-lot trader, or it might be a large corporation in the process of a buy-out. If a buy-out were the case, the insider trader could cost the buying company millions of dollars more than the takeover would have cost without insider trading affecting the

### EXHIBIT 1 EFFECTS OF INSIDER TRADING



market price. Though it might cost the odd-lot trader as little as a few dollars, the odd-lot trader is still victimized. The point must be made that the volume of trading by the insider would have to make up a large percentage of all shares traded of that particular stock in order to have the dramatic effect on the price as seen in Exhibit 1. If the insider traded only a few shares, or even a few hundred shares of a large firm, the effect on the stock price would be unnoticeable.

Trading on inside information can also make for less efficient markets. Penman says insider trading can capture the returns from generating information (480). Insiders could generate this information falsely for their own short-term profit at the expense of outside investors as well as to the detriment of their firm and their firm's image. Insider trading effectively "taxes" the market forcing the average bid-offer spread to widen to account for material information accessible to only a select few ("Cheating").

## INFORMATION CONTENT

When insiders buy their own firm's stock, they are indirectly disclosing positive information. Insiders can benefit from the timing of trades. If they know of an impending "good news" announcement, they can buy before or sell after the announcement. On the other side, they can sell before or buy after a "bad news" announcement (Penman 491). Their trading contributes to allocational efficiency just as "proper capital-asset pricing leads to the optimal allocation of capital resources (Ausubel 1025). "By permitting those with information to take market positions in line with the announcement of that information, insider trading promotes the production and dissemination of information .... This information might not otherwise be produced thus causing an under-investment in information in the economy (Penman 480)." Efficient markets are a result of quick accurate information. Information causes pricing to be more accurate allowing for the more efficient allocation of capital.

### In Predicting Future Stock Price Movement

Research over the past has concluded that insiders can predict stock price movement up to six months subsequent to trading (Jaffe 410).

In his thesis at the University of Pennsylvania in 1956, Thomas Driscoll studied trading by insiders prior to dividend changes. Insiders buy more than they sell in the six months prior to dividend decreases. He concluded that the evidence does not suggest any noticeable speculative interest of insiders with respect to unfavorable dividend action. (Jaffe 410)

In his 1963 dissertation at the University of Pennsylvania, Hsiu Wu classified months as net buying or net selling months. He studied the price movement during the

month following the month of trading. He concluded no relationship existed between insider trading and subsequent stock price movement. (Jaffe 411)

David Rogoff, in his 1964 thesis at Michigan State University, studied 45 companies' insider transactions. He looked at months where at least three insiders made purchases at the same time no insiders made sales. Insiders of these companies averaged a 9.5 percent gain greater than the market as a whole over the following six months. (Jaffe 410)

Gary Glass, in his dissertation at Ohio State University in 1966, examined eight securities with greatest buyers to sellers among insiders in a given month over a 14 month period. He found the average return on these securities is 10 percent greater than the return on the stock market as a whole in the seven months following the individual months of intensive buying. (Jaffe 410)

In their paper which appeared in the *Journal of Law and Economics* in 1968, James Lorie and Victor Niederhoffer investigated the performance following months in which there at least two more buyers than sellers among insiders of a firm. They found that when a security experienced a heavy buying month, the price was more likely to increase than decrease relative to the market in the six months following the event. Conversely, a heavy selling month showed the security more likely to decline than advance relative to the market during the six months after the event. (Jaffe 410)

Myron Scholes, in his 1972 article in the *Journal of Business*, investigated secondary offerings which included many by insiders. The residuals, the amount of return exceeding that of the market portfolio, of the securities declined an average of one percent on the days of these offerings. He says the residuals do not fall because of selling pressure. He says the drop is due to the market's belief that the issuer possesses



inside information of an adverse nature, but found no further systematic change in stock price beyond the day of offering. (Jaffe 411)

Jaffe did a study in 1974 where he found that a trading strategy based on intensive trading by registered insiders was able to outperform the market (Keown 856). The residual return was found by Jaffe to be about five percent in the eight months following an intensive trading event (Keown 856).

