

盈余质量与债券市场反应

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Abstract: In this paper, we examine the effects of Earning Management on both equity market and bond market. The initial results show that: 1. Earning Management (measured by using Discretionary Accruals based on Modified Jones' Model) has negative effects on the corporate bond return and positive effects on the equity return; 2. These effects are more significant on high financial distress firms; 3. These effects are more significant when information asymmetry is severe (high adverse selection, high moral hazard); 4. Financial restatements have negative effects on both short- and long-term bond return by increasing the credit risk. The contribution of this paper is to provide the evidence about the relationship between earnings quality and bond market. And also, this study provide the initial evidence about the role of Earnings Management as a wealth transfer channel from bond holders to equity holders.

1. Introduction and Literature Review

There is now a large body of literature on the relationship between corporate earnings and equity market reaction. Beginning with Ball and Brown (1968) and Beaver (1968) discussing the role of accounting earnings in equity markets with on-going developments in methods and analysis, this area is likely to see further developments in the forthcoming years. However, little research work is known about the role of earning quality in bond markets. The role of accounting earnings is also very important for the debt holders.

1.1. Literature Review

The connection between earnings management and corporate bond market get increasingly more attention for recent years. Because the high total market size of corporate bond market (according to the Securities Industry and Financial Markets Association (SIFMA), as of Q4 2013, the U. S. corporate debt market size is \$9,766.4 billions), it is interesting and important to investigate the reaction of corporate bond market to earnings management. Some of these previous research works focus on the earnings management around certain events related to corporate bonds. Liu, Ning and Davidson (2010) provides empirical evidence that, similar to the earnings management around equity offering, firms manage earnings upward prior to bond offering. And they also find that observed abnormal accruals are negatively related to the cost of bond financing, which means bonds are priced inappropriately based on this inflated earnings numbers. Their work illustrates that both shareholders and bondholders are influenced by earnings management of firms. In the work of Caton et al. (2011), they find that seasoned bond issuers inflate earnings performance prior to an offering in order to inflate ratings and decrease offering yields. However, the regression results show contradictory to it, this aggressive earnings management efforts are associated with lower initial ratings and higher offering yields. From their results, it seems that rating agency and market can partially use accounting information of issuers to evaluate the bond. This is distinct from the work by Liu, Ning and Davidson (2010). So these two seemed conflict results give us the room to test whether bond market reacts to earnings management in a broad

sense. And according to our empirical analysis, bond returns are negatively associated with observed abnormal accruals. Another recent work associated with this area is Kim, Kim, and Song (2013) which investigates whether firm managers have incentives to affect the rating changes through income-increasing accruals manipulation or real activities earnings management. Their findings provide evidence that firm's managers tries to influence the upcoming changes of credit ratings by real activities earnings management rather than accruals-based earnings management. By using a large sample of quarterly data, Jha (2013) empirically analyses the earnings management around debt-covenant violation. According to the results, firms manage earnings upward in the quarters preceding a debt-covenant violation, but downward in the quarter a violation occurs, and earnings are managed continually downward while the firm remains in violation. And based on additional analysis. This paper provides evidence that the earnings management around the debt-covenant violation is also done to improve the manager's bargaining power in the renegotiation following the violation. Following this result, it is clear that managers of firm use earnings management as a tool to benefit from the interaction with debt holders. This empirical evidence inspires us to look for more evidences about the relationship between earnings management and the wealth of bondholders, which is the main goal of this paper.

Another direction of previous literature investigates the effect of earnings management, mainly of real earnings management, on credit risk of firms. Chen, Tseng, and Hsieh (2014) examines the accounting information effects on corporate credit risk. One of their results shows that, the volatilities of real earnings management activities significantly and positively affect corporate bond yield spreads. And they also provide empirical result that, this positive effect become weaker for the firms with lower credit rating. These empirical evidences of their work support that the idiosyncratic risk effects caused by real earnings management volatilities have an impact on firm credit risk. Although these two research works focus on more about the impact of real activities earnings management rather than accruals-based, it is interesting to test the impact of inflated earnings on corporate bond market. Because the corporate bond performance is highly related to the credit risk of the issuer, the results of these research works provide to us powerful foundation when we explain the cause of corporate bond reaction to earnings management. The basic intuition behind this connection is earnings management cannot directly increase the firm's fundamental value but early recognize future periods' income into the current period. As a result, this manipulation behavior potentially lowers the expected income in the following period. Since many debt contracts and bond covenants are backed by accounting performance (e.g. the ratio of income to total debts), this earnings management increases the credit risk in future periods caused by the reversal of accruals. This process implies that, similar to real activities earnings management, accruals-based earnings management also increases the credit risk of firms and then influences the performance of corporate bonds.

Regarding the direct evidence of the relationship between the corporate bond market and accounting earnings, there are also many fruitful works in recent years. The work of Easton, Monahan and Vasvari (2009) is one of the first papers which provides initial evidence of the role by examining both the incidence of bond trade around earnings announcements and the relation between bond returns and earnings news. The main research question of this paper is to test the role of accounting earnings in bond market by examine two hypotheses: First, the role of accounting earnings in the bond market depends on whether earnings convey good news or bad news about firm performance; Second, the role of earnings in the bond market depends on the riskiness of the bond. The basic intuitions behind these two hypotheses are that, since bonds have a nonlinear payoff structure, their payoffs can be replicated by taking a long position in the issuing company's assets and a short position in a call option on those assets. When the good news is respected by the market, stockholders who own the call option will be in the money and exercise their call option and make fixed principal and interest payments to bondholders. As a result, payment to hold bonds has an

upper bound when earnings convey good news. On the other hand, if bad news about earnings is observed in the market, the call options are out of money. Bondholders will experience an economic loss equal to the difference between the face value of the debt and the value of the assets. The major contribution of this paper is to show on the role of accounting earnings in the bond market by testing bond-trading activity around earnings announcements and the information content of quarterly earnings. The weakness of this study is the case that, although it tests the role of earnings news on bondholders' reaction, the information channel is not clear. Because earnings announcements are majorly used by stockholders, so the reason for the bond market reactions should be investigated more to distinguish from the equity market reaction. The explanation by using call options may be not suitable if the company does not issue such financial derivatives.

Gkougkousi (2014) is another related paper which discusses the relation between aggregate earnings changes and corporate bond market returns. It provides the empirical evidence that aggregate earnings changes have a negative relation to invest-grade corporate bond market returns and a positive relation to high-yield corporate bond market returns. Depending on this result, the reaction of bond return to earnings is related to the characteristics of bond and issuer. Different endogenous factors of firms can decide the different direction of bond returns reaction. This point is equally important when we test our hypotheses about the relation between earnings management and bond returns. We expect that, depends on the internal factors of issuer, such as financial distress, credit risk, etc., bond returns should have different reaction to earnings management, and knowing in which conditions these effects are most significant should be very useful for both bondholders and firm's managers. And the diversification of these reactions also has economic meaning when we try to explain our final empirical results. We will discuss more about them in the later sections.

