



Limited deposit insurance coverage and bank competition [☆]



Oz Shy ^{a,1}, Rune Stenbacka ^{b,2}, Vladimir Yankov ^{c,*}

^a MIT Sloan School of Management, Cambridge, MA 02142, USA

^b Hanken School of Economics, 00101 Helsinki, Finland

^c Board of Governors of the Federal Reserve System, Washington, D.C. 20551, USA

ARTICLE INFO

Article history:

Received 24 November 2015

Accepted 15 May 2016

Available online 23 June 2016

JEL classification:

G21

Keywords:

Limited deposit insurance coverage

Deposit rates

Bank competition

Bailout cost

ABSTRACT

Deposit insurance designs in many countries place a limit on the coverage of deposits in each bank. However, no limits are placed on the number of accounts held with different banks. Therefore, under limited deposit insurance, some consumers open accounts with different banks to achieve higher or full deposit insurance coverage. We compare three regimes of deposit insurance: no deposit insurance, unlimited deposit insurance, and limited deposit insurance. We show that limited deposit insurance weakens competition among banks and reduces total welfare relative to no or unlimited deposit insurance.

Published by Elsevier B.V.

1. Introduction

During the Free Banking Era and the Great Depression banks faced deposit runs, where small depositors simultaneously withdrew their deposits triggering illiquidity and default on otherwise healthy financial institutions. The financial crisis of 2008 brought a new type of “bank runs” which involved the non-traditional “shadow” banking system and where financial institutions ran on other financial institutions.³ Deposit insurance, which prevented

the traditional type of bank runs, was the most significant institutional change since the Great Depression. This paper focuses on two aspects of the design of deposit insurance that have not received much attention in the academic literature and the importance of which became evident during the 2008 financial crisis.

The first aspect of the deposit insurance design is that insurance is partial in the sense that it has limited coverage. The second aspect is that the deposit insurance limit applies to one institution per depositor account but is unlimited with respect to the number of accounts with different banks all of which are subject to the same deposit insurance limit. Our paper addresses the question of how this particular design of limited deposit insurance coverage affects the intensity of competition in the deposit market through its effect on demand for multiple deposit accounts. We also explore the effects of limited deposit insurance on consumer welfare as well as total welfare compared with systems of unlimited or no deposit insurance.

Our study initially documents a few stylized facts regarding the demand for multiple deposit accounts across different banks. We document that the average amount deposited in accounts that exceed the deposit insurance limit is approximately at most three times the deposit insurance limit. We show that at least half of wealthier U.S. households in the Survey of Consumer Finances indeed held multiple deposit accounts with multiple banks. At the onset of the 2008 financial crisis, the demand for higher deposit insurance increased as measured by the rapid increase in the share of insured brokered deposits.

* We held discussions and received most helpful comments from John Driscoll, Huberto Ennis, Étienne Gagnon, Michal Kowalik, Ned Prescott, Rafael Repullo, Jonathan Rose, Alex Vardoulakis, Zhu Wang, as well as participants at seminars given at the Federal Deposit Insurance Corporation (FDIC), 2014 European Meeting of the Econometric Society, 2014 Conference of the Federal Reserve System Committee on Financial Structure and Regulation, and the 13th Annual International Industrial Organization Conference. We also acknowledge most valuable comments from two anonymous referees. Stenbacka acknowledges financial support from Suomen Arvopaperimarkkinoiden Edistämisaatio. The views expressed in this paper are those of the authors and do not necessarily represent the views of the Federal Reserve System.

* Corresponding author at: Board of Governors of the Federal Reserve System, 20th Street and Constitution Avenue N.W., Washington, D.C. 20551, USA.

E-mail addresses: ozshy@ozshy.com (O. Shy), Rune.Stenbacka@hanken.fi (R. Stenbacka), Vladimir.L.Yankov@frb.gov (V. Yankov).

¹ MIT Sloan School of Management, 100 Main Street, E62-613, Cambridge, MA 02142, USA.

² Hanken School of Economics, P.O. Box 479, 00101 Helsinki, Finland.

³ See [Gorton \(2010\)](#) and [Gorton \(2012\)](#) for analysis of the recent financial crisis in historical perspective.

We next develop a stylized theoretical model of deposit market competition with the feature that some consumers diversify their funds across different banks in order to qualify for complete deposit insurance coverage. We establish that a system with limited deposit insurance coverage lowers the elasticity of deposit demand and softens deposit market competition as compared to systems with unlimited or no deposit insurance. We further show that limited deposit insurance reduces consumer welfare not only by inducing depositors to bear costs of opening several accounts, but also by weakening competition in the deposit market. Overall, we find that limited deposit insurance induces a social deadweight loss compared with systems of unlimited or no deposit insurance, because the benefits to banks associated with limited deposit insurance fall short of the losses to consumer welfare and total welfare when the bailout costs are taken into account.

We build on an extensive literature which has examined the role of deposit insurance for social welfare. Following the seminal contribution by [Diamond and Dybvig \(1983\)](#), the literature has typically analyzed deposit insurance systems in the context of models with bank runs. [Diamond and Dybvig \(1983\)](#) demonstrated how the interaction between pessimistic depositor expectations may generate bank runs as an inefficient Nash equilibrium, and how deposit insurance systems can eliminate such inefficient equilibria. Subsequently, an important and extensive category of studies, exemplified by [Keeley \(1990\)](#), [Matutes and Vives \(2000\)](#) and [Shy and Stenbacka \(2004\)](#), has explored the consequences of imperfect competition for deposits on the risk-taking incentives by banks. For example, [Matutes and Vives \(2000\)](#) characterize in detail the roles played by limited liability, deposit insurance with complete coverage, and deposit market competition for the determination of risk-taking by banks.