Finnerty and Seyhun did further individual studies in 1974 and 1986 respectively. They also found that insiders can identify mispricings in their own firms and trade on the basis of their special information. (Seyhun 1)

It might be noted that as time has elapsed, more studies have shown the benefit of following the actions of insiders. The two studies noted here that found no relationship between insider trading and stock price movement were the two oldest. Six subsequent studies have found a relationship. Those first studies were not as accurate because their sample sizes were small.

Following the lead of insiders will not always bring abnormal returns. Norman Fastback and Glen Parker in their newsletter, "The Insiders," at the Institute for Econometric Research in Fort Lauderdale, Florida, conducted a study on mimicking insider's trades for the period between January of 1985 and September of 1990. They concluded that it was not as easy to profit from this "anomaly," as theory suggests, because too many investors following insider's leads will dilute what used to be a way of achieving above market returns. Over those six years, the researchers gained an average of 4.9 percent, that is significantly less than the S&P 500's 13.5% gain over the same period. (Hulbert "Insider") Many consider selling by an insider a negative signal. Selling by an insider does not always signal trouble for the company. Insiders receive a part of their

compensation in stock and stock options. After a certain accumulation of stock, insiders may want to sell some in order to take on other investments for diversification of their portfolio or because of liquidity needs (Frons 146). By the same token, buying by insiders does not always mean good things because corporate insiders are notorious for being eternal optimists on their own company (Palmer).

### As a Market Timing Device

Academic studies have focused on studying insider transactions in picking specific stocks, not as a measure for market timing (Hulbert "Inside"). Seyhun, in a 1988 study, analyzed about 60,000 open market sales and purchases by insiders. The study examined the relationship between market movements and aggregate insider trading. It suggested insiders cannot always distinguish between the effects of firm-specific and economy-wide factors. The insiders can only identify the effect on their own firm. Whether it is a macro or a micro effect is of no concern. Seyhun wondered if information about insider trades help predict future stock market returns and provide market timing ability. Professors Wayne Lee and Michael Solt of Santa Clara University found recently that the volume of insider activity may be a guide to market direction, but they found no correlation between market direction and the ratio of insider buying to selling (Hulbert "Inside"). This is an indication that insiders have insight as to the direction of their own company, but there is no reason for them to have any more insight than the rest of us as to where the market as a whole is going.

Instead of focusing on the insider anomaly as a market timing device, attention should be shifted to broader anomalies of which it is a subset. The only one that lends itself to market timing is the *P/E* effect (Hulbert "Inside"). Rozeff and Zaman point out

that insiders generally buy low-cap companies with low *P/Es* while selling high-cap, high *P/E* companies. An investor would do no better, according to Rozeff and Zaman, imitating insiders' buying and selling than by simply constructing a portfolio out of low-cap stocks with low *P/Es*.

## **BONDS**

Bond trading is not regulated like stock trading is. Illegal trading in the bond market has not been established. Insider trading in stocks violates an insider's fiduciary duty to the stockholders, but there is no fiduciary duty to bondholders. The only duty to bondholders is the contractual payment of coupon interest (Galen "Junk" 57). There has been research done to determine the extent or existence of insider leakage in relation to an unannounced merger by looking at daily stock price movements. Keown examines pre-announcement abnormal returns occurring on listed versus unlisted stocks to determine if regulation associated with an organized exchange acts to deter trading on inside information. Registered insiders who are active in the bond market and insiders who are not registered are not required to follow the disclosure guidelines set forth in rule 16a and 16b of the Securities and Exchange Act. Therefore this kind of research can only be done with stock where registered insiders can be monitored. There are no registered insiders when bonds are involved. Most bond trading, particularly junk bond trading, is done over the counter.