Further literature examines the connection between accounting and debt contracts. Armstrong, Guay, and Weber (2010) review recent literature on the role of financial reporting transparency in reducing governance-related agency conflicts among managers, directors, and shareholders, as well as in decreasing agency conflicts between shareholders and creditors. From the theoretical point of view, this paper discusses the role of financial reporting in resolving agency conflicts that arise in the contracting relationships that comprise a firm's nexus of contracts. Since this survey contains many topics related to the role of financial reporting on reducing agency costs, we focus on the part of the relationship between accounting information and debt contracts. One major topic of this review paper is the notion that a firm's contractual arrangements and its corporate information environment evolve together over time to resolve agency conflicts. The efficiency of certain contractual arrangements depends on information and financial reporting choices. As a result, we should not conclude that there are some optimal mechanisms or governance for firms with different economic characteristics. The most relevant part of the discussion of this review paper is about the debt contracting and financial reporting. Based on previous literature, such as Jensen and Meckling's (1976), the owner-manager has incentives to engage in actions that benefit the owner/manager to the detriment of the debt holder. The external capital provider (debt holders in our case) rationally anticipates the manager's actions and price-protects its claims from potential losses. Price protection and monitoring costs give rise to agency costs that are supported by the owner/manager. Related to our research questions in this paper, we want to investigate the role of the quality of accounting reports on the bond market. The theoretical foundation can be built by viewing the bond as an implicit contract between debt holders and firm. Higher quality of financial reports can reduce the agency costs and price-protects by debt holders. This leads to a positive reaction in the bond market. A formal testable hypothesis will be established below, and this survey paper can provide a theoretical support for our research questions and help us to explain our empirical results.

Our work contributes to two branch of related literature: first, we provide empirical evidences to resolve the previous conflict conclusions about whether corporate bond market react to accounting information in a general sense; second, we also study the wealth transfer effect from firm's shareholders to bondholders. By implementing regression analysis in different sub-groups of firms based on financial distress and information asymmetry, we illustrate that in which endogenous and exogenous condition, this effect from earnings management on corporate bond market is most significant.

1.2. Structure of following sections

In this paper, we examine the bond market and equity market reaction to earnings management. In the following part, section 2 develops our major hypothesis; section 3 provides the research design of this paper; sample selection procedures and the calculation of earnings quality proxies is included in section 4. Empirical analysis results are shown in section 5. All conclusions and suggestion for future research is summarized in our last section.

2. Development of Hypotheses

2.1. THEORETICAL BACKGROUND

In sum, a managers' intervention is aimed at improving shareholder value. However, it could be the case that a given intervention is individually efficient for the (common) shareholders but socially inefficient. This will occur when increased shareholder value is the result of a transfer of wealth from other stakeholders – such as preferred shareholders, debtholders, suppliers, customers, and workers – to the (common) shareholders. That is, a given intervention may be Kaldor-Hicks inefficient, meaning that shareholder gains from a given intervention do not compensate the losses other stakeholders bear upon that intervention (Laffont, Fundamentals of Public Economics).

Any 'transfer of wealth' among shareholders and other stakeholders has distributional effects. For example, if there is a short-run transfer of wealth (i.e., debt value decreases and share value increases), this effect may or may not persist over time. It may not be persistent over time if the "expropriated" stakeholder reacts by increasing the cost of its capital contribution (e.g., demanding higher interest rates). Hence, in the longer-term the shareholders are likely to internalize the losses borne by the stakeholders. However, the extent to which these losses are internalized and over what periods of time depends on the degree of "memory" of the market.

Consider the classical example of a manager's intervention aimed at increasing leverage. The short-term effect of this type of intervention is a reduction in pre-existing debt value (because of claim dilution) and an increase in shareholder value (because of Modigliani – Miller Proposition 1). In the long term, however, the cost of debt may increase (in order to *ex ante* compensate the debtholders for expected asset substitution), with the firm at hand and, potentially, other firms bearing this increased cost. In this example, the pre-existing debtholders lose in any case, and their loss presumably goes to the existing shareholders (short-term positive stock return). The feedback effect – of increased future borrowing costs – may or may not matter empirically. In the longer term, this may negatively affect shareholder value if future borrowing costs rise substantially. Further, it may take some time before the market realizes how the corporate bond market is going to react, such that we could possibly observe inter-temporal transfers of wealth from future shareholders to present shareholders. Finally, we can consider the aggregate effect by considering the total firm value.

This analysis can also be replicated to test the effect on manager's intervention on workers as firm stakeholders (i.e.,

labor as production factor), though it is empirically more challenging to measure outcomes for workers (or suppliers and customers).

We assume that manager intervene when the firm faces high level of financial distress. Empirically this means that a firm would have higher probability of bankruptcy and harder to pay interest by using their income. When facing this situation, manager would be more prefer to use earnings management to increase the stock performance. From a theoretical perspective, it is useful to distinguish the reasons for inefficiency. We could make two distinct theoretical hypotheses: the firm can be inefficient for either managerial reasons (i.e., *inefficient management*) or market reasons (i.e., *inefficient markets*).

Inefficient management is essentially linked with the managerial agency costs arising from the separation of ownership and control - what in contract theory is defined as a 'moral hazard' problem.

Inefficient markets are a more complex problem. At a very abstract level, the problem is linked with that of incomplete markets. When a market is incomplete, the results of general equilibrium may not hold anymore, i.e., a competitive equilibrium may no longer be Pareto optimal. Indeed, general equilibrium presupposes complete markets that allow agents to smooth consumption by ex-ante trading Arrow-Debreu securities. In the presence of externalities or asymmetric information, however, the payoff matrix of Arrow-Debreu securities is not full-ranked (i.e., the payoffs are lower than the possible states of the world, see Mas-Colell, Winston, and Green, Microeconomic Theory).

Specifically, we would consider the most important case of incomplete markets: asymmetric information in the form of adverse selection (and limited commitment on the part of shareholders as a lack of contractibility). Shareholders may not know whether short-term underperformance (in earnings) is due to poor management or due to good management of long-term projects that require large initial set-up costs. As a result, they have difficulty committing to longer evaluation periods, such that management worries of the short-term consequences of investing in long-term projects. The negative result of this market failure is a pooling equilibrium where the market cannot distinguish between the two cases (poor management versus good management of long-term projects that require large initial set-up costs), which may be a primary reason of underpriced securities. Please see Section 2 of our staggered board paper for a more complete description of the asymmetric information/limited commitment problem and the pooling equilibrium.

2.2. Hypothesis

In this section we provide a brief discussion of features of bond market and we develop our empirical hypotheses.