These theoretical studies have typically focused on complete deposit insurance with unlimited coverage. One exception is [Manz \(2009\)](#), who characterizes the optimal level of deposit insurance coverage as well as its determinants. However, [Manz \(2009\)](#) analyzes neither the effect of limited deposit insurance coverage on the demand for multiple deposit accounts, nor deposit market competition. More recent work by [Egan et al. \(2014\)](#) examines the role of competition for insured and uninsured deposits for banks' financial stability. They show that an increase in deposit insurance coverage may increase or decrease the risk to financial stability depending on whether banks or depositors benefit from the increase in insurance. However, their model does not explicitly examine the deposit insurance design or the possibility for uninsured depositors to increase their deposit insurance coverage by maintaining multiple bank accounts.

Empirical studies have presented cross-country evidence regarding the effects of deposit insurance coverage on deposit rates. [Penati and Protopapadakis \(1988\)](#) analyze moral hazard issues generated by deposit insurance. [Demirgüç-Kunt and Huizinga \(2004\)](#) exploit cross-country differences to conclude that the existence of an explicit insurance policy lowers deposit rates, while at the same time it also reduces market discipline on bank risk-taking. [Bartholdy et al. \(2003\)](#) present evidence that the risk premium in deposit rates is on average over 40 basis points higher in countries without deposit insurance than in countries with deposit insurance. They argue that the risk premium is a non-linear function of deposit insurance coverage, which they interpret to mean that the market recognizes that extended deposit insurance coverage makes the moral hazard problems more severe. [Pennacchi \(2006\)](#) shows that the combination of a deposit insurance design which facilitates complete insurance coverage through multiple deposit accounts and mispriced deposit insurance premia have given banks a competitive advantage over money market funds in providing safe haven asset classes. However, these studies do not examine the effect of limited deposit insurance on deposit

rates and profits. Furthermore, they do not provide evidence regarding demand for multiple deposit accounts induced by the deposit insurance design.

Since [Merton \(1978\)](#), who applied option pricing to characterize the pricing of deposit insurance premia under costly supervision, the debate on the deposit insurance design focused on formulating actuarially fair premia. The introduction of capital requirements imposed by the Basel regulation in the early 1990s as a mechanism to control credit risks of individual banks brought these issues strongly into the policy agenda. In the aftermath of the 2007–2008 financial crisis, the paradigm of both capital requirements and the design of deposit insurance premia shifted to incorporating systemic risk of financial institutions, see [Pennacchi \(2009\)](#). However, neither of these academic studies, nor the policy debate has focused on the effect of the partial insurance design on bank competition.

It should be emphasized that our study analyzes the effects of limited deposit insurance on deposit market competition without explicitly modeling banks' risky lending decisions. Abstracting from political and moral hazard issues, see [Calomiris and Jaremski \(2016\)](#), we develop a stylized model in order to highlight in a transparent way how deposit insurance systems with limited coverage induce some consumers to diversify their deposits across several banks.⁴ Our normative analysis is restricted to the investigation of how deposit insurance systems with limited coverage affect deposit rates, bank profits, consumer welfare, and total welfare. We do not attempt to address the more challenging issue of how to characterize the socially optimal design of deposit insurance. Instead, the goal of this study is to point out a set of distortions that arise as unintended consequences of the partial deposit insurance design which do not arise in systems with no or unlimited deposit insurance.

The paper is organized as follows. Section 2 presents a set of empirical facts regarding the implementation of deposit insurance in the United States and the resulting demand for multiple deposit accounts to achieve higher deposit insurance coverage. Section 3 constructs a model of deposit market competition and analyzes equilibrium deposit rates and profits as well as welfare in three regimes of deposit insurance: no deposit insurance, unlimited deposit insurance, and limited deposit insurance. Section 4 presents the main results of our analysis by comparing the performance of the banking industry under the different regimes of deposit insurance. Section 5 outlines extensions of the baseline model. Section 6 presents some concluding comments.

2. Limited deposit insurance and demand for multiple deposit accounts: empirical facts

Since its establishment in 1933, the Federal Deposit Insurance Corporation (FDIC) in the United States was designed to insure bank deposits up to a certain dollar amount, called the deposit insurance limit.⁵ [Table 1](#) displays the historical values of the deposit insurance limit both in nominal terms at the time they were set and in real values measured in 2008 dollar amounts. In addition, the last two columns of [Table 1](#) show that the deposit insurance limit was

⁴ A number of important studies, for example, [Hellwig \(1998\)](#) and [Winton \(1997\)](#), have analyzed the performance of the banking system from the perspective of diversification of economy-wide risks. These studies have typically focused on banks' lending activities. In our model the diversification is caused by the limited coverage of deposit insurance as some consumers split their funds across several banks.

⁵ A limited deposit insurance design is also the norm in most countries with explicit deposit insurance. A survey by the IMF ([Garcia, 2000](#)) documented that out of the 78 countries with explicit deposit insurance in 2000, 68 had implemented limited deposit insurance and only 10 countries had unlimited deposit insurance.

Download English Version:

<https://daneshyari.com/en/article/5088206>

Download Persian Version:

<https://daneshyari.com/article/5088206>

[Daneshyari.com](https://daneshyari.com)