Another aspect of bond trading that does not exist in stock trading is the creditor committees set up during a bankruptcy. Unsecured creditors are appointed by the court to negotiate with management for a reorganization which often is a restriction of debt

(Weston 841). These committees are set up to work out a reorganization plan for the company (Lyons 92). The members of these committees have first access to inside information on the intentions of the company. For this reason, a holder of the firm's debt has three choices. The debt holder may have an active part in the reorganization of the bankrupt firm through a creditor committee, or the debt holder may trade in the bankrupt firm's securities and sit passively while others determine the future of the firm (Lyons 92). Many of the organizations with representatives on these committees are investment companies who trade regularly. The committee member has a fiduciary duty to the other creditors represented by the committee, but the fund manager has a fiduciary responsibility to maximize return for customers (Lyons 92). This may involve trading the securities in the bankrupt company. The dilemma between allowing the trader fulfilling a duty to customers, and the representative on the creditor committee fulfilling a duty to restructuring the firm was bridged by a proposal by Fidelity Management and Research Company agreed to set up a "Chinese Wall" to prevent traders from gaining information of bankruptcy proceedings from fund personnel working with creditor committees. Schifrin says the Chinese Walls can be awfully thin (38). R.D. Smith brokerage business in New York, offered to buy bonds of a bankrupt firm a few weeks before the company announced a plan that would offer bond holders a premium. R.D. Smith had a representative on the creditors committee (Schifrin 38).

With respect to trading in junk bonds, former SEC counsel and law firm Fried, Frank, Harris, Shriver and Jacobson partner, Harvey Pitt, says the cornerstone of insider trading law "applies to any security listed on an exchange or otherwise. There's no reason inherently that insider trading law shouldn't apply to junk bonds (Anders)." The problem is that the Securities and Exchange Act was designed for stocks. According

to the head of SEC enforcement, William McLucas, it is going to be tough on regulators to determine how much of insider trading law actually applies to bonds. Case law has "been built up almost entirely in cases involving common stocks (Anders)." Trading in junk bonds is difficult to track because most of the trading is done discreetly instead of on an organized exchange. Because of its relative ease, trading on inside information is common according to Schifrin (36). Junk bonds are effectively the equity of highly leveraged firms. A corporate raider can take large positions in a highly leveraged firm without reporting anything to the SEC. The positions can be liquidated just as easily. This raider can tell a company he owns a controlling position in the company's bonds and the company can verify this only by checking with other bondholders to see if the raider is bluffing (Schifrin 37).

The effects of insider trading have never been studied to any degree on the bond market. The economy affects the bond market differently than it affects the stock market. When interest rates fall or there is a general decline in the economy, bonds generally increase while the stock market falls. If the economy is optimistic or interest rates are on the rise, the stock market generally increases while the bond market falls.

If investors see a firm's insiders buying, that is viewed as a good sign for the firm. The price of the firm's stock generally increases on this sign. If an insider is buying, that generally means the insider believes good things are happening in the firm. In October, John Sculley and two other executives of Apple Computer Inc. filed notice of selling some of their shares of Apple. Sculley intended on selling 100,000 shares for \$5.5 million at a price of \$54.50. The stock fell to \$48.75 by November after reaching \$55 days before Sculley's announcement (Jasen). This intent to sell came just before fourth quarter fiscal earnings were announced to have dropped 18 percent. Pennzoil's

chairman, J. Hugh Liedtke, sold 21 percent of his Pennzoil stock worth \$2.9 million two weeks before the company announced a delay in its restructuring plans and a change in plans to sell off its Purolator Products subsidiary. This news caught many investors off guard prompting analysts to issue sell recommendations. The stock fell eight percent that day. (Solomon) A significant drop in earnings nearly always makes the market value of a company fall. Shocks like this may also adversely affect bonds by making them more risky to hold. If an earnings announcement is shocking enough, bond rating companies may lower the rating it has for the company. If the rating is dropped from an investment grade to junk grade, many institutional investors will no longer be allowed to hold the bonds. This is due to restrictions placed on certain institutional investors requiring them to hold any investment grade corporate bonds.

This all affects price too. The increase in risk for no change in return will force the price down to the point the bond yields the same as comparable risky bonds. This is not a factor in the stock market. The change from investment grade to junk grade also may glut the market when the institutional investor forbidden to hold junk bonds must sell. This is also not a factor in the stock market. The maturity of the bond may have something to do with the amount of change.

## **PREDICTION OF STUDY**

In this research, it is predicted that when corporate insiders trade their personal holdings in the firm, the bond market will react in a similar way we have seen the stock market react. The magnitude of change in bonds will be less than for stock due to some fundamental differences in the security.

