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Hold-up and the use of performance-sensitive debt[☆]

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ABSTRACT

We examine whether performance-sensitive debt (PSD) is used to reduce hold-up problems in long-term lending relationships. We find that the use of PSD is more common in the presence of a long-term lending relationship and if the borrower has fewer financing alternatives available. In syndicated deals, however, the presence of a relationship lead arranger reduces the use of PSD because a lead arranger has little incentive to hold-up a client. Further supporting the hypothesis that hold-up concerns motivate the use of PSD, we find a substitution effect between the use of PSD and the tightness of financial covenants.

1. Introduction

Since the early 1990s, many bank loans contain performance pricing provisions, which stipulate that the coupon paid rises if the firm's financial performance deteriorates and/or vice versa. Financial

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performance is measured either by the borrower's credit rating or a financial ratio such as leverage. The theoretical literature has linked the use of performance-sensitive debt (PSD) to debt renegotiation costs, signaling, and asset substitution considerations. Asquith et al. (2005) argue that PSD reduces debt renegotiation costs due to adverse selection, moral hazard, or unanticipated changes in the borrower's credit risk. Manso et al. (2010) demonstrate that PSD can be used as a signaling device for a firm's credit quality in a setting with adverse selection. Finally, Koziol and Lawrenz (2010) show that PSD can mitigate risk-shifting incentives, but Bhanot and Mello (2006) argue that PSD is an inefficient method to reduce incentives for asset substitution.

In this paper we explore a new explanation for the use of PSD. We hypothesize that PSD can be used to mitigate hold-up problems, which, for example, can arise in long-term lending relationships. Sharpe (1990) and Rajan (1992) show that a cost of relationship lending is the potential for hold-up by the lender. The potential for hold-up arises from the information advantage, which the lender acquires in the course of the lending relationship. This information advantage makes it difficult for the borrower to switch to another, less well informed, lender due to adverse selection, which is especially relevant for opaque borrowers with fewer financing alternatives. If the borrower is "locked in", the bank could exploit the situation by charging higher interest rates or by denying interest rate reductions when the borrower's performance improves. Schmidt (2006) argues that the use of covenants, which is common in private debt contracts, further exacerbates the hold-up problem because covenants shift bargaining power from borrowers to lenders. Von Thadden (1995) shows that a solution to this hold-up problem is to pre-specify contract terms ex ante, thereby limiting the discretion of the lender. Indeed, one can view PSD contracts as limiting the discretion of the lender because the performance-pricing provision stipulates coupon adjustments if the borrower's performance changes, thereby avoiding debt renegotiations in these states. For example, rather than renegotiate a loan after a covenant violation, the performance-pricing provision specifies the outcome of such renegotiation ex ante and thus avoids the situation of a technical default. Consistent with this argument Nikolaev (2015) finds that debt renegotiations are less common if loan contracts contain performance-pricing provisions.[1]

Furthermore, we argue that in syndicated deals, the presence of a relationship lead-arranger is likely to reduce the use of PSD. In the decision to hold-up a client a lender needs to weigh the short-term gains from hold-up against the long-term costs of jeopardizing the relationship. In a syndicated deal, the short-terms gains from hold-up would be shared by all syndicate members, while the long-term costs of jeopardizing the relationship would be borne mostly by the relationship lender. Thus, a relationship lead-arranger is more likely to favor to continue the relationship and benefit from its information advantage relative to other lenders rather than to hold-up a client.

Our paper is the first to explicitly investigate a possible link between hold-up problems in repeated lending relationships and the use of PSD contracts. A particular advantage of focusing on lending relationships is that it allows us to differentiate the hold-up hypothesis from the signaling motivation. This is because signaling is less important in lending relationships, as the relationship lender already has an information advantage (see for example Menkhoff et al., 2006), while the potential for hold-up rises in lending relationships. Using a large sample of private debt contracts issued by non-financial U.S. borrowers between 1993 and 2011, we show that *accounting-based* PSD contracts, i.e., PSD based on a financial ratio, are about 25% more likely to be used in repeated lending relationships after we control for the endogeneity of the lending relationship. Next, we analyze whether the use of PSD varies systematically across different types of borrowers because the potential for hold-up is also a function of borrower characteristics. For example, Santos and Winton (2008) argue that the costs of relationship lending are higher for companies, which do not have access to other financing sources (e.g., bond market access). In line with this argument, we find that accounting-based PSD contracts are more common in relationship lending arrangements with smaller firms, firms that do not have

[1] While PSD is common place in private debt markets, it is rare in public bond markets. Using keyword searches on both Bloomberg and EDGAR Pro we are able to identify only 115 performance-sensitive bond issues from 74 distinct companies between 1989 and 2012. In contrast, there are over 12,000 private debt issues with performance-pricing provisions over the same period. The relative rarity of PSD in public debt markets is consistent with the hold-up hypothesis because hold-up problems are of less concern in public debt.