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Information asymmetry and the wealth appropriation effect in the bond market: Evidence from late disclosures[☆]

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ABSTRACT

We examine the effect of an exogenous increase in information asymmetry (as proxied by late filings of firms' Form 10-K) on bond prices. We find that bondholders react negatively to a late filing announcement but this negative reaction is conditional on whether late filing firms appropriate wealth from bondholders through shareholder distribution. Moreover, we find that the impact of financial distress and covenants on bond values is mainly driven by the wealth appropriation from bondholders. The results are robust to difference-in-difference analysis using treatment (i.e., late filing) and control (i.e., non-late-filing) samples based on propensity score matching. The results provide evidence that shareholder distribution as a specific form of wealth appropriation from bondholders to shareholders has a significant effect on bond values when financial information is not timely provided to capital markets.

1. Introduction

It is well known that timely disclosure of periodic financial statement information helps capital market participants make informed investment decisions, which in turn decreases the information asymmetry between managers and investors (e.g., Glosten & Milgrom, 1985; Hakansson, 1977; Healy & Palepu, 2001). One such vital corporate disclosure is the firm's annual financial filings with the SEC, i.e., the Form 10-K.[1] Recent research on the equity side examining the consequences of an increase in information asymmetry caused by late disclosures of 10-Ks documents negative and significant equity market reaction (e.g., Bartov, Defond, & Konchitchki, 2015).[2] In this paper, we investigate the effect of an exogenous increase to information asymmetry, as proxied by late filing of annual financial statements with the SEC, on bond values.[3]

We focus on the U.S. bond market for several reasons. First, the U.S. bond market is one of the largest capital markets in the world with over \$9.8 trillion outstanding corporate bonds issued by U.S. firms as of end of 2013.[4] Second, prior research suggests that the value of debt is less sensitive to asymmetric information than the value of equity because debtholders own a put option on the firm's assets (e.g., Kerr & Ozel, 2015; Myers & Majluf, 1984). Hence, it is unclear whether the asymmetric information caused by late disclosures will have significant consequences in the bond market. Third, the U.S. bond market is

☆ Data Availability: Data are publicly available from the sources identified in the study with the exception of the bond data from Lehman Brothers, which is a proprietary dataset.

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[1] In addition to providing detailed and comprehensive financial information not provided by other means (e.g., earnings announcements) to investors, annual financial filings contain management discussion and analysis (MD&A), which evaluates the entity's financial condition based on its past performance, current condition, and future viability.

[2] Earlier research by Impink et al. (2012), Griffin (2003), and Alford et al. (1994) document similar equity investor reaction to non-timely financial filings.

[3] A non-timely (NT) filing provides an additional 15 days for 10-Ks to be filed, and the short extension of actual filing may not be costly (Bartov & Konchitchki, 2017). Since filing an NT notification certainly raises red flags for capital market that relies on timely financial filings to reduce information asymmetry, late filing can cause a negative shock, while temporarily, to a firm's information environment. In this paper, we use "information asymmetry" in a broad sense of worsened information environment with no intention of referring this term to widened bid-ask spread and decreased number of dealers in the bond market. We thank an anonymous referee for this point.

[4] Estimates are from the Securities Industry and Financial Markets Association.

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dominated by institutional investors, and it is unclear whether bond investors will react to announcements of non-timely SEC filings if these institutional investors can have access to various information sources other than public financial filings (e.g., Defond & Zhang, 2014; Ronen & Zhou, 2013) that can help them anticipate the late filing before it actually occurs. Fourth, announcements of non-timely filings of financial statements may not necessarily trigger bond values downward because late filing firms may agree with bond investors to delay the release of their financial statements by, for example, giving bondholders more leverage over the firm's assets.[5] Finally, prior research finds that late filing firms are on average smaller, more levered, with lower market to book and profitability (e.g., Bartov et al., 2015). These firms are usually in serious default risk and bondholders may have already priced in such a high level of information asymmetry. Therefore, the findings on the consequences of an increase in information asymmetry caused by late filings previously documented in the equity market may not necessarily hold in the bond market.

In our attempt to answer whether a negative shock to a firm's information environment caused by announcements of late filings matter to bond investors, we argue that bond investors will be more sensitive to late filing announcements as late filing firms transfer wealth from bondholders to shareholders through, for example, dividend payouts and stock repurchases.[6] Agency theory suggests that bondholders and shareholders in a firm have conflicting interests over dividend policy (Jensen & Meckling, 1976). Dividend payouts can transfer wealth from bondholders to shareholders by reducing the assets available for meeting bondholders' fixed claims and hence increasing the distress risk for bondholders (Ahmed, Billings, Morton, & Stanford-Harris, 2002). Furthermore, the put option of bondholders on the firm's assets will be less valuable as those assets are transferred to shareholders. Prior research also shows that corporate actions that lead to wealth transfer from bondholders to shareholders have a negative impact on bond prices. For example, Warga and Welch (1993) find that bondholders suffer significant wealth losses in leveraged buyouts. Maxwell and Stephens (2003) find negative abnormal bond returns upon announcement of stock repurchases. Hence, we posit that bondholders that are mainly institutional investors will be less concerned with announcements of late disclosures if there is no wealth transfer to shareholders. On the contrary, we posit that bondholders will negatively react to a delay in the release of accounting information to the bond market if the late filing firm appropriate wealth from bondholders, which we refer to as the wealth appropriation effect.