A major difference is the disclosure requirement. Section 16a of the Securities and Exchange Act sets very stringent rules for insiders on the reporting of stock transactions. That rule does not seem to apply to bonds allowing the insider to trade freely without being noticed. Even though the bond market is predicted to move similar to the stock market, huge profits are not as likely on the bond market because it is not as volatile as the stock market.

Bonds are not as risky as stocks and some bonds are riskier than others. If the firm should go bankrupt and be forced to liquidate, there is a priority as to which creditors are paid first as seen in Exhibit 2. Secured bonds will fluctuate the least on the market due to their safety. Secured bonds are collateralized so if the firm is liquidated, secured bondholders are the first to be paid. Unsecured bond holders, on the other hand, are number nine on the list. As a firm weakens and debt makes up a greater part of the balance sheet, unsecured debt becomes more like equity due to its riskiness and, in the event of a filing for bankruptcy, become responsible for reorganizing the firm. This is the debt expected to be volatile and very responsive to insider trading news.

## EXHIBIT 2

Claims on a firm to be liquidated  
In order of Seniority

1. Secured Creditors
  2. Trustee's costs to administer and operate the bankrupt firm
  3. Expenses incurred after involuntary case has begun but before a trustee is appointed
  4. Wages due workers if earned within 3 months prior to the filing for bankruptcy
  5. Claims for unpaid contributions to employee benefit plans
  6. Unsecured claims for customer deposits (maximum \$900 per individual)
  7. Taxes due to federal, state, county and other agencies
  8. Unfunded pension plan liabilities
  9. General or unsecured creditors. Holders of trade credit, unsecured loans, unsatisfied portion of secured loans, and debenture bonds are all general creditors. Holders of subordinated debt fall into this category but must turn over required amounts to holders of senior debt such as holders of notes payable.
  10. Preferred stockholders
  11. Common stockholders
- (Weston 842)



## RESEARCH METHOD AND RESULTS

The consensus among studies has been that insiders are able to identify profitable as well as unprofitable situations in their own companies in the short-term. There is no such consensus for long-term results. This consensus has effectively refuted the strong-form efficient market hypothesis.

The results of this study are based on bond prices where every study up to this point on insider trading has focused on the stock market. Since reporting bond trading by insiders is not required by the SEC, there is no way to track that data. Instead, insider trading of stock is followed and bond prices prior and subsequent to the trade is tracked.

The sample was taken by examining announcements of insider trading in *The Wall Street Journal*. Those insiders trading in firms not having outstanding bonds were eliminated. In the firms remaining, bond prices were recorded for the 10 days before and the 10 days after the announcement of the trade by the insider.

A treasury bond with similar coupon and maturity to the corporate bond being tracked was recorded along with each corporate bond followed in order to filter out any market influences on the price of the corporate bond. This process was to determine whether or not insider trading affected the bond prices being studied. Fifteen insider purchases and another 15 insider sales of stock were analyzed. The results, as seen in Exhibit 3, show the amount of excess return to the bondholders during the period before and after the trade by the insider was announced. The study found that there were abnormal returns right before the announcement of the insider's trade. The returns were more significant for sales transactions than for purchase transactions.

**EXHIBIT 3**

## Buyers:

<b>Period</b>	<b>Bondholder Excess Returns</b>	
-10, -2	0.69%	insignificant
-1, 0	0.35%	significant at 8% level
+1, +10	0.53%	insignificant

## Sellers:

-10, -2	-0.17%	insignificant
-1, 0	-0.43%	significant at 5% level
+1, +10	0.20%	insignificant

The findings of this study are similar to those studying stocks. In 1974, Jaffe found the residuals increase the most in the first few months after the trade made by the insider. In particular, the most significant returns occur in the second month after the trade which also translates into the first month after the announcement of the trade which can be seen in Exhibit 4. Jaffe's study followed 200 securities over a five month period. He lumps buy and sell transactions into one statistic. The residual increases when purchased stocks increase and sold stocks decrease (421).