One of the major feature of bond market is its less frequent transaction compared to equity market. Based on the results in the work of Easton, Monahan and Vasvari (2009), for all bond issues in the Mergent Fixed Income Securities Database (FISD), the average (median) number of days on which a particular bond trades is 6.78 (4) days. One of the reason of this low frequency of bonding trading is differences in the types of investors of bond market and equity market according to Warga (2004). Equity tends to be widely held and be traded for diversified reason, such as M&A, speculation, or just for liquidity reason. Bond market attracts much more institutional investors, such as Insurance Companies, Mutual Funds, etc. The debt holders' characteristics also decide the difference expectation of bond return. Different from firms' equity transaction and returns, bond returns are much more sensitive to the credit risk of issuer and its fundamental performance. The reason is that, not like the equity holders who care more about the future cash flow generated by the firm and the profitability, bond holders focus on the potential default risk and downside risk of firm's performance. This different focus is caused by the non-linear payment structure of corporate

bond. The payment of bond has an upper boundary, not like the payoff structure of equity. Because of this reason, bond returns reflect this potential credit risk of the issuer.

Previous literature investigates the role of earnings management to equity market reaction from different view, such as exclusive compensations, M&A, seasonal equity issuance, etc. However, when we try to develop the hypotheses of bond market reaction to earning management, we should think in another direction. Corporate bond is much less common to be used in exclusive compensation package, so the explanation from the view of incentive mechanism of managers is not very clear. Institutional investors take very large proportion of corporate bond holders, as a results, it cannot be explained the bond returns from the view of speculation or arbitrage behavior.

Based on the previous reasons, we develop our major hypotheses from the view of credit risk of issuer. Similar to the intuition in the work of Easton, Monahan and Vasvari (2009) , we view the payoffs to holding a bond are equal to the payoffs from holding a package of securities consisting of the firm's assets and a short position on a call option written on those assets. According to this replication structure of payment to bond holding above, we develop first predictions about the role of earnings quality in the bond markets. First, earnings management is negatively related to the bond return. The intuitions behind this is following: previous accounting literature shows that the negative relationship between discretionary accruals and stock return in following periods. (i.e. the accruals anomalies) According to our previous discussion, the bond holders is equivalent to buy the assets of bond issuer company and sell the call options of these assets back. Earnings management cannot largely influence the fundamental value of firm assets. And higher discretionary accruals lead to lower return in next periods, so lower the price of call option. The combination of these two effects causes the negative relationship between discretionary accruals and bond return.

On the other hand, earnings management is also used as a tool to benefit managers and shareholders. For example, seasoned equity offering firms engage real and accrual-based management activities before these offerings (Cohen, Paul Zarowin, 2010). And Coles, Hertzel, and Kalpathy (2006) find evidence of abnormally low discretionary accruals in the period following announcements of cancellations of executive stock options up to the time the options are reissued. The work of Bergstresser, and Philippon (2006) also provides the evidence that CEOs have incentive to manipulate earnings when their potential total compensation is more closely tied to the value of stock and option holdings. As a result, earnings management can benefit the shareholders in short run.

Our empirical results verify earnings management has negative effect on bond market and positive effect on equity market. We use discretionary accruals estimated by Dechow et al. (1995) as a measure of earnings management to test these two effects. The regression results show that, the coefficients of discretionary accruals on annual stock return is significantly positive; and the coefficients on annual bond return is significantly negative. After this initial result, we continue to investigate whether these effects are significant for all firms or just for part of them with specific characteristics. Because our basic idea is that, earnings management cannot directly increase the fundamental value of firm, so these effects on bond market and equity market should be viewed as a wealth transfer from bond holders to equity holders. We extend our research question to a modified principal (managers) – agent (shareholders) problem by including non-principal interest party (bond holders) in our analysis.

Previous theoretical and empirical research focus on principal-agent problem under information asymmetry (e.g. Moral Hazard problem, Adverse Selection problem) to discuss the agency rent. However, in the real world, there is also non-principal interest party, who are not represented by agent but their personal wealth would be influenced by the decision of agent. One example is the role of managers in the shareholder-bondholder conflict. Managers are selected by shareholders and also their compensation plan is voted by shareholders in annual meeting (Say-on-pay).

And the decision or business strategy decided by managers can influence the wealth of bondholders through the change of default risk. So it is interesting to investigate what is the impact on non-principal by agent under information asymmetry. The basic intuition behind it is that, under certain external and internal condition, agent has incentive to benefit principal by transferring wealth from non-principal interest party. This paper empirically tests in which conditions this wealth transfer happens. The reason of using earnings management as testing tool is that, earning management is adopted by managers of company (Agent). On the one hand, earning management per se cannot direct change the fundamental value of company. On the other hand, earning management recognize next period earning to current period, then it potentially lower next realized earnings. Since many debt contract is backed by accounting performance thresholds, so earning management could increase the default risk of corporate debt to lower the value of bond. According to the intuition above, the major prediction is that, earning management lowers value of bond and inflates value of equity.

Following this logic, we form three hypothesis as below.

H1: *In high financial distress firms, managers have incentive to use non-fundamental tools (earning management) to benefit shareholders (principal) and damage the wealth of bondholders (non-principal).*

The intuition behinds H1 is that, when the company is under high financial distress, it is difficult for the managers to fundamentally improve the value of firms. In order to please the shareholders, managers have incentive to transfer the wealth from non-principal bondholders to shareholders. In the low financial distress firm, such incentive is not significant, so we predict this effect would only happen in high financial distress firms.

H2: *Firm under high adverse selection, managers with low ability have incentive to use non-fundamental tools (earning management) to benefit shareholders (principal) and damage the wealth of bondholders (non-principal).*

Intuition behinds H2 is that, when adverse selection is high, outsiders cannot easily to find out the fundamental value of company, so managers have incentive to lower the cost of improving fundamental value of company but transfer the wealth from non-principal bondholders to principal shareholders. We use Tangibility as a proxy of adverse selection, since high tangibility makes it to be higher transparency to value the firm. We predict the transfer effect would only happen in firms with high adverse selection.

H3: *Firm under high moral hazard, managers with low ability have incentive to use non-fundamental tools (earning management) to benefit shareholders (principal) and damage the wealth of bondholders (non-principal).*

Intuition behinds H3 is that, managers with high moral hazard have less incentive to improve the fundamental value of the firm by shirking. Alternatively, they have incentive to use non-fundamental tool (earning management) to transfer wealth from non-principal bondholders to principal equity holders. We predict this effect would only happen in firms with high moral hazard.

