The value of restrictive covenants in the changing bond market dynamics before and after the financial crisis

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A B S T R A C T

We examine the pricing of restrictive covenants on bond issues before and after the financial crisis. The existing literature in this area uses data from the pre-crisis period. While the results of our analysis using pre-crisis data are entirely consistent with existing literature, there are dramatic differences in the value of restrictive covenants between the two periods. Further, the differences between the coefficients on the control variables document and elucidate the very different bond market dynamics before and after the crisis. Before the financial crisis, we find a statistically significant cost reduction of around 50 basis points for the inclusion of negative pledges and restrictions on sale-and-leaseback activity. In the post-financial crisis period, however, the benefit of these types of covenants evaporates, becoming statistically insignificant. The benefits, for investment grade firms, of restrictions on investment activities survives the financial crisis; the price effect in the pre-crisis period is a statistically significant 60 to 72 basis point (depending on model) reduction in yields, while in the post-crisis period it is a statistically significant 51 to 55 basis point reduction in yields. For non-investment grade firms, we find in the pre-crisis period that the price effect of restrictions on payouts and additional debt are insignificant. After the financial crisis, however, these restrictions lead to a statistically significant 141 to 150 basis point reduction in yields.

1. Introduction

That the financial crisis of 2007–2009 presented a shock to financial markets is indisputable. In the midst of the crisis, corporate borrowing and expenditures fell sharply (Kahle and Stulz, 2013). There is debate regarding the channels through which the crisis that began in the mortgage market affected disparate credit markets. Some argue that the crisis entailed a credit supply shock (Brunnermeier, 2009; Shleifer and Vishny, 2010; and Gorton, 2010), and others argue that a shock to credit demand drove the decline (Mian and Sufi, 2010). A third hypothesis centers on a balance sheet multiplier effect (Brunnermeier and Oehmke, 2013) in which the corporations’ ability to borrow was hampered by their declining net worth and, hence, their ability to provide collateral for loans.

Additionally, laws and regulations changed the business environment in which the corporations were operating. For example, the American Recovery and Reinvestment Act (ARRA) in 2009, added section 108(1) to the tax code allowing for the temporary
deferral of cancellation of debt income (CODI). While the Dodd-Frank Wall Street Reform and Consumer Protection act (Dodd-Frank) in July 2010,\textsuperscript{2} imposed several regulations on the financial system.

Regardless of the channel through which the shock arose, it is clear that the crisis was a tumultuous and possibly transformational period in financial markets and hence the periods before and after the crisis provide a ripe research environment in which to explore the value of restrictive covenants on bonds.

The literature related to the value of restrictive covenants on bonds presents two competing hypotheses. The optimal contracting hypothesis postulates that bond issuers weigh the costs and benefits of particular covenants and include those covenants for which they believe there will be a positive benefit for the firm (Smith and Warner, 1979; Aghion and Bolton, 1992; Rajan and Winton, 1995; and Watts and Zimmerman, 1986, 1990). The costs of the covenants are related to less flexibility in managing the firm, and potentially, an inhibition of the firm's ability to grow; while the benefits can be defined in terms of lower costs of capital—if investors perceive the covenants as mitigating agency problems. The irrelevance hypothesis, on the other hand, suggests that bond indentures are boilerplate contracts and little analysis goes into the question of which covenants to include in a particular bond (Beneish and Press, 1995; Chen and Wei, 1993; Nini et al., 2009; Verde, 1999).

Reisel (2014) presents results consistent with the optimal contracting hypothesis in a study that empirically demonstrates the value of restrictive covenants on bonds, using a methodology that controls for the endogeneity of the question of whether or not to include a particular covenant. Reisel's sample spans the timeframe from 1989 to 2006, and she finds in this pre-financial crisis period that negative pledges and restrictions on sale-and-leaseback activity lower the initial difference between the bond's yield and the yield on a similar term treasury bond (the treasury spread) by about 75 basis points, on average. Reisel (2014) further finds that, for investment grade firms, restrictions on investment activities reduce the initial treasury spread on the bonds by about 60 basis points. In Reisel's sample, however, covenants that restrict payouts and additional debt are not found to have a statistically significant price effect. Reisel (2014) is undoubtedly an important milestone in understanding the processes and rationales for the inclusion of restrictive covenants in bond indentures.

