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Interbank deposits and market discipline: Evidence from Central and Eastern Europe ☆

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ABSTRACT

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There is a considerable debate on the role played by market discipline in the banking industry. Using data for 207 banks across 10 Central and Eastern European countries, this paper empirically analyzes the disciplining role of interbank deposits. We find that market discipline has been effective in Central and Eastern Europe since the implementation of explicit deposit insurance. However, several factors affect the strength of this discipline. State-owned banks are not disciplined probably because they benefit from implicit insurance. Institutional and legal factors, and resolution strategies adopted by countries during banking crises also impact bank risk and the effectiveness of market discipline. Our results indicate that stronger regulatory discipline reduces risk but also weakens market discipline. *Journal of Comparative Economics* **41** (2) (2013) 544–560. Université de Limoges, LAPE, 5 rue Félix Eboué, BP 3127, 87031 Limoges, France.

1. Introduction

Economists and bank regulators have shown a growing interest in favoring the reliance on market forces and higher involvement of private agents such as uninsured creditors to monitor banks (Flannery, 2001; BIS, 2003). Concomitantly, the Basel Committee on Banking Supervision has designated market discipline the third of the three pillars of the regulatory framework. Market forces are assumed to reinforce bank capital regulation and supervision to ensure the safety of the banking system. However, for market discipline to be effective, several conditions must be fulfilled: market agents must feel at risk and must have sufficient information about the actual riskiness of banks (Hamalainen et al., 2005; Nier and Baumann, 2006). Thus, explicit deposit insurance with a coverage limit might serve as a signal that eliminates the unlimited coverage of the de facto implicit deposit insurance system.[1] However, even in presence of explicit insurance other factors are likely to

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[1] Explicit or formal deposit insurance is different than implicit deposit insurance. Explicit deposit insurance is based on formal regulation through central bank law, banking law, or the constitution. These laws define for example the coverage limits and the funding mode of the deposit insurance system, and how bank failures will be resolved. In absence of explicit deposit insurance, the deposit insurance is implicit that is depositors are protected by the bank monitoring and regulatory authority which does so without specifying guarantees regarding the extent of the protection (Demirgüc-Kunt et al., 2005). Most countries have henceforth explicit insurance schemes.

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affect the incentives of uninsured creditors to monitor banks. Some banks can still benefit from implicit government insurance. For example, state-owned banks might be considered by uninsured creditors as implicitly insured which should remove their incentives to monitor them (Borisova and Megginson, 2012). Similarly, some country specificities might affect the effectiveness of market discipline. Angkinand and Wihlborg (2010) show for example that market discipline depends on the extent of explicit deposit insurance, as well as on the credibility of non-insurance of creditors. Banks face a combination of regulatory discipline and market discipline. Market discipline implies that the cost and availability of debt depend on bank risk. Regulatory discipline is based on risk-weighted capital requirements, insurance premiums and examination frequency and intensity (Billett et al., 1998). Thus, the incentives of uninsured creditors to monitor banks might also depend on the strength of regulatory discipline: stronger regulatory discipline might weaken market discipline.

The aim of this paper is to assess the effectiveness of market discipline and the factors affecting its strength in the Central and Eastern European context. While most of the previous studies focus on Europe or on the US where financial markets are well developed and where the potential instruments of market discipline are broad, we consider Central and Eastern European countries where the conditions of the effectiveness of market discipline may be doubtful and where the potential instruments of market discipline are almost inexistent.[2] In fact, it is well-known that market discipline is likely to contribute to financial stability, but evidence from cross-country studies show that market discipline is possible only if it is promoted by rigorous accounting and auditing rules and in absence of generous deposit insurance schemes (Barth et al., 2004). In other words, low-income countries would lack the prerequisites for market discipline and regulators would have to rely only on capital adequacy rules and bank supervision, the two first Basel II pillars.

Besides, Central and Eastern European countries have implemented explicit deposit insurance in the 1990s. Indeed, within the framework of the liberalization of their banking market, starting in the early 1990s, they have implemented explicit deposit insurance systems to comply with the European Union (EU) Directive on Deposit Insurance and to deal with the banking distress that they suffered at the beginning of their transition process. The existence of an implicit insurance beforehand, that covered most creditors (large and small), had presumably undermined market discipline. The implementation of explicit deposit insurance should have created the conditions for effective market discipline.

In this paper, using bank-level and country-level data under explicit deposit insurance from 1995 to 2006 for 10 countries, we examine the effectiveness of market discipline by focusing on deposits and more specifically interbank deposits which are explicitly uninsured. We question whether banks that are more reliant on interbank deposits take less risk. We also investigate how some aspects of regulatory discipline and some bank specificities affect the effectiveness of market discipline by influencing the incentives of uninsured creditors to monitor banks. Specifically, we investigate the following empirical questions. First, we test the effectiveness of market discipline on government controlled banks assuming that these banks are less prone to market discipline. Indeed, state-owned banks might benefit from an implicit insurance from the government. Second, we examine whether higher deposit insurer power weakens the impact of interbank deposit on bank risk-taking. We assume that the disciplinary role of interbank deposits weakens as regulatory discipline is stronger. Third, we analyze the impact of the previous banking crises resolution strategies on the effectiveness of market discipline. We assume that the effectiveness of market discipline is higher in countries that have pursued liquidation strategies rather than recapitalizations.

The key findings are as follows. First, we find that under explicit deposit insurance (which has been implemented in the 1990s), interbank deposits do play a disciplining role in Central and Eastern Europe. However, we also find that several factors affect the effectiveness of market forces. Interbank deposits do not moderate the risk behavior of state-owned banks presumably because of an implicit and unlimited insurance perceived for such banks by market participants. The effectiveness of market discipline is also affected by the regulatory environment and notably the resolution strategies adopted by each country during banking crises and the power of the deposit insurer. Our results indicate that when regulatory discipline is strong, market discipline is undermined.

The remainder of this paper is organized as follows. Section 2 reviews the literature and explains how this work extends the existing literature. Section 3 presents our sample, variables and method. The empirical results are presented in Section 4. Section 5 is dedicated to robustness checks. Section 6 concludes.

2. Related literature and research focus

Many empirical studies have addressed the issue of the existence and the effectiveness of market discipline. Several types of agents can discipline banks. Some papers focus on the discipline exerted by depositors. For example, Martinez Peria and Schmukler (2001) show, using a sample of banks from Argentina, Chile and Mexico, that depositors withdraw their deposits from bad banks or require higher interest rates on their deposits, suggesting the presence of market discipline, even among small-insured depositors. Boot and Greenbaum (1993) establish theoretically that, when banks raise funds, the cost of funds is related to the bank's risk profile. Banks face lower costs when they invest in safe assets than when they invest in risky assets. A broad literature focuses on subordinated debt holders showing that the spreads on subordinated debt reflect bank

[2] Indeed, there are only few listed banks which limits the use of indicators based on equity markets. Similarly, subordinated debt which is an instrument frequently used in the literature on market discipline (Sironi, 2003; Morgan and Stiroh, 2001) cannot be used for these countries because of illiquidity issues: very few banks issue subordinated debt and only for small amounts.