The last hypothesis is related to the bond market reaction to financial reporting restatement. Because the financial restatement is serious corporate event related to both the value of firm's assets and future stock return. On the one hand, the restatements can increase the credit risk (for example, Liu, Rowe, and Wang 2002) and thus increase the default risk of issuer. On the other hand, financial restatements have large negative impact on the following stock returns. Because of these two impacts to the bond return, the negative effect of financial restatement on bond market reaction of Issuer Company is significant. And because these two effects could continue to longer time periods, as a result, the negative impacts should be found in both short-term and long-term. Our second hypothesis is shown as below,

H4: *Financial restatement has significantly negative effects on bond return for both short-term and long-term.*

In order to test these hypothesis above, we introduce our research design in the following section.

3. Research Design

According to the difficulties we mentioned in the beginning, event study of bond market is hard to implement for two reasons. First, bond trading is less frequent as equity trading. As a result, the calculation of bond returns is different from the stock return. Second, on the one hand, not every company issues bond; on the other hand, some companies issue more than one bond to the market. So, it is very important to get bond prices from a comprehensive database. In order to implement our test of hypotheses, we refer to the work of Easton, Monahan and Vasvari (2009) to calculate the bond return; and refer to the second point, we select to use TRACE database in WRDS to get our sample of bond price in this study.

TRACE (Trade Reporting and Compliance Engine) is FINRA's over-the-counter (OTC) corporate bond market real-time price dissemination service. Bringing transparency to the corporate bond market, it helps create a level playing field for all market participants by providing comprehensive, real-time access to corporate bond price information. Introduced in July of 2002, TRACE consolidates transaction data for all eligible corporate bonds - investment grade, high yield and convertible debt. As a result, individual investors and market professionals can access information on 100 percent of OTC activity representing over 99 percent of total U.S. corporate bond market activity in over 30,000 securities. However, one disadvantage of TRACE is that, all information is reported by the brokers and deals in Over-The-Counter (OTC) market, so if one transaction is not reported or traded in the exchange, we cannot complement this lack.

Because TRACE database provide the information of the price of trading volume of each bond transaction by both sell and buy side. So the information is enough for us to calculate the bond returns for each empirical test in this study. The calculation of bond return around event date is shown as below,

$$ret_t = \frac{prc_{t+1} - prc_{t-1}}{prc_{t-1}}$$

Because TRACE does not report the accrued interest for each bond, so here we use “clean price” (bond price without accrued interest) to calculate our bond return. prc_t is the clean price for time period t. All of this procedure is the same as the descriptions in the work of Easton, Monahan and Vasvari (2009).

4. Sample Selection and Empirical Proxies

To test our first three hypotheses, we use three source of data in our study. The accounting information comes from COMPUSTAT Annual; bond transaction data is from TRACE database; stock price data is from CRSP database. The definitions of related variables used in the following analysis are listed in the Appendix.

The difficulty in this part of our empirical analysis consists in identifying suitable proxies for (in)efficient management and (in)efficient markets. Markets tend to be more inefficient when the level of asymmetric information is higher (due to more severe adverse selection). Firms with more intangible assets, more innovation, and more complexity should present this feature. However, moral hazard is also premised on the non-verifiability of information. In other words, moral hazard and adverse selection share the same assumption/cause: asymmetric information.

In order to isolate the moral hazard problem, we suggest identifying those firms where it is more likely that managers may extract more agency rents. For example, firms with weak performance whose CEOs are not fired are more likely to be associated with higher agency rents extraction. Similarly, firms with very low CEO compensation sensitivity to performance are more likely to present a more severe moral hazard problem. On the other hand, firms with more longer-term projects or shorter-term investors or few ex ante investor commitment devices (such as staggered boards) may face stronger adverse selection problems.

To test our last hypothesis, we use three source of data in our study. The accounting information comes from COMPUSTAT Annual; bond transaction data is from TRACE database; and the data of financial restatement is collected from the Item 402 in 8-K filings which are downloaded from SEC EDGAR database. SEC starts to require all public companies to file Item 402 in Form 8-K to report any “Non-Reliance on Previously Issued Financial Statements or a Related Audit Report or Completed Interim Review”. Many research work and research database (e.g. AuditAnalytics) views the filing of Item 402 in 8-K as financial restatements of Filer Company. Based on our parsing algorithm, we can identify the items reported in each 8-K filing from EDGAR database. This parsing procedure gives us 5,746 observations of 8-K filings with reported Item 402. After we get these filings header information, we link each filing to COMPUSTAT based on Filer’s CIK number. And we also excludes all financial firms with SIC code within the range between 6000 and 6999. After this step, we get 2,832 filings which can be merged with COMPUSTAT. For comparison the companies with financial restatement and other firms in the universe of COMPUSTAT, we also create a control group for each treatment company with restatement. The control firms are formed based on the same year and same SIC three digit code as each treatment firm. The advantage of this forming procedure is that the control group captures the year fixed effect and industry fixed effect. This method can lower potential bias in the following analysis.

5. Empirical Results

In this section, we include two parts of regression analysis of bond market and equity market event study. The first part is the empirical analysis of the relationship between Earnings Management and bond and equity returns. And the second part is the long-term and short-term bond market reaction to financial reporting restatement.

5.1. Effects of Earnings Management on Stock Returns and Bond Returns

[Insert Table 1 here]

[Insert Table 2 here]

The descriptive statistics for variables used in the following analysis are listed in Table 1, and we also provide Pearson correlation matrix in Table 2. In order to test the general effects of Earnings Management on stock returns and bond returns, we test all firm-year observations in our sample. From the OLS regressions listed in Table 3, discretionary accruals have positive effect on stock returns and negative effect on bond returns, all of this effects are both statistically and economically significant. From the point of view of Earnings Management, high level of earnings management (high discrecional accruals) increase the wealth of shareholders and damage the wealth of bondholders.

[Insert Table 3 here]

To test our H1, we choose two proxies of financial distress: Altman-Z score and Interest Coverage. Lower level of Altman-Z score means higher level of financial distress, the firm has higher bankruptcy risk. And lower level of Interest Coverage means the firm is harder to pay the interest expense by using their own income, as a result, firm faces higher financing difficulty. In Table 4 Panel A, we split our total sample into four quartiles according to their

Altman-Z score, and consistent with our prediction, only within lowest level of Altman-Z score, discretionary accruals have significantly positive effect on stock returns and negative effect on bond returns. The similar results can be also observed in Table 4 Panel B of high and low Interest Coverage groups.

[Insert Table 4 here]

Our next prediction is about the effects of Earnings Management with information asymmetry. According to the previous discussion, managers are more prefer to use Earnings Management as a tool to benefit shareholders and transfer the wealth from bondholders. In order to test our hypothesis, we first consider these effects with adverse selection. We use Tangibility as proxy of adverse selection, and we split our sample into high and low adverse selection. Consistent with our prediction, the effects of Earnings Management can be only observed within the high Adverse Selection group, and these effects are insignificant within low Adverse Selection group. This result means that, when market cannot properly observe the information of firms, managers could use Earnings Management to transfer the wealth from bondholders to shareholders.

