Market discipline by bank creditors during the 2008–2010 crisis

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A B S T R A C T

We investigate whether uninsured depositors, insured depositors, and general creditors exhibit evidence of quantity market discipline during the recent financial crisis. To establish which types of creditors expect to incur loss, we evaluate the FDIC’s expectations about losses to creditors at banks that failed between 2008 and 2010. Our results show that quantity market discipline tends to begin far enough in advance to signal to both banks and supervisors that corrective actions can and should be taken. Furthermore, creditors are able to distinguish between banks of different risk levels. Our findings support several policy implications for encouraging market discipline.

The recent financial crisis resulted in the failure of over 300 banks and thrifts from 2008 through 2010 most of which were community and medium-sized institutions—those that clearly would be allowed to fail. Were creditors monitoring these banks and thrifts before and during the crisis? When the government stepped in with unprecedented liability guarantees, special programs to mitigate losses, and direct capital injections, were there reactions by creditors to further safeguard their claims? Or, as many have argued, was market discipline dead?

The answers to these questions are important for at least two reasons. First, if market discipline were weak before the crisis and became less effective during the crisis, then the preservation of financial stability in the future will need to rely increasingly on other means to limit bank risk. Second, if market discipline were even somewhat operative, we may learn important lessons for how best to encourage market discipline in smaller banks and possibly in the larger systemically important financial institutions.

This paper analyzes the dynamics of the liability structure at banks and thrifts, henceforth “banks”, in the period leading up to and during the crisis. We track the composition of liabilities by creditor class in failed banks as well as comparable banks that did not fail. We test the hypothesis that creditors who believe their funds are at risk actively monitor their banks and take actions to protect themselves. These actions include converting their funds to insured deposits at their current bank; moving their funds to banks they perceive are relatively safe; or otherwise reducing their exposure to their bank. All these actions have the potential both to constrain the ability of a bank to take risk and to signal to supervisors and market participants that the bank is becoming more risky. Our results indicate that changes in liability shares pre-crisis and throughout the crisis were consistent with market discipline being alive and well. We call these changes, in which liability holders reallocate their portfolios to protect against losses, “quantity discipline (QD) consistent portfolio reallocations.”

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1 For discussions of these guarantees and injections in the United States (see Bair, 2009; Bernanke, 2009). In reaction to fears that market discipline had been undermined, a core mandate of the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act), enacted in July 2010, is to promote market discipline (see, Financial Stability Oversight Council, 2011, p. 11). Berger and Turk-Ariss (2014) find evidence consistent with the view that in both the United States and the European Union government actions contributed to declines in depositor discipline during and after the crisis.

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Importantly, our results indicate that during the crisis, QD-consistent portfolio reallocations typically began well before—often four or more quarters before—a bank failed. In addition, we observe comparable reallocations when we expand our analysis to include risky banks that did not fail. Indeed, our analysis finds that creditors generally seemed able to distinguish between very risky and safe banks.

Our study both builds on, and has several advantages over, previous work. The first advantage is that, to our knowledge, few studies focus on market discipline at community and medium-sized banks during the recent crisis. These banks are of particular interest because they are truly at risk to fail. Second, no other study has used expected loss rates to illustrate some of the sources of uncertainty for uninsured and unsecured creditors. In particular, we use a unique data set of loss rates expected by the Federal Deposit Insurance Corporation (FDIC) on the full range of failed-bank liability categories: insured deposits, uninsured deposits, general creditor claims, secured claims, and subordinated debt. Finally, we use supervisory measures of overall bank risk at non-failed banks to investigate whether market discipline operates differently at banks of different risk.

The paper proceeds as follows. Section 1 defines quantity and price market discipline and places our paper within the previous literature. The next section discusses the sources of uncertainty for creditors in a bank failure and describes the unique data used in this study. Section 3 explains our empirical strategy for testing for quantity market discipline, and Section 4 analyzes our results. The concluding section summarizes our results and discusses their policy implications.

1. Definition of market discipline and previous literature

Liability holders may attempt to impose ex ante market discipline on their depository institutions when they are exposed to the risk of loss and/or to the risk of delayed access to their funds. The goals of such market discipline are to compensate creditors for the risks that banks take and to deter banks from taking excessive risks. The pre-crisis literature found evidence of market discipline at banks; however, the strength of market discipline depended on the extent to which the bank closure regime imposed losses on the uninsured and unsecured creditors.4

The pre-crisis literature considers market discipline as either a quantity or price mechanism which can be direct or indirect.5 Direct quantity market discipline occurs when, ceteris paribus, a bank experiences withdrawals of funds as its risk increases. Withdrawals can be gradual or may become a run on the bank. Such discipline imposes a direct cost on a bank that chooses to increase its risk. Indirect quantity discipline occurs when bank creditors restructure their holdings in ways that signal they are concerned about a bank’s safety and, as a result of this signal, supervisors or private agents require the bank to take risk-reducing actions. Whether direct or indirect, we call such movements “QD-consistent portfolio reallocations,” and they can include moving funds to a bank that creditors perceive to be safer, converting uninsured funds to insured funds, obtaining collateral, and reducing or cancelling existing nondeposit banking relationships.

