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Inferring market information from the price and quantity of S&L deposits

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Abstract

This paper infers market information embedded in the price and quantity of S&L deposits. While previous empirical research typically treats the risk premium as the key element of deposit interest spread, subsidy-shifting theory suggests that deposit rates also contain a subsidy-shifting premium that arises from an institution's eagerness to fund loan and investment opportunities that extract deposit-insurance subsidies. This paper examines the existence and the nature of both premiums and shows how regulators can use this information to make regulatory oversight more effective.

JEL classification: G21; G28
Keywords: Deposit pricing; Bank regulation; Market discipline

1. Introduction

In principle, full and perfect deposit insurance eliminates depositor incentives to monitor and discipline bank risk taking. In this extreme case, the insurer assumes complete responsibility for measuring pricing and managing the risk exposures that bank activity passes onto insurance reserves. In practice, because coverages are partial and imperfect, supplementary risk-taking discipline is supplied by any depositor who feels exposed to loss.

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To a first approximation, the spread between the interest rates on particular deposit instruments and comparable Treasury yields is a risk premium that measures the extent of depositor discipline imposed on the institutions that issue them. However, weaknesses in pricing and managing the risks insured institutions transmit to a government insurance fund implicitly subsidize particular forms of risk taking. In markets where insured institutions compete aggressively for subsidized funding and lending opportunities, the bulk of the subsidy is shifted into the interest rates institutions offer their depositors and borrowers (Kane, 1985, Chapter 5). Subsidy-shifting theory suggests that deposit interest rates contain a component that arises not from an institution's riskiness per se, but from its eagerness to fund loan and investment opportunities that promise a substantial profit. Thinking of the behavior of insolvent S&Ls during the FSLIC debacle, Shoven et al. (1992) conceived of the subsidy-shifting component as a "moral-hazard premium" that allowed high-risk institutions to pursue asset growth strategies that expanded the amount of ex ante deposit-insurance subsidies they could extract.

Despite the theoretical importance of the subsidy-shifting premium, [1] previous empirical literature has led to no consensus on the existence of such a component. Cook and Spellman (1994) find the monthly correlations between deposit spreads and deposit growth rates to be statistically insignificant for thrifts in District 11 during the period of January 1987–August 1988. They interpret this result as evidence that the moral-hazard premium was absent for the sample they study. On the contrary, Shoven et al. (1992) observe abnormally high deposit inflows at thrifts in states that offer high deposit rates during 1986–1989. However, the lack of firm-level data and control variables in both studies limits the power of their tests. Strahan (1995) is the first to explicitly test for the presence of the moral-hazard premium with firm-level data of 1987–1989 while controlling for thrifts' probability of closure and their expected loss and return standard deviation conditional on FSLIC default. He views the finding that thrifts' CD yields increased with the rates of their asset growth as evidence supporting the existence of a moral-hazard premium.

However, thrifts' growth could be influenced by the deposit rates they offer, treating the growth variables to be exogenous in deposit pricing models could generate biased and inconsistent estimates. Although Strahan (1995) provides evidence of subsidy shifting, he does not consider the endogeneity of asset growth. This paper seeks to develop a deposit-pricing model that can be used to address the endogeneity issue and to resolve the controversy on the subsidy-shifting premium. In addition, this study is motivated by current discussions on incorporating market information into banking supervision. A number of proposals advocate the use of subordinated debt yields to monitor and discipline banking organizations. [2] Despite the important role of subordinated debt, data on the price and quantity of institution deposits provide irreplaceable market information for two reasons. First, yields on publicly traded subordinated debt are available only for the largest deposit institutions,

[1] Moral-hazard premium and subsidy-shifting premium are used interchangeably in this paper.

[2] Evanoff and Wall (2000) provide a comprehensive survey on this issue.