[Insert Table 5 here]

Next, we investigate the relationship between the effects of Earnings Management and the role of managers. We consider two directions for testing this relationship: one from moral hazard and the other one from managerial ability. Table 6 to 8 provide evidence that Earnings Management significantly increases the stock return and decreases bond return when moral hazard is high and managerial ability is low. Consistent with H3, when manager with higher incentive to extract agency rent, they choose to use Earnings Management as to tool to benefit the shareholders and damage the bondholders by transferring the wealth. The idea behind this effect is that, when moral hazard is high, lower managerial ability managers have limitation to improve the fundamental value of the firm, but they have high incentive to please shareholders to get more agency rent. Earnings Management could achieve this goal by recognize next period earnings to current period to make the firm performance looks better. This early recognition decreases the potential income in next periods, as a result, the default risk increases to damage the wealth of bond holders.

[Insert Table 6]

[Insert Table 7]

[Insert Table 8]

5.2. Short-Term and Long-Term Bond Event Study on Financial Restatements

In this subsection, we implement both short-term and long-term bond market event study around the financial restatement. We consider the filing date of Item 402 of Form 8-K filings as the event date of financial restatement. The selection of time period for short- and long-term event study is similar to the work of Klein and Zur (2011).

For the short-term bond event study, we consider the latest price in time interval $[t-10, t]$ as PRC_{t-1} , in which time t is the event date of financial restatement. And we consider the bond price of first trading day after event day as PRC_{t+1} .

For the long-term bond event study, we consider the price of first trading day after event day PRC_{t-1} . And we consider the bond price of first trading day after $t + 360$ days as PRC_{t+1} . The results are shown in Table 9.

[Insert Table 9 here]

From the results as shown above, we can see the significantly negative effects of financial restatements on bond returns for short-term; and this negative effects are much larger for long-term. Both results are consistent with our prediction in Hypothesis 4.

6. Conclusions

In this paper, we examine the relationship between earnings quality and bond market and equity market reaction by test four hypothesis. The empirical evidences support our predictions that: Earnings Management has negative effects on bond return of issuer company, and positive effects on stock returns; these effects are more significant when information asymmetry is severe; and Financial Reporting Restatement has significantly negative effects on bond returns for both short- and long-term event studies. Our major contributions are: first, we provide initial evidence that earnings management is bad for bondholders in the way that, the bond return is lower for the company with higher discretionary accruals; second, similar to the effects on equity market negative effects, financial restatements also damage the wealth of bondholders by the negative bond returns in short-term and even more negative bond return in the long-term. The results in this study can help the regulators and bondholders to put more efforts to lower the earnings management to protect the wealth of bondholders.

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Appendix – Variable Definition

Variable	Definition	Units	COMPUSTAT item
ME	Market Equity	millions	Shares outstanding multiply fiscal year end equity price (csho * prcc_f)
BE	Book Equity	millions	total shareholders' equity (seq) plus deferred taxes and investment tax credit(txdtc) minus the book value of preferred stock (pstk)
Market-to-Book	Market-to-Book ratio	ratio	ME/BE
LnSize	log of Size	rate	log of total assets (log(at))
Interest Coverage	Interest Coverage	ratio	Operating Income Before Depreciation over interest expenses (oibdp/xint)
ROA	Return on Assets	ratio	Operating Income Before Depreciation (oibdp)/ Total Assets (at)
Leverage	Book Leverage Ratio	ratio	the ratio of long term debt and debt in current liabilities (dltt & dlc) to Total Assets (at)
Tangibility	Overall Tangibility	ratio	Total tangible assets scaled on total assets (ppent/at)
DA	Discretionary Accruals	ratio	Estimated by using Modified Jones' Model (Dechow et al. 1995)
Earnings Volatility	Earnings Volatility	ratio	the ratio of the standard deviation of earnings before interest, taxes, depreciation and amortization using 4 years of consecutive observations to the average book value of total assets estimated over the same time horizon.
CAPX	Capital Expenditure	ratio	Capital expenditure scaled on total assets (capx/at)
R&D	Research and Development Expenditure	ratio	the ratio of R&D expenses (xrd) to assets
DummyRating	Dummy of Debt Rating	dummy	a dummy variable that takes a value of 1 if the firm has either a bond rating (splticrm) or a commercial paper rating (spsticrm) and zero otherwise.
DummyDelaware	Dummy of Delaware Incorporation	dummy	an indicator for firms incorporated in Delaware.

Table 1- Descriptive Statistics for Target Firms

This table reports descriptive statistics target firms with equity returns and bond returns. All firm level data are from the COMPUSTAT industrial database. The sample excludes financial firms (SICs from 6000 to 6999). The sample period ranges from 2002 to 2012.

	Mean	Median	St. Dev.	25 th PCTLE	75 th PCTLE	Obs.
Stock Return	0.048	0.031	0.409	-0.143	0.224	5470
Bond Return	-0.045	-0.036	0.208	-0.099	0.017	6811
Market-to-Book	2.263	1.704	5.082	1.052	2.820	6807
LnSize	8.181	8.170	1.445	7.176	9.241	6811
Interest Coverage	7.730	3.965	30.503	1.748	9.031	6741
Altman-Z	2.701	2.471	2.050	1.489	3.640	4765
DA	-0.051	0.004	0.858	-0.050	0.072	6434
ROA	0.114	0.120	0.121	0.083	0.165	6807
Leverage	0.350	0.312	0.219	0.212	0.435	6808
Earnings Vol	0.046	0.029	0.055	0.016	0.054	6810
CAPX	0.057	0.037	0.065	0.021	0.067	6801
R&D	0.029	0.000	0.073	0.000	0.026	6811
Dummy Rating	0.829	1.000	0.377	1.000	1.000	6811
Dummy Delaware	0.657	1.000	0.475	0.000	1.000	6806