Finnerty studied 9,602 buy transactions and 21,487 sell transactions from 1969 through 1972. Of the buy portfolios, the intercept is always positive and significantly different than zero at the 10 percent significance level. As is seen in Exhibit 5, the most significant returns are made in the first six months with the first month being the most significant (1146). All of the sell portfolios have negative differential returns which are significantly different from zero at the 10 percent level except for the fifth and seventh months. Unlike the buy portfolios, below average performance of sell portfolios takes place uniformly throughout the months subsequent to the inside transaction. Finnerty believes the difference in performance between buy and sell portfolios is one of two reasons: The first one is that the information on which insiders are selling is not immediately released to the market; and the other reason is the fact that insiders are selling is not immediately discounted by the market (1146).

Penman concluded in 1982 that insiders time their trades relative to announcements of their firm's earnings prospects. The numbers in Exhibit 6 are lower limits because there is no record of insider trading in other financial instruments such as stock options and bonds.

## EXHIBIT 4

### Cumulative Average Residuals

#### Time Measured from Month of Trading Event

Length of Time (Months)	Cumulative Average Residual	T-value	One-tailed Significance Level
Initial Sample (362 Observations)			
1	.0060	1.93	.026
2	.0118	2.24	.012
8	.0136	1.32	.010
Sample of Large Transactions (204 Observations)			
1	.0062	1.99	.023
2	.0134	2.09	.018
8	.0184	1.14	.126
(Jaffe 421)			

#### Time Measured from Month of Publication of *Official Summary*

Length of Time (Months)	Cumulative Average Residual	T-value	One-tailed Significance Level
Initial Sample (362 Observations)			
1	.0087	2.55	.005
2	.0027	0.91	.184
8	.0070	0.98	.064
Sample of Large Transactions (204 Observations)			
1	.0098	2.23	.013
2	.0134	1.67	.047
8	.0184	1.36	.088
(Jaffe 426)			

## EXHIBIT 5 MONTHLY DIFFERENTIAL RETURNS

### Buy Portfolio

Month from Trade	Monthly Excess Return	Standard Error	T-Statistic	Significance
0	.0368	.0128	2.875	.0420
1	.0101	.0053	1.905	.0731
2	.0085	.0026	3.230	.0042
3	.0037	.0012	2.972	.0054
4	.0053	.0013	4.252	.0002
5	.0026	.0011	2.440	.0200
6	.0049	.0013	3.832	.0005
7	.0016	.0012	1.433	.1010
8	.0018	.0011	1.606	.0951
9	.0021	.0012	1.808	.0675
10	.0040	.0012	3.369	.0019
11	.0020	.0012	1.750	.0891

### Sell Portfolio

Month from Trade	Monthly Excess Return	Standard Error	T-Statistic	Significance
0	-.0090	.0042	-2.143	.0403
1	-.0045	.0012	-3.750	.0007
2	-.0043	.0012	-3.583	.0009
3	-.0042	.0012	-3.500	.0009
4	-.0047	.0011	-4.272	.0003
5	-.0033	.0018	-1.277	.1581
6	-.0031	.0014	-2.214	.0438
7	-.0026	.0019	-1.368	.1173
8	-.0037	.0011	-3.363	.0019
9	-.0034	.0015	-2.266	.0468
10	-.0028	.0010	-2.833	.0421
11	-.0026	.0012	-2.166	.0398

(Finnerty 1147)

**EXHIBIT 6****Abnormal Returns Associated with Announcements of Corporate Earnings Forecasts**

Day	Estimated Cross-Sectional		t statistic
	Mean Abnormal Return	Standard Deviation of Abnormal Returns	
-40	-.0002	.0233	-.36
-30	.0005	.0208	.75
-20	-.0003	.0231	-.52
-10	.0009	.0230	1.29
-9	.0001	.0222	.14
-8	.0003	.0234	.37
-7	-.0006	.0234	-.89
-6	.0009	.0244	1.24
-5	.0003	.0242	.39
-4	.0008	.0229	1.17
-3	.0021	.0285	3.12
-2	.0014	.0250	1.99
-1	.0092	.0334	9.49
0	.0017	.0374	1.54
1	.0017	.0254	2.25
2	.0007	.0220	1.14
3	.0010	.0234	1.51
4	.0005	.0223	.71
5	-.0004	.0214	-.72
6	-.0001	.0224	-.10
7	-.0008	.0214	-1.21
8	-.0002	.0227	-.35
9	-.0002	.0232	-.33
10	.0000	.0224	.06
20	-.0006	.0222	-.87
30	.0000	.0230	-.06
40	.0008	.0232	1.15