In addition, we argue that the wealth appropriation effect will exacerbate the negative effect of late filing firms' financial distress on bond values. The lower the firms' operating performance and credit quality, the higher would be the uncertainty of firm future cash flows and, as a result, the expected distress risk (Wei & Zhou, 2016). Hence, late filing firms of lower operating performance and poor credit quality will find it difficult to reach an agreement with bondholders to delay the filings of financial statements especially if those late filing firms appropriate wealth from bondholders. Therefore, we posit that the negative reaction of bondholders to the announcements of non-timely annual filings by firms of high distress risk will be stronger when those firms appropriate wealth from bondholders.

Further, we examine the wealth appropriation effect by relating the loss in bond values upon late filing announcements to bond covenants. Debt contracts generally include clauses and covenants that are often based on reported financial statement variables (e.g., balance sheet leverage and earnings-based interest coverage ratios). Nevertheless, the impact of having more covenants on bond values around late filings is not so clear. If more covenants give bondholders a greater protection, bonds with more covenants may suffer less in bond values. In that regard, prior studies have found evidence on the positive impact of having more covenants around some corporate events.[7] On the contrary, the damage to bond values arising from late filings may increase with covenants if the adoption of covenants is positively correlated with financial distress risk, so that the firms with more bond covenants are just happening to have greater distress risk, ex ante, compared to firms with less bond covenants.[8] In addition, creditors can use accounting numbers to judge compliance with covenants and to administer lending agreements (Daley & Vigeland, 1983; Defond & Jiambalvo, 1994). Therefore, late filings of firms with more covenants would increase the risk of covenant violations, which can also negatively impact the value of bonds. The damage to bond values can become more severe for firms with a high tension between shareholders and bondholders because the wealth appropriation by shareholders through dividends distribution would worsen the negative impact of distress risk on bond values. It is thus an empirical question of whether more covenants provide a better protection to bondholders of late filing firms or rather serve as an indicator of greater distress risk that can cause more losses in bond values upon late filing announcements.

To empirically examine our conjectures, we take advantage of the SEC's regulatory changes beginning in 2003 to the reporting deadlines whereby firms must file a Form 12b-25 (Form NT "Non-Timely") with the SEC if they cannot file an annual report with the SEC before the new reporting deadlines.[9] In addition, we use the monthly pricing information from the Lehman Brothers Fixed Income database and daily bond data from the TRACE database covering the period from January 2000 to December 2012. More importantly, we employ a propensity score matching (PSM) technique and create treatment (i.e., the late filing firms) and control groups (i.e., timely filing firms) on several dimensions of firm-specific characteristics using the estimated likelihood of late filing. The counterfactual nature of PSM allows for straightforward and intuitive estimation of late filing and wealth appropriation effects in the bond market with relaxed assumptions regarding the functional relation between default risk, information asymmetry, and bond values. We find a negative and significant reaction in the bond market to the announcements of late filings, but this reaction is conditional on the appropriation of wealth from bondholders through shareholder distributions. In particular, only bonds of late filing firms with high shareholder distribution have a negative reaction. These bonds have experienced on average a negative abnormal return of around 90 bps in late filing announcement month, which is translated into nearly $10 million loss in bond value. We do not find significant

[5] For example, Valeant Pharmaceuticals International Inc. announced in 2016 that it will start talks with its debtholders since it may delay the release of its 2015 annual report. Investors and analysts say that a deal is considered highly likely because most debt investors still believe Valeant is capable of paying its obligations (Goldfarb & Cherney, 2016).

[6] We acknowledge that there are many forms of wealth appropriation from bondholders to shareholder, one of which is shareholder distribution. Throughout the paper, we only focus on shareholder distribution to examine the wealth appropriation effect.

[7] For example, Asquith and Wizman (1990) show that pre-buyout bondholders suffer statistically significant wealth losses in leveraged buyouts, but bonds with more covenants (i.e., strong covenant protection) gain value, while those with no covenants lose value.

[8] Financial distress risk is the risk that a firm cannot meet, or has difficulty paying off, its financial obligations to its debtors. Bratton (2006) find that in the debt market contracting practice correlates directly with the level of financial distress risk and borrowers are sorted according to the degree of that risk, imposing substantial constraints on the borrowers with the greatest financial distress.

[9] For fiscal years beginning December 15, 2003, SEC (2002, rule 33-8128) accelerated the annual filing deadlines by decreasing the statutory due date from 90 to 75 days for accelerated filers (i.e., firms with market capitalization of at least $75 million). For fiscal years beginning December 15, 2006, SEC (2005, rule 33-8644) further accelerated the deadline by decreasing the statutory due date from 75 to 60 days for large accelerated filers (i.e., firms with market capitalization of at least $700 million).