Table 2 – Pearson Correlation Matrix

	Stock Return	Bond Return	Market- to- Book	LnSize	Interest Coverage	Altman- Z	DA	ROA	Leverage	Earnings Vol	CAPX	RND	Dummy Rating	Delaware
Stock Return	1.000	-0.041	-0.094	-0.009	-0.037	-0.042	0.012	-0.005	0.035	0.008	-0.014	-0.019	0.036	0.010
Bond Return	-0.154	1.000	0.169	0.017	-0.030	0.058	-0.033	-0.069	-0.057	0.010	-0.126	0.034	-0.025	0.009
Market-to-Book	-0.056	0.065	1.000	0.083	0.388	0.505	0.037	0.442	-0.108	0.132	-0.033	0.311	0.057	0.052
LnSize	-0.009	0.035	-0.016	1.000	0.271	0.026	0.019	0.159	-0.227	-0.238	0.079	-0.070	0.493	-0.055
Interest Coverage	-0.016	-0.002	0.053	0.131	1.000	0.734	0.064	0.723	-0.596	0.070	-0.069	0.200	0.118	0.042
Altman-Z	-0.073	0.094	0.263	0.083	0.289	1.000	0.011	0.562	-0.547	0.152	-0.132	0.289	0.028	0.065
DA	0.045	-0.049	-0.030	0.007	-0.016	-0.067	1.000	0.067	0.018	0.009	0.014	0.001	0.001	0.000
ROA	-0.003	0.002	0.187	0.246	0.263	0.514	0.030	1.000	-0.226	0.149	0.196	0.018	0.217	0.083
Leverage	0.057	-0.067	0.086	-0.265	-0.199	-0.494	0.054	-0.244	1.000	-0.094	0.096	-0.267	-0.024	0.016
Earnings Vol	-0.014	-0.018	0.031	-0.194	0.010	0.047	-0.015	-0.049	-0.008	1.000	0.164	0.063	-0.183	0.168
CAPX	-0.016	-0.129	-0.011	-0.045	-0.028	-0.151	0.021	0.003	0.087	0.373	1.000	-0.332	0.112	-0.005
RND	-0.005	0.008	0.093	-0.195	0.003	0.049	-0.061	-0.337	-0.041	0.135	-0.149	1.000	-0.243	0.024
DummyRating	0.043	-0.002	0.039	0.511	0.057	0.048	-0.009	0.289	-0.036	-0.162	0.019	-0.373	1.000	-0.071
Delaware	0.010	0.000	0.019	-0.055	0.024	0.045	-0.008	0.044	0.040	0.108	0.016	0.036	-0.071	1.000

Table 3 –Effects of Earning Management on Stock Return and Bond Return

This table presents the coefficient estimates from OLS regressions. All firm level data are from the COMPUSTAT industrial database. Stock Return is annual abnormal stock return calculated by monthly stock return from CRSP minus value-weighted index return. Bond Return is annual abnormal bond return calculated by bond return from TRACE database minus five year Treasury bond return. Standard errors reported in parentheses are robust and clustered at the firm level.

	Stock Return	Stock Return	Bond Return	Bond Return
Discretionary Accruals	0.014*	0.015*	-0.010***	-0.010***
	[0.008]	[0.008]	[0.003]	[0.003]
Market-to-Book	-0.003**	-0.003**	0.001**	0.001**
	[0.001]	[0.001]	[0.001]	[0.001]
LnSize	-0.003	-0.014***	0.000	0.001
	[0.004]	[0.004]	[0.001]	[0.002]
ROA	0.072	0.044	0.082**	0.056
	[0.080]	[0.079]	[0.034]	[0.036]
Leverage	0.128***	0.113***	-0.079***	-0.066***
	[0.038]	[0.039]	[0.018]	[0.018]
Earnings Volatility		-0.082		0.158***
		[0.177]		[0.053]
CAPX		-0.183		-0.386***
		[0.113]		[0.045]
R&D		0.106		-0.164**
		[0.158]		[0.068]
DummyRating		0.079***		-0.003
		[0.022]		[0.007]
DummyDelaware		0.010		0.001
		[0.010]		[0.003]
Observations	5,156	5,152	6,431	6,424
R-squared	0.006	0.011	0.015	0.028

Robust standard errors in brackets

*** p<0.01, ** p<0.05, * p<0.1

Table 4 – Effects of Earning Management on Stock Return and Bond Return by financial distress

This table presents the coefficient estimates from OLS regressions for each level by Altman-Z score and Interest Coverage (ebit/xint). Lower level of Altman-Z score and Interest Coverage means higher level of financial distress. Standard errors reported in parentheses are robust and clustered at the firm level.

Panel A: Altman-Z score

	Full Sample		Lowest Altman-Z		Lower Altman-Z		Higher Altman-Z		Highest Altman-Z	
	Stock Return	Bond Return	Stock Return	Bond Return	Stock Return	Bond Return	Stock Return	Bond Return	Stock Return	Bond Return
Discretionary Accruals	0.019** [0.008]	-0.008** [0.003]	0.039* [0.023]	-0.031*** [0.011]	0.031 [0.020]	-0.004 [0.006]	0.006 [0.015]	-0.009 [0.007]	0.009 [0.011]	0.002 [0.004]
Market-to-Book	-0.008*** [0.003]	0.005*** [0.001]	-0.003 [0.006]	0.003 [0.003]	-0.012*** [0.004]	0.005 [0.005]	-0.011* [0.006]	0.008** [0.004]	-0.009** [0.005]	0.007*** [0.003]
LnSize	-0.008* [0.005]	0.003* [0.002]	0.003 [0.014]	0.007 [0.005]	0.004 [0.010]	0.004 [0.004]	-0.035*** [0.010]	-0.001 [0.004]	-0.004 [0.010]	-0.007* [0.004]
ROA	0.099 [0.104]	-0.048 [0.042]	-0.014 [0.261]	0.157 [0.109]	0.354 [0.287]	-0.231* [0.135]	0.244 [0.311]	-0.253* [0.151]	0.191 [0.202]	-0.329*** [0.079]
Leverage	0.157*** [0.052]	-0.061*** [0.020]	0.160 [0.155]	0.080* [0.048]	0.127 [0.097]	-0.108** [0.049]	0.056 [0.138]	-0.098* [0.053]	0.292*** [0.111]	-0.115*** [0.043]
Earnings Volatility	-0.019 [0.212]	0.124** [0.055]	-0.239 [0.479]	0.238* [0.132]	-0.511* [0.296]	0.083 [0.116]	0.378 [0.371]	0.208 [0.160]	0.348 [0.254]	0.153* [0.086]
CAPX	-0.109 [0.120]	-0.374*** [0.049]	0.279 [0.267]	-0.531*** [0.101]	-0.199 [0.267]	-0.242*** [0.076]	-0.551* [0.306]	-0.159 [0.116]	-0.436 [0.297]	-0.282** [0.137]
R&D	0.245 [0.196]	-0.266*** [0.090]	0.539 [0.453]	-0.270 [0.206]	0.193 [0.424]	-0.354* [0.183]	0.012 [0.409]	-0.053 [0.152]	0.120 [0.194]	0.047 [0.085]
DummyRating	0.075*** [0.024]	-0.011 [0.009]	0.134** [0.066]	0.008 [0.025]	-0.056 [0.049]	0.029 [0.025]	0.132*** [0.042]	-0.011 [0.018]	0.098** [0.040]	-0.038** [0.019]
DummyDelaware	0.009 [0.011]	0.001 [0.004]	0.016 [0.034]	-0.015 [0.010]	0.031 [0.022]	0.003 [0.009]	0.002 [0.022]	0.014* [0.008]	0.009 [0.021]	0.011 [0.007]
Observations	3,618	4,524	867	1,101	895	1,105	922	1,154	934	1,164
R-squared	0.013	0.025	0.016	0.064	0.026	0.028	0.033	0.027	0.035	0.067

