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# Market discipline of bank risk: Evidence from subordinated debt contracts

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## Abstract

Do bank debtholders discipline excessive risk taking? I investigate this question by examining how a bank's incentives to take risks affect offering yield spreads and restrictive covenants in their debt contracts. Results suggest that bank charter values, which determine a bank's risk-taking incentives, significantly affect the likelihood of restrictive covenants in bank debt contracts. This effect was most pronounced during the 1980s, when greater competition and relatively less-stringent regulation increased the severity of moral hazard problems in the US banking industry. Overall, the results suggest that an important channel for market investors to discipline bank risk taking is through writing restrictive covenants in bank debt.

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## 1. Introduction

Recent banking reform proposals advocate the provision of private efforts in monitoring and controlling bank risk as being more effective than direct regulatory oversight. The Basel Committee on Banking Supervision, for example, designates market discipline as

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one of the three pillars of future financial regulation. By appealing to market discipline, several of these proposals require mandated issuance of subordinated debt because such debt provides direct discipline if yields are positively correlated with bank risk measures.<sup>1</sup> Anticipating higher funding costs from increased bank risk, banks have the incentive to prudently manage risk taking.<sup>2</sup> Moreover, subordinated debt provides indirect discipline if the information contained in secondary market prices helps in the supervisory process. A key question is whether or not market investors in subordinated bank debt can and will effectively assess and control the risk-taking incentives of banks.

The existing tests of market discipline, which typically focus on the relation between subordinated debt yields and bank risk, have been inconclusive. Early papers by [Avery et al. \(1988\)](#) and [Gorton and Santomero \(1990\)](#) examine balance sheets and income statements and find no evidence of a relation between yields on bank subordinated debt and risk measures. In contrast, [Flannery and Sorescu \(1996\)](#) and [Jagtiani et al. \(2002\)](#) show that during the late 1980s and early 1990s, as regulators showed greater willingness to allow subordinated debtholders to absorb losses, yields on subordinated debt correlated more closely with accounting risk measures.<sup>3</sup>

Offering yield spreads represents only one part of the contracting process between bank and market investors. Investors also can directly limit a bank's ability to engage in risk-taking by including restrictive covenants in debt contracts ([Smith and Warner, 1979](#)). Restrictive covenants and yield spreads are determined jointly. Investors require lower yield spreads on more restrictive debt contracts, all else equal, because the presence of covenants limits the issuer's future risk-taking behavior. A more restrictive contract, however, imposes costs of reduced flexibility on the issuers. The decision to include covenants, therefore, depends on the tradeoff between the expected reduction in yield spreads from offering a more restrictive contract and the costs associated with reduced flexibility. Thus, it is possible that, in a period such as the early 1980s for which previous research has shown that yields were insensitive to risk-taking measures, subordinated debtholders included more covenants in debt contracts issued by riskier banks.<sup>4</sup>

In this paper, I empirically address the following question: how does a bank's incentive to take risks affect both the offering yield spreads and the restrictive covenants in subordinated debt issued by banks? Risk taking incentives of banks depend on the value of their charter, which reflects future economic rents that banks obtain from privileged access to markets protected from competition. Banks with valuable charters have few incentives

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<sup>1</sup> These proposals include those by [Benston and Kaufman \(1994\)](#), [Wall \(1989\)](#), [Keehn \(1989\)](#), [Cooper and Fraser \(1988\)](#), [Benston et al. \(1986\)](#), [Calomiris \(1997\)](#), [Benink and Calomiris \(1999\)](#), and [Evanoff and Wall \(2000\)](#). A Federal Reserve task force recently examined whether large banks should be required to issue subordinated debt as a means to enhance supervision ([Federal Reserve Board, 1999, 2000](#)). The US Congress has also recently expressed an interest in subordinated debt as a potential regulatory tool ([Gramm–Leach–Bliley Act](#)).

<sup>2</sup> However, [Bliss and Flannery \(2002\)](#) point out that showing a positive relation between subordinated debt yields and bank risk does not mean that banks will actually respond to changes in these yields.

<sup>3</sup> See [Flannery \(1998, 2001\)](#) for a survey of studies examining the relation between yield-spreads and risk measures.

<sup>4</sup> An alternative explanation is offered by [Covitz et al. \(2002\)](#) who argue that banks time their debt issuances and consequently secondary market debt prices understate the potential of market discipline in some periods and overstate it in others.

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