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# Market discipline and deposit insurance reform in Japan ☆

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**Abstract**

On April 1, 2002, the Japanese government lifted a blanket guarantee of all deposits and began limiting the coverage of time deposits. This paper uses this deposit insurance reform as a natural experiment to investigate the relationship between deposit insurance coverage and market discipline. I find that the reform raised the sensitivity of interest rates on deposits, and that of deposit quantity to default risk. In addition, the interest rate differentials between partially insured large time deposits and fully insured ordinary deposits increased for risky banks. These results suggest that the deposit insurance reform enhanced market discipline in Japan. I also find, however, that too-big-to-fail (TBTF) policy became a more important determinant of interest rates and deposit allocation after the reform, thereby partially offsetting the positive effects of the deposit insurance reform on overall market discipline.


*JEL classification:* G2; G28; O53

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## 1. Introduction

Deposit insurance is one of the most controversial issues in economics. As shown by Diamond and Dybvig (1983), deposit insurance can reduce the likelihood of system-wide bank panic as it assures depositors of the safety of their deposits. Deposit insurance, however, also reduces depositors' incentives to carefully select and monitor banks. Consequently, deposit insurance provides banks with opportunity and incentives to increase leverage and take excessive risk unless bank regulators perform effective supervision to offset the weakening of depositor discipline.[1]

This negative consequence of deposit insurance has been extensively examined in empirical studies. Various historical studies of US banks show that insured banks held less capital, took more excessive risk, and failed more frequently than uninsured banks.[2] Recent cross-country studies also find that the combination of generous deposit insurance schemes and weak banking supervision tend to promote excessive risk-taking by banks, which in turn results in an increase in the likelihood of large scale banking distress and an increase in the fiscal cost of banking crises.[3]

Many financial economists consider market discipline to be a critical part of financial supervision.[4] But only a few papers specifically investigate the effects of deposit insurance on market discipline, and they present some conflicting pieces of evidence.[5] Mondschean and Opiela (1999) find that the adoption of deposit insurance reduced the sensitivity of deposit interest rates to bank default risk and weakened market discipline in Poland. Similarly, Demirguc-Kunt and Huizinga (2004) find in a cross-country regression that deposit insurance, and its design features such as coverage limits and funding sources, affect the effectiveness of market discipline. On the other hand, Martinez Peria and Schmukler (2001) examine the difference in the sensitivity of interest rates to bank risk between insured and uninsured deposits, and find no significant difference, even though uninsured deposits carry higher risk than insured deposits.

In light of these conflicting pieces of evidence, this paper attempts to uncover further empirical evidence regarding the relationship between deposit insurance and market discipline. In particular, I use a reduction in deposit insurance coverage on April 1, 2002 in Japan to examine whether limiting insurance coverage promotes market discipline. This particular deposit insurance reform presents a rare and clean natural experiment for two reasons. First, it contains a clear structural break, when the deposit insurance coverage shifted from a blanket guarantee to a limited guarantee of 10 million yen (approximately $100,000) per depositor per bank on April 1, 2002. Second, the Japanese government began limiting the coverage of time deposits while it kept the blanket guarantees of ordinary deposits. In empirics, the partial nature of this reform makes it possible to better identify the shifts in the supply schedule of time deposits since

[1] See Merton (1977) and Furlong and Keeley (1989).

[2] See Calomiris (1990) and Hooks and Robinson (2002), Grossman (1992), Alston et al. (1994), Wheelock and Kumbhakar (1994), Wheelock and Wilson (1995), and Wheelock and Kumbhakar (1995).

[3] See Hovakimian et al. (2003), Demirguc-Kunt and Detragiache (2002), and Honohan and Klingebiel (2003).

[4] See Calomiris (1999) and Evanoff and Wall (2001) among others.

[5] There is a large literature that examines and finds the *presence* of market discipline in a particular country, mostly the United States. Flannery (1998) gives an excellent literature review.