(Penman 483)

Givoly found evidence that abnormal returns exist over the first 60 trading days. According to a t-test, abnormal returns over this period are significantly different from zero at the five percent significance level. He says this does not imply illegal exploitation of insider information does not occur. He does say the evidence suggests profits from insider trading are no associated with disclosure of specific news. Abnormal returns to insiders lasts well beyond the typical period of market reaction. This is summarized in Exhibit 7.

Seyhun, in his 1988 study, examined whether publicly available information about aggregate insider trading activity can help predict future expected market returns, and whether the predictability of market returns violates the concept of market efficiency. He used 1.5 million insider transactions over 82 months in 769 different firms. The study found that net aggregate insider trading activity in a given month is significantly positively correlated with the return to the market portfolio during the subsequent two months (22). Seyhun said that insiders increase their aggregate stock sales prior to declines in the stock market and decrease sales following increases in the stock market.

Rozeff, in his 1988 study, classified a stock as a buy if at least three insiders take the same action with no insiders taking an opposing action. Such as three insiders buying while no insiders sell. This decision by Rozeff was made to reduce noise caused by insiders making trades for diversification and portfolio rearrangement, not based on insider information (28). He found the same kind of anomalous results as have been found in prior studies. That is, profits can be earned when outsiders act on the publicly available information provided in the SEC summary of insider transactions. It is also noted that these profits largely disappear if a two percent transaction cost is assumed. The same is true for corporate insiders leaving them with three percent to three and a half percent in excess returns before the two percent transaction cost is assumed.

**EXHIBIT 7****Performance of Insiders as Measured by Abnormal Returns**

Period	Average Abnormal Returns	Cumulative Abnormal Return	Std.Dev. of Cumm. Abnormal Return	t-value
Buyers (1,118 purchases)				
0-9	0.0175	0.0175	0.1250	---
10-19	0.0079	0.0254	0.1724	5.90
20-39	0.0135	0.0389	0.2294	10.81
40-59	0.0056	0.0445	0.2833	13.25
60-79	0.0051	0.0496	0.3389	
80-99	0.0082	0.0578	0.3946	
100-119	-0.0024	0.0552	0.4537	
120-139	-0.0006	0.0546	0.5005	
140-159	0.0008	0.0554	0.5628	
Sellers (413 sales)				
0-9	-0.0066	-0.0066	0.1169	---
10-19	-0.0037	-0.0103	0.1577	-1.34
20-39	0.0102	0.0001	0.2176	.12
40-59	0.0207	0.0309	0.2480	---
60-79	0.0038	0.0347	0.3140	
80-99	0.0171	0.0518	0.3649	
100-119	0.0077	0.0595	0.4021	
120-139	0.0011	0.0606	0.4464	
140-159	0.0111	0.0717	0.4975	
All Transactions (1,531 transactions)				
0-9	0.0110	0.0110	0.1233	---
10-19	0.0048	0.0128	0.1692	3.45
20-39	0.0126	0.0284	0.2269	7.62
40-59	0.0125	0.0409	0.2742	11.80
60-79	0.0047	0.0456	0.3324	
80-99	0.0106	0.0562	0.3867	
100-119	0.0002	0.0564	0.4402	
120-139	-0.0002	0.0562	0.4863	
140-159	0.0036	0.0598	0.5459	

(Givoly 77)



## CONCLUSIONS

Bondholders can make abnormal returns based on insider trading of stocks. Insiders have been able to make anywhere from 0.79 percent to 1.75 percent average abnormal return where our studyd found insiders able to achieve a 0.35 percent at a ignificant level for buyers and a -0.43 percent at a five percent level for sellers. The significance is greater for stock transactions than for bonds. There is strong evidence that ensider activity affects prices around the announcement date of insider trades.

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