Direct price market discipline occurs when, ceteris paribus, a bank must pay higher risk premiums on at-risk liabilities (e.g., uninsured deposits) or suffer other risk-based cost increases (e.g., higher credit default swap spreads) as its risk increases. Indirect price discipline occurs when government supervisors or private agents monitor market prices and react to changes in those prices in ways that deter a bank from taking excessive risk. Bank supervisors might, for example, conduct a special examination or limit a bank’s activities in response to a large increase in the bank’s market risk premiums.

In this paper, we do not focus on market discipline through the pricing channel mostly because the literature suggests that price discipline dominates only at relatively low levels of bank risk. For example, Maechler and McDill (2006) examined uninsured deposits and studied price and quantity discipline at both banks and thrifts from 1987 to 2000. They found “that good banks can raise uninsured deposits by raising their price, while weak banks cannot” (p. 1871). Acharya and Mora (2015) report that riskier banks had only weak success raising rates to attract deposits during the crisis. Ben-David et al. (2011) argue that as the crisis evolved, price discipline became inoperative. These results suggest that because our analysis is limited to a time of extremely high bank-specific and systemic risk, we would also expect to observe relatively low levels of price discipline.

In contrast to the findings on price discipline, the literature suggests that as tangible signs of serious weakness begin to appear QD becomes more likely. In the banking literature, one of the most commonly used signals of QD is a decrease in the share of uninsured deposits in a bank’s liabilities. In addition, as the perceived risk of a bank’s failure rises significantly, withdrawals can become destabilizing and may lead to contagious runs on other banks. However, it is noteworthy that the pre-crisis literature on bank runs and contagion generally concluded that even these phenomena tended to “be bank-specific and rational.” Moreover, federal deposit insurance has virtually eliminated destabilizing runs.

Previous literature has focused on an additional aspect of market discipline—monitoring versus influence. Bliss and Flannery (2002) emphasize the importance of distinguishing between the ability of bank owners and creditors to “monitor” accurately the financial condition of a firm and their ability to “influence” a bank’s risk-taking behavior. The authors point out that most studies of market discipline test only for monitoring, and our study is similarly constrained. They found little evidence that either bank stockholders or bond holders exert much influence. More generally, banks subject to monitoring by creditors most often do not fail, which implies

2 One example of a study that examines depositor discipline during the crisis is Berger and Turk-Ariis (2014). In addition, there is a growing literature on quantity discipline runs on large banks and “shadow banks” during the crisis. This literature focuses on nontraditional quantities such as asset-backed commercial paper, repurchase agreements, and money market mutual fund shares. Early examples include Gorton (2008) and Bernanke (2010).

3 General creditor claims include claims of outside law firms, accountants, information technology providers, landlords, and any other firm that was not paid for goods or services provided before the bank failed. General creditor claims also include trading liabilities and foreign deposits.

4 Papers that emphasize the importance of the regulatory regime include Balasubramanian and Cyree (2011), Ashcraft (2008), Nier and Baumann (2006), Covitz et al. (2004), Goldberg and Huddins (2002), and Jordan (2000).

5 The distinction between quantity and price mechanisms is made by Park and Peristiani (1998), among others, and direct and indirect effects are discussed in Board of Governors (1999). Papers that focus on quantity discipline are discussed in the text. Papers that focus on price discipline include Balasubramanian and Cyree (2011), Curry et al. (2008), Goyal (2005), Krishnan et al. (2005), Bliss and Flannery (2002), Hancock and Kast (2001), Board of Governors (1999), and Hannoan and Hanweck (1988). Papers that focus on both quantity and price discipline include Berger and Turk-Ariis (2014), Schaeck (2008), Davenport and McDill (2006), Maechler and McDill (2006), Covitz et al. (2004), and Jagtiani and Lernieu (2001). Market discipline has been studied in an international context by Berger and Turk-Ariis (2014), Pop (2009), Murata and Hori (2006), Nier and Baumann (2006), and Peria and

6 Schmukler (2001): A comprehensive discussion of the importance of bank liability structures can be found in Bradley and Shubik (2006).

6 Kaufman (1994, p. 143). See also Calomiris and Mason (1997).”

7 And, according to a recent study of Russian banks by Karas et al. (2013), has blunted market discipline.
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