Robust standard errors in brackets

*** p<0.01, ** p<0.05, * p<0.1

Panel B: Interest Coverage

	Full Sample		Low Interest Coverage		High Interest Coverage	
	Stock Return	Bond Return	Stock Return	Bond Return	Stock Return	Bond Return
Discretionary Accruals	0.015*	-0.010***	0.039**	-0.020***	-0.003	-0.003
	[0.008]	[0.003]	[0.016]	[0.007]	[0.007]	[0.003]
Market-to-Book	-0.003**	0.001**	-0.003*	0.002**	-0.002	0.001
	[0.001]	[0.001]	[0.002]	[0.001]	[0.001]	[0.001]
LnSize	-0.014***	0.001	-0.020***	0.006**	-0.005	-0.003
	[0.004]	[0.002]	[0.007]	[0.002]	[0.005]	[0.002]
ROA	0.044	0.056	-0.010	0.155**	0.049	-0.125***
	[0.079]	[0.036]	[0.130]	[0.062]	[0.103]	[0.047]
Leverage	0.113***	-0.066***	0.083	-0.076***	0.075	-0.048**
	[0.039]	[0.018]	[0.057]	[0.025]	[0.055]	[0.022]
Earnings Volatility	-0.082	0.158***	-0.338	0.266***	0.319	0.176**
	[0.177]	[0.053]	[0.258]	[0.082]	[0.209]	[0.070]
CAPX	-0.183	-0.386***	-0.288*	-0.445***	-0.020	-0.263***
	[0.113]	[0.045]	[0.164]	[0.065]	[0.128]	[0.050]
R&D	0.106	-0.164**	0.128	-0.093	-0.024	0.004
	[0.158]	[0.068]	[0.238]	[0.098]	[0.144]	[0.064]
DummyRating	0.079***	-0.003	0.108***	-0.002	0.043*	0.001
	[0.022]	[0.007]	[0.037]	[0.012]	[0.022]	[0.010]
DummyDelaware	0.010	0.001	0.006	0.003	0.012	-0.001
	[0.010]	[0.003]	[0.018]	[0.006]	[0.010]	[0.004]
Observations	5,152	6,424	2,442	3,129	2,710	3,295
R-squared	0.011	0.028	0.017	0.040	0.008	0.016

Robust standard errors in brackets

*** p<0.01, ** p<0.05, * p<0.1

Table 5 – Effects of Earning Management on Stock Return and Bond Return by Adverse Selection

This table presents the coefficient estimates from OLS regressions. High level of Tangibility means higher level of adverse selection. Standard errors reported in parentheses are robust and clustered at the firm level.

	Full Sample		High Adverse Selection		Low Adverse Selection	
	Stock Return	Bond Return	Stock Return	Bond Return	Stock Return	Bond Return
Discretionary Accruals	0.015*	-0.010***	0.018	-0.019***	0.012	-0.004
	[0.008]	[0.003]	[0.013]	[0.005]	[0.009]	[0.004]
Market-to-Book	-0.003**	0.001**	-0.004**	0.001	-0.001	0.002**
	[0.001]	[0.001]	[0.002]	[0.001]	[0.001]	[0.001]
LnSize	-0.014***	0.001	-0.008	0.004*	-0.024***	-0.006**
	[0.004]	[0.002]	[0.006]	[0.002]	[0.006]	[0.003]
ROA	0.044	0.056	-0.014	0.043	0.117	0.078
	[0.079]	[0.036]	[0.117]	[0.051]	[0.114]	[0.053]
Leverage	0.113***	-0.066***	0.096	-0.036	0.127**	-0.123***
	[0.039]	[0.018]	[0.060]	[0.023]	[0.064]	[0.028]
Earnings Volatility	-0.082	0.158***	0.050	0.189***	-0.398	0.105
	[0.177]	[0.053]	[0.235]	[0.060]	[0.268]	[0.112]
CAPX	-0.183	-0.386***	-0.251*	-0.410***	-0.449	-1.141***
	[0.113]	[0.045]	[0.137]	[0.052]	[0.449]	[0.240]
R&D	0.106	-0.164**	0.394	-0.356***	0.088	-0.061
	[0.158]	[0.068]	[0.310]	[0.131]	[0.182]	[0.091]
DummyRating	0.079***	-0.003	0.112***	0.018	0.063***	-0.010
	[0.022]	[0.007]	[0.041]	[0.014]	[0.024]	[0.009]
DummyDelaware	0.010	0.001	0.008	0.001	0.017	0.002
	[0.010]	[0.003]	[0.014]	[0.004]	[0.014]	[0.005]
Observations	5,152	6,424	2,671	3,286	2,481	3,138
R-squared	0.011	0.028	0.013	0.037	0.014	0.035

Robust standard errors in brackets

*** p<0.01, ** p<0.05, * p<0.1

Table 6 – Effects of Earning Management on Stock Return and Bond Return by Moral Hazard

This table presents the coefficient estimates from OLS regressions. Compensation data are from ExecuComp. High (Low) Compensation Sensitivity to Performance is an indicator equal to 1 if the ratio of stocks and options compensation to total compensation (so/tdc1) in the year the firm is targeted by active investors is above (below) the sample-year median ratio. All firm level data are from the COMPUSTAT industrial database. Standard errors reported in parentheses are robust and clustered at the firm level.

	Full Sample		High Moral Hazard		Low Moral Hazard	
	Stock Return	Bond Return	Stock Return	Bond Return	Stock Return	Bond Return
Discretionary Accruals	0.015*	-0.010***	0.016*	-0.011***	-0.016	0.008
	[0.008]	[0.003]	[0.009]	[0.003]	[0.016]	[0.008]
Market-to-Book	-0.003**	0.001**	-0.003**	0.002**	-0.001	0.000
	[0.001]	[0.001]	[0.001]	[0.001]	[0.002]	[0.001]
LnSize	-0.014***	0.001	-0.015***	0.000	0.002	0.005
	[0.004]	[0.002]	[0.004]	[0.002]	[0.011]	[0.004]
ROA	0.044	0.056	0.068	0.061	-0.423*	-0.137
	[0.079]	[0.036]	[0.083]	[0.038]	[0.247]	[0.094]
Leverage	0.113***	-0.066***	0.118***	-0.069***	-0.009	-0.022
	[0.039]	[0.018]	[0.042]	[0.018]	[0.095]	[0.047]
Earnings Volatility	-0.082	0.158***	-0.133	0.163***	1.033***	0.172
	[0.177]	[0.053]	[0.188]	[0.055]	[0.318]	[0.186]
CAPX	-0.183	-0.386***	-0.180	-0.392***	-0.014	0.005
	[0.113]	[0.045]	[0.118]	[0.047]	[0.271]	[0.141]
R&D	0.106	-0.164**	0.170	-0.159**	-2.012***	0.051
	[0.158]	[0.068]	[0.163]	[0.070]	[0.515]	[0.187]
DummyRating	0.079***	-0.003	0.083***	-0.001	0.028	-0.041*
	[0.022]	[0.007]	[0.022]	[0.008]	[0.064]	[0.022]
DummyDelaware	0.010	0.001	0.008	0.000	0.027	0.018**
	[0.010]	[0.003]	[0.011]	[0.004]	[0.023]	[0.008]
Observations	5,152	6,424	4,564	5,793	588	631
R-squared	0.011	0.028	0.012	0.029	0.056	0.036