In this paper, we adopt and extend the methodology used in Reisel (2014) to examine the benefits of restrictive covenants in bond contracts on the cost of debt for two periods: one before the financial crisis and one after the financial crisis. According to the optimal contracting hypothesis bond issuers include covenants only when the benefits outweigh the costs. If the optimal contracting hypothesis holds, one would expect that significant changes in the economic and business environment would cause the costs and benefits related to restrictive covenants in bond contracts to change. For example, the agency problem, which the covenants are expected to mitigate, may become more or less severe depending on the economic environment. This may be especially the case for the period after the financial crisis, which saw an increase in corporate deleveraging (Yago and Li, 2011). First, the ARRA in 2009 allowed for temporary deferral of cancellation of debt income (CODI) causing companies to restructure their debt without being taxed on such activities; hence, incentivizing corporate deleveraging.\textsuperscript{3} Second, decreasing corporate net worth increased firms' leverage and reduced firms' ability to borrow. Corporate deleveraging, in and of itself, may have reduced the agency conflict and, hence, reduced the cost of debt. Yet, the impact of restrictions on the pricing of different types of debt covenants is far from homogenous. As Reisel (2014) demonstrates, the impact on the cost of debt differs depending on the nature of the restriction.

Corporate deleveraging also may have desensitized creditors' concerns related to financing activities. At the same time, it may be that an increase in leverage exacerbates agency problems during normal times, but this may not necessarily be the case during times of relatively low levels of leverage. Consequently, bondholders may no longer reward firms for including restrictions leveraged financing during periods when the market conditions make such leveraging unlikely in the first place.

Restrictions addressing the potential transfer of wealth, such as investment activities or payout activities, may have remained important or have become more important in mitigating the agency conflict after the crisis. The financial crisis increased investors' risk aversion leading to a higher equity risk premium and ultimately a higher required return on equity.\textsuperscript{4} Thus, bondholders may be more concerned that managers' commitment to shareholders' wealth maximization causes transfer of wealth from creditors to shareholders through more risky investment activities or higher payouts.\textsuperscript{5} Hence, the importance of certain restrictive covenants as well as their impact on debt prices may vary before and after the financial crisis. On the other hand, if the market perceives bond covenants are truly irrelevant, then, one would expect the impact of covenants on the cost of debt to remain stable no matter the economic environment.

Additionally, if bond issuers view covenants as merely boilerplate contracts there would be little reason for the frequency with which certain covenants are included in bond indentures to change after the crisis. Yet, the literature suggests that financially healthy firms (e.g., firms with high cash position and/or low leverage) suffered less from a credit supply shock during a crisis (e.g., Campello et al., 2011; Duchin et al., 2010).\textsuperscript{6} Further, Malitz (1986) and Reisel (2014) find that such firms are less inclined to include restrictive covenants. Thus, the characteristics of companies that issue bonds may have shifted after the financial crisis towards larger and more financially sound companies, for which the benefits of debt covenants are potentially outweighed by their cost. Further, the significant increase in regulations during the crisis (e.g., Dodd-Frank), may have also lowered agency costs and reduced the number of firms for which the

\textsuperscript{2} The Dodd-Frank Wall Street Reform and Consumer Protection Act was signed into law in July 2010. While the Dodd-Frank Act primarily targeted US financial institutions, it undoubtedly had a direct and indirect impact on the overall business environment in the US.

\textsuperscript{3} For a more detailed discussion, see Yago and Li (2011).

\textsuperscript{4} See, for example, Roszkowski and Davey (2010) and Guiso et al. (2013).

\textsuperscript{5} Billett et al. (2004) provides evidence for the wealth transfer hypothesis, as they find that during the announcement period of acquisitions the bonds of the acquiring firm experiences a $-0.17$ negative excess return on average. Similarly, Maxwell and Stephens (2003) find a 0.13% decline in bond prices after the announcement of an open market repurchase program.

\textsuperscript{6} See also the discussion in Kahle and Stulz (2013).
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