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Dynamic threshold values in earnings-based covenants ☆

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ABSTRACT

We examine the role of dynamic covenant threshold values in syndicated loan agreements. We document that 45% of syndicated loans specify dynamic covenant thresholds in earnings-based covenants and that these changing thresholds typically become tighter over the life of a loan. We find that covenants with a tight trend provide an important signaling mechanism that meets the needs of borrowers that experience an inferior financial performance at loan initiation but expect future performance improvements. Specifically, we find that these covenants provide underperforming borrowers with a grace period by requiring less restrictive initial thresholds. At the same time, they allow these borrowers to credibly convey information to lenders about their future prospects via gradually more demanding subsequent thresholds. Our empirical evidence also suggests that while lenders entering into tight threshold trend covenant contracts receive weaker covenant protection over the grace period, they benefit from having stronger control rights in subsequent periods.

1. Introduction

Theoretical research suggests that, in the presence of asymmetric information, borrowers can use debt contractual terms to credibly convey to lenders favorable information about their future prospects (e.g., Chan and Kanatas, 1985; Besanko and Thakor, 1987; Garleanu and Zwiebel, 2009). Manso et al. (2010) and Demiroglu and James (2010) show that strong borrowers signal their "good type" to lenders by committing to performance pricing provisions (PPP thereafter) and the tight slack in financial covenants at loan initiation, respectively. However, borrowers with inferior financial performance but

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promising future prospects often access debt markets. Our study sheds light on how these borrowers can convey their type to lenders by using a previously unexplored feature of financial covenants – the presence of threshold values that become stricter over the life of the loan.

We focus on earnings-based covenants, which represent the most common financial covenants in syndicated loans: interest coverage (IC), fixed charge coverage (FCC), debt service coverage (DSC), debt to cash flows (DCF) and minimum EBITDA covenants. We find that around 45% of loan contracts specify, for at least one of these covenants, a grid that designates how the covenant thresholds change over the life of the loan, including the exact date when the new threshold applies and its value. The vast majority of these threshold grids have a tight trend, which sets stricter threshold values over a contract's duration relative to the threshold at contract initiation. For example, an interest coverage ratio may be set at 1.5 during the first four quarters after a loan's initiation, 1.75 during the following two quarters and 2.5 thereafter.

We expect tight threshold trend covenants to meet the special signaling needs of borrowers underperforming at loan initiation but expecting their future performance to improve. The tight threshold trend feature may endow these borrowers with a period of a *temporary* reduction in the restrictiveness of covenant thresholds following the loan's issuance (i.e., a "grace period"), thus granting them some time to enhance their financial performance. At the same time, this feature offers underperforming borrowers the opportunity to credibly convey information to lenders about their future prospects by requiring gradually more demanding subsequent thresholds.

We argue that covenants with a tight trend provide an important signaling mechanism for borrowers who experience poor performance at loan initiation. These borrowers cannot rely on constant threshold covenants with a tight slack to convey their future prospects to lenders as their poor initial performance is likely to immediately trigger violations of such covenants. Underperforming borrowers also cannot signal via interest increasing PPP, as these provisions allow borrowers to only commit that their performance will not deteriorate in the future, without offering an opportunity to convey expectations about future performance improvements.[1]

The use of covenants with a tight trend in loan contracts is also consistent with the predictions of incomplete contracting theory, which suggests that covenants designate a state-contingent allocation of control rights between the borrower and lenders based on pre-specified contractible signals that reflect the borrower's underlying performance (e.g., Aghion and Bolton, 1992; Aghion et al., 1994; Dewatripont and Tirole, 1994). While the required level of the contractible signal (i.e., the performance threshold) in constant threshold covenants remains the same over the loan's life, tight trend covenants allow a dynamic ex ante allocation of control rights because their thresholds change over the loan's life. More specifically, by demanding a less restrictive initial threshold following the loan's initiation, tight trend covenants can endow borrowers with a grace period during which they retain control rights despite their relatively poor performance; these covenants then shift control rights to lenders if the borrower continues to perform poorly and cannot meet the more demanding thresholds over subsequent periods.

Another important advantage of tight trend covenants is that they potentially mitigate credit rationing for borrowers underperforming at loan initiation and reduce their cost of debt financing. In the absence of the tight trend feature, we expect these borrowers to experience difficulties in accessing credit because lenders are unlikely to issue credit to poorly performing firms unless they can commit to future performance improvements. In other words, we expect that tight trend covenants facilitate access to credit and decrease loan pricing for temporarily underperforming borrowers by providing a signaling mechanism that allows these borrowers to separate themselves from weaker borrowers that do not expect performance improvements.

To support our predictions, we conduct a series of tests. First, we examine the determinants of the presence of tight trend covenants in loan contracts. We find that borrowers are more likely to commit to these covenants if they report losses, have a lower interest coverage ratio and operating cash flows and violate financial covenants prior to the loan's issuance. These findings support our expectation that borrowers utilize a tight trend structure when they are experiencing poor performance at loan initiation and need a grace period to enhance it.

Second, we examine the strictness of the initial threshold values of tight trend covenants relative to constant thresholds. Controlling for fundamental firm and loan characteristics, we find that the initial thresholds of IC, FCC and DCF covenants with tight trends are less restrictive.[2] This result suggests that a tight trend provides underperforming borrowers with a grace period following the loan initiation that allows them to improve performance. We estimate that this period lasts between one year (or 20% of a loan's maturity), if we consider the first increase in the threshold, and two and a half years (or 50% of a loan's maturity) if we consider the period until the threshold reaches its final value. In addition, we find that final thresholds in tight trend covenants are significantly more demanding than constant thresholds, potentially compensating lenders for the weaker covenant protection over the grace period.

Third, we analyze tight trend borrowers' realized future performance. We find that, relative to borrowers who do not commit to tight trend covenants, borrowers with tight trend covenants experience a deterioration in profitability, interest

[1] We note that the interest decreasing provisions, which decrease the interest rate when a borrower's performance improves, cannot serve as a signaling mechanism because they do not impose any ex ante costly commitment on the borrower (e.g., Asquith et al., 2005). As it is no more costly for weak borrowers to commit to interest decreasing provisions than it is for stronger borrowers, the former will mimic the strong borrowers and also commit to the interest decreasing performance pricing provisions, which will prevent a separating equilibrium.

[2] We exclude from these tests DSC covenants due to their low frequency and EBITDA covenants because their thresholds change with firms' size and may be negative, which complicates cross sectional comparisons.