Bank Disclosure and the Financial Crisis

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Financial institutions voluntary disclose a vast amount of information to satisfy regulatory requirements and investors' and funding suppliers' demand for information. In this project, we explore the determinants and consequences of banks' voluntary disclosures during the financial crisis of 2007-2009. In particular, we study whether and how banks' changed the quantity and quality of their disclosure in response to deteriorations in their economic condition, and provide the first descriptive evidence of the content of these disclosures. We also study whether and how these disclosures impacted bank outcomes during the financial crisis.

Using a large amount of textual and unstructured data (over 30,000 conference call transcripts, over 6,000 10-K filings, and over 60,000 8-K filings), our project stands to provide some of the first empirical evidence on bank disclosure during a crisis period. Informational asymmetries are at the heart of banking theory (Diamond and Kashyap 2016, Cornett et al. 2011, Ivashina and Scharfstein 2010, Morris and Shin 2002, Diamond and Dybvig 1983, He and Manela 2014). To date, much of the empirical research on bank accounting has focused on mandated disclosure (e.g., fair value accounting and loan loss provisioning). While this represents an essential source of information on bank performance and assets, they constitute only a small part of the overall information set available to bank stakeholders. In particular, banks disclose a wealth of information via SEC filings and conference calls. To the best of our knowledge, these disclosures, their determinants, and their consequences have not yet been explored for financial institutions.

We have already collected banks' earnings conference calls with analysts as well as SEC 8-K and 10-K filings for a large sample of publicly-traded U.S. banks. We plan to use this data to conduct several analyses. First, using textual analyses techniques, we plan to provide descriptive evidence on how bank disclosure evolved before and during the financial crisis, and in particular, whether the characteristics of bank disclosure (e.g., amount and tone) vary predictably with bank characteristics and performance (e.g., realized loan losses, ABS and MBS exposure) before and during the crisis. During a banking crisis, outsiders – such as regulators, funding providers, and credit line borrowers – may seek to assess a bank's stability, including its solvency and liquidity. Banks may use voluntary disclosures to signal their health to these outsiders to mitigate the impact of the financial crisis on the bank's operations. Furthermore, banks with particular types of exposures may be more likely to use voluntary disclosures to mitigate risks stemming from information asymmetry between the bank and its stakeholders. For example, banks with high exposure to liquidity shocks may provide more informative voluntary disclosures, which could resolve funding providers' uncertainty about the bank's liquidity profile. If short-term funding providers knew that the bank were likely to have sufficient liquidity to repay them, then the incentive to run would be diminished, and they may provide more funding at favorable terms. On the other hand, banks may be reluctant to provide transparent, high-quality disclosures during a crisis period if transparency increases the likelihood of adverse outcomes (e.g., runs by credit line borrowers). Consistent with this idea, some prior research has suggested that some opacity may be desirable for banks during crisis periods (Gao and Jiang 2018, Parlatore 2015, Morrison and White 2013).

Second, we plan to explore whether various proxies for the quality of bank disclosure are associated with equity market outcomes (e.g., returns and bid-ask spreads), credit market outcomes (e.g.,

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CDS spreads), and behavior by other bank stakeholders (e.g., credit line drawdowns) during the financial crisis. If voluntary disclosures decrease outside stakeholders' uncertainty about a bank's stability, they may take actions which improve the bank's ability to navigate the crisis successfully. For example, related to the discussion above, if a bank's customers with outstanding credit lines were to believe that a bank has sufficient liquidity, they might not rush to draw down on these lines during the crisis (Ivashina and Sharfstein 2010, Pennacchi, 2006). Prior studies document that increased voluntary disclosure by banks reduces long-run average stock price volatility and the cost of funding (Baumann and Nier 2004, Bischof and Daske 2014); however, these studies have not examined whether voluntary disclosures impact bank outcomes during crisis periods.

It is also not clear whether banks will use voluntary disclosures to manage during-crisis risk for several reasons. First, voluntary disclosures are costly (Shaffer 1995, Baumann and Nier 2004) and require *ex ante* commitment (Diamond and Verrecchia 1991, Baiman and Verrecchia 1996). Second, certain funding providers (e.g., depositors) may be unlikely to use banks' voluntary disclosures (Flannery 1982, Rajan 1992). Third, even if some stakeholders use voluntary disclosures, the information in certain disclosures (for example, the management's discussion and analysis in the Form 10-K) may be stale. Therefore, it is an empirical question as to whether banks voluntarily disclose relevant information during a crisis and whether the disclosures have economically significant effects.

The intended contribution of this project is to provide descriptive evidence on bank disclosures, and in particular how these disclosures evolve before and during the financial crisis, and the impact of those disclosures on bank outcomes such as funding costs and liquidity. The second contribution is to provide empirical insights on the role of banks' voluntary disclosures on specific outcomes such as funding costs and survival using shocks to banks' liquidity and exposure to the financial crisis for identification and heterogeneous treatment estimation.

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