Robust standard errors in brackets

*** p<0.01, ** p<0.05, * p<0.1

Table 7 – Effects of Earning Management on Stock Return and Bond Return by Management Ability

This table presents the coefficient estimates from OLS regressions. Management Ability is a measure in the work of Peter R. Demerjian, Baruch Lev, Melissa F. Lewis, and Sarah E. McVay (2013). High level of MA means higher efficiency of management. Standard errors reported in parentheses are robust and clustered at the firm level.

	Full Sample		High Management Ability		Low Management Ability	
	Stock Return	Bond Return	Stock Return	Bond Return	Stock Return	Bond Return
Discretionary Accruals	0.015*	-0.010***	0.008	-0.000	0.021*	-0.019***
	[0.008]	[0.003]	[0.010]	[0.003]	[0.012]	[0.005]
Market-to-Book	-0.003**	0.001**	-0.003**	0.001	-0.003	0.003**
	[0.001]	[0.001]	[0.001]	[0.001]	[0.002]	[0.001]
LnSize	-0.014***	0.001	-0.006	0.004*	-0.022***	-0.004
	[0.004]	[0.002]	[0.005]	[0.002]	[0.007]	[0.003]
ROA	0.044	0.056	0.009	0.039	0.141	0.069
	[0.079]	[0.036]	[0.087]	[0.044]	[0.123]	[0.066]
Leverage	0.113***	-0.066***	0.053	-0.069***	0.151**	-0.055*
	[0.039]	[0.018]	[0.042]	[0.025]	[0.065]	[0.029]
Earnings Volatility	-0.082	0.158***	0.163	0.005	-0.295	0.386***
	[0.177]	[0.053]	[0.144]	[0.055]	[0.333]	[0.102]
CAPX	-0.183	-0.386***	-0.207*	-0.220***	-0.136	-0.680***
	[0.113]	[0.045]	[0.121]	[0.044]	[0.218]	[0.094]
R&D	0.106	-0.164**	-0.130	-0.030	0.294	-0.297***
	[0.158]	[0.068]	[0.134]	[0.097]	[0.279]	[0.102]
DummyRating	0.079***	-0.003	0.059**	0.001	0.098***	-0.004
	[0.022]	[0.007]	[0.025]	[0.011]	[0.035]	[0.012]
DummyDelaware	0.010	0.001	0.003	0.006	0.014	-0.004
	[0.010]	[0.003]	[0.011]	[0.004]	[0.019]	[0.007]
Observations	5,152	6,424	2,882	3,869	2,270	2,555
R-squared	0.011	0.028	0.007	0.015	0.019	0.052

Robust standard errors in brackets

*** p<0.01, ** p<0.05, * p<0.1

Table 8 – Effects of Earning Management on Stock Return and Bond Return by Moral Hazard and Management Ability

This table presents the coefficient estimates from OLS regressions. Standard errors reported in parentheses are robust and clustered at the firm level.

	Low Moral Hazard				High Moral Hazard			
	High Management Ability		Low Management Ability		High Management Ability		Low Management Ability	
	Stock Return	Bond Return	Stock Return	Bond Return	Stock Return	Bond Return	Stock Return	Bond Return
Discretionary Accruals	-0.027 [0.025]	0.012 [0.012]	-0.011 [0.019]	0.006 [0.007]	0.009 [0.011]	-0.001 [0.003]	0.022* [0.013]	-0.020*** [0.006]
Market-to-Book	0.001 [0.002]	0.000 [0.001]	-0.008** [0.004]	-0.002 [0.003]	-0.004** [0.002]	0.001 [0.001]	-0.003 [0.002]	0.003** [0.001]
LnSize	0.010 [0.014]	0.001 [0.005]	-0.009 [0.016]	0.009 [0.008]	-0.009 [0.006]	0.004 [0.002]	-0.023*** [0.008]	-0.005 [0.003]
ROA	-0.504* [0.267]	-0.097 [0.118]	-0.002 [0.487]	-0.128 [0.154]	0.059 [0.093]	0.045 [0.046]	0.159 [0.129]	0.074 [0.070]
Leverage	-0.062 [0.124]	-0.055 [0.073]	0.088 [0.131]	0.050 [0.047]	0.060 [0.045]	-0.069*** [0.026]	0.151** [0.069]	-0.059* [0.030]
Earnings Volatility	1.133*** [0.369]	-0.082 [0.169]	0.933 [0.586]	0.618* [0.360]	0.106 [0.156]	0.012 [0.058]	-0.342 [0.341]	0.382*** [0.106]
CAPX	0.171 [0.333]	0.215 [0.144]	-0.721 [0.470]	-0.382 [0.271]	-0.231* [0.127]	-0.233*** [0.046]	-0.095 [0.225]	-0.677*** [0.097]
R&D	-2.845*** [0.590]	0.126 [0.265]	-1.400* [0.810]	0.101 [0.252]	-0.044 [0.129]	-0.020 [0.100]	0.348 [0.287]	-0.295*** [0.105]
DummyRating	0.069 [0.096]	-0.069** [0.031]	0.031 [0.091]	-0.017 [0.028]	0.064** [0.026]	0.004 [0.011]	0.100*** [0.037]	-0.003 [0.013]
DummyDelaware	0.037 [0.029]	0.018* [0.010]	0.022 [0.042]	0.015 [0.011]	-0.001 [0.012]	0.006 [0.005]	0.012 [0.020]	-0.006 [0.008]
Observations	356	386	232	245	2,526	3,483	2,038	2,310
R-squared	0.093	0.060	0.051	0.085	0.008	0.016	0.020	0.053

Robust standard errors in brackets

*** p<0.01, ** p<0.05, * p<0.1

Table 9 – Short- and Long-Term Bond Event Study around Financial Restatement

Bond Return (%)	Short-Term	Long-Term
mean	-1.392 ***	-3.130***
Std. Err	0.433	0.890
Obs	323	540