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Subsidiary debt, capital structure and internal capital markets ☆

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ABSTRACT

I study external debt issued by operating subsidiaries of diversified firms. Consistent with Kahn and Winton's [2004. Moral hazard and optimal subsidiary structure for financial institutions. Journal of Finance 59, 2537–2575] model, where subsidiary debt mitigates asset substitution, I find firms are more likely to use subsidiary debt when their divisions vary more in risk. Consistent with subsidiary debt mitigating the free cash flow problem, I find that subsidiaries are more likely to have their own external debt when they have fewer growth options and higher cash flow than the rest of the firm. Finally, I find that subsidiary debt mitigates the "corporate socialism" and "poaching" problems modeled in theories of internal capital markets.

1. Introduction

Instead of issuing debt at the parent level, multi-division firms sometimes separately incorporate their operating divisions as distinct legal entities, i.e., as subsidiaries, and allow them to issue their own debt. Holders of subsidiary debt have a claim on the subsidiary senior to that of the parent's creditors. If the parent guarantees the debt, holders also have recourse to the parent should the subsidiary default.[1] Otherwise, they have no recourse, unless the parent engages in some wrong doing (Thomson, 1991). Since 1995, subsidiary debt issues have accounted for approximately 13% of total US non-financial corporate public debt proceeds,[2] yet this phenomenon remains till now largely unexamined in the empirical literature. This study seeks to fill this void by proposing and testing rationales, based on models developed in prior research, for why non-financial firms use subsidiary debt. In addition, it examines how the presence of subsidiary debt in the capital structure affects internal capital markets.

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[1] If the subsidiary is organized as an unlimited liability entity or a partnership with the parent as general partner, its debt holders have a claim on parent assets even without a guarantee.

[2] I use data from the Securities Data Corporation (SDC) to calculate this estimate.

I estimate multinomial logistic models of the probability that a division is separately incorporated with its own subsidiary debt and whether that debt is guaranteed by the parent. I find that a division is more likely to have nonguaranteed subsidiary debt outstanding if it is in a firm whose divisions vary more in operating risk. This result supports the Kahn and Winton (2004) model, which predicts that firms with large cross-divisional variation in operating risk use nonguaranteed subsidiary debt to mitigate asset substitution problems. I also find some evidence that nonguaranteed subsidiary debt is more common in divisions with high cash flows and few growth options relative to the rest of the firm, suggesting firms use subsidiary debt to control Jensen's (1986) free cash flow problem in a manner that also controls the underinvestment problem. Finally, I find that the better a division's investment opportunities relative to the rest of the firm, the more likely it is to have parent-guaranteed subsidiary debt outstanding. Furthermore, when a division has parent-guaranteed debt outstanding, its cash flows are less likely to be diverted for investment in other divisions. As I discuss in more detail in the next section, the last two results imply that firms use parent-guaranteed subsidiary debt to protect their growth divisions from the "corporate socialism" and "poaching" problems of internal capital markets modeled in Scharfstein and Stein (2000) and Rajan, Servaes, and Zingales (2000).

Nonguaranteed subsidiary debt shares with project finance debt the feature of creditors having no recourse to the parent.[3] I thus consider models of non-recourse project debt (John and John, 1991; Leland, 2007), in which the non-recourse feature drives the empirical predictions. I test these predictions on my sample of nonguaranteed subsidiary debt and fail to find supporting evidence.

This study contributes to the large literature on debt contract features used to mitigate bondholder–shareholder conflicts and agency problems. The relevant features considered here include the specific set of assets and cash flows over which debt has priority and recourse provisions. Other examples of literature in the broad area of debt contract features include, but are not limited to, Barclay and Smith (1995a), Childes, Mauer, and Ott (2005), Guedes and Opler (1996), and Johnson (2003), who study maturity choice; Barclay and Smith (1995b), who study to priority structure; Mian and Smith (1992), Morellec (2001), and Stulz and Johnson (1985), who study security provisions; and Billet, King, and Mauer (2007), Chava and Roberts (2008), and Smith and Warner (1979), who study covenants.

My results also contribute to the literature on corporate diversification and internal capital markets. Thus far, the literature has largely focused on the question of whether internal capital markets within diversified firms are efficient on average, and the evidence is mixed. Numerous studies find evidence that investment polices of diversified firms appear less efficient than those of standalones, or that diversified firms are valued at a discount relative to standalones.[4] Others, however, cast doubt on these results.[5] My results imply that the issues surrounding internal capital markets are more complex. Previous research provides mixed evidence that diversification *ceribus paribus* reduces investment efficiency, but my findings suggest that firms take measures to mitigate this problem. Scharfstein (1998) provides evidence that improved governance can improve internal capital markets. My findings show financing policy is also important. Hence, together with Scharfstein, this study suggests that the question of how firms mitigate internal capital markets inefficiencies is as important an area of inquiry as the question of whether such markets are on average efficient.

The rest of this study proceeds as follows. In Section 2, I develop rationales for subsidiary debt use and their empirical implications. In Section 3, I discuss my sample. In Section 4, I discuss my tests and present results. In Section 5, I examine alternative rationales for subsidiary debt and rule them out. Section 6 concludes.

2. Hypothesis development

In this section, I use models developed in prior research to explore rationales for subsidiary debt, and I develop empirical hypotheses, summarized in Table 1.

2.1. Subsidiary debt in asset substitution models

Jensen and Meckling (1976) postulate that when a firm nears financial distress, equity holders have an incentive to substitute more risky assets for existing ones in an attempt to "gamble for resurrection," even if the new assets have negative net present value. Kahn and Winton (2004) argue that the problem is worse for diversified firms with divisions that differ in their operating risk. Should the riskier division encounter difficulties that threaten the entire firm with financial distress, a firm financed with parent debt will be tempted to increase the risk of the safer division. If the divisions are separately incorporated and financed with their own nonguaranteed subsidiary debt, however, financial distress at the riskier division should be less likely to affect operations in the safer division, since the holders of the riskier division's debt have no claim over the safer division's assets. Hence, Kahn and Winton postulate that firms will be more likely to use subsidiary debt financing when their divisions differ more in their operating risk. Flannery, Houston, and Venkataraman's (1993) model has similar empirical predictions. I therefore postulate the following hypothesis.

[3] The main difference is that subsidiary debt is issued by a corporate going concern, the subsidiary, whereas project debt is issued by a special purpose vehicle created to undertake a specific, finite-lived project (Kensinger and Martin, 1988).

[4] See Berger and Ofek (1995), Lamont (1997), Lamont and Polk (2002), Lang and Stulz (1994), Ozbas and Selvili (2006), Rajan, Servaes, and Zingales (2000), Scharfstein (1998), Schoar (2002), and Shin and Stulz (1998).

[5] See Campa and Kedia (2002), Chevalier (2004), Gomes and Livdan (2004), Matsusaka (2001), Graham, Lemmon, and Wolf (2002), Maksimovic and Phillips (2002), Villalonga (2004), and Whited (2001).