



# How prompt was regulatory corrective action during the financial crisis?☆



Robert Loveland\*

California State University, East Bay, United States

## ARTICLE INFO

### Article history:

Received 15 October 2015

Received in revised form 8 March 2016

Accepted 18 May 2016

Available online 19 May 2016

### JEL classification:

G33

G38

G21

G12

### Keywords:

Forbearance

Regulation

Banking

Financial crisis

Valuation

## ABSTRACT

This paper empirically investigates the incidence of regulatory forbearance during the financial crisis. Using an option pricing technique in concert with valuation data gathered from failed bank sales, I find that failed banks consistently underreported the level of impairment in loan portfolios during the financial crisis period of 2008–2010, helping these market value insolvent banks to report adequate capital for regulatory purposes. Impairment-adjusted capital ratios provide evidence of regulatory forbearance for up to 18 months prior to seizure. Analyses of bank coverage ratios reveal that coverage ratios are negatively and significantly related to impairment levels and are significantly lower for banks with critically low levels of capital.

© 2016 Elsevier B.V. All rights reserved.

## 1. Introduction

Past studies have shown that U.S. financial regulators are inclined to practice capital forbearance during financial crises (Gupta and Misra, 1999, survey the literature). Put simply, forbearance allows distressed or insolvent financial institutions to continue operation despite evidence of capital inadequacy. Various incentives motivate forbearance but it is often employed in the hope that a distressed institution may return to financial health and, in times of crisis, help prevent further destabilization of a weakened financial system.

However, the extant literature on bank failures demonstrates that regulatory forbearance, in the end, is costlier to the insurance

fund<sup>1</sup> that underpins the U.S. banking system than the prompt resolution of severely distressed institutions. Studies of the savings and loan (S&L) crisis of the 1980s show that regulatory forbearance ultimately cost U.S. taxpayers tens of billions of dollars (DeGennaro and Thomson, 1996; Kane and Yu, 1996). In response to failings of regulatory agencies during the S&L crisis, the Federal Deposit Insurance Corporation Improvement Act (FDICIA) of 1991 revamped the regulatory mechanisms that handle bank failures. The prompt corrective action provision (PCA) of FDICIA specifically addresses capital forbearance by allowing regulators to close a financial institution before it becomes insolvent and the losses become substantial; the overarching goal being to resolve the institution at the least possible long-term cost to the insurance fund.

The recent financial crisis has again tested regulatory structures designed to ensure the stability of the financial system. To date, relatively little work has been done to study the efficacy of the PCA

☆ I thank Allen Berger, Jack He, Jim Linck, Harold Mulherin, Jeffrey Netter, Bradley Payne, seminar participants at the University of Georgia, and conference participants at the 2015 Financial Management Association, 2015 Southern Finance Association, and 2014 Southwestern Finance Association meetings for helpful comments, suggestions and discussions. I gratefully acknowledge the valuable comments of two anonymous referees.

\* Correspondence to: Department of Accounting and Finance, College of Business and Economics, California State University – East Bay, 25800 Carlos Bee Blvd., Hayward, CA 94542, United States. Tel.: +1 510 885 3130; fax: +1 510 885 7175.

E-mail address: [robert.loveland@csueastbay.edu](mailto:robert.loveland@csueastbay.edu)

<sup>1</sup> The Federal Deposit Insurance Corporation's Deposit Insurance Fund (DIF) insures the deposits of commercial banks and savings and loan institutions. In 2005, the DIF replaced the Bank Insurance Fund and the Savings Association Insurance Fund (SAIF) which insured the deposits of commercial banks and savings and loan institutions, respectively. The SAIF was created in 1989 to replace the insurance provided by the Federal Savings and Loan Insurance Corporation.

regulations during this latest crisis, however, these studies suggest a familiar theme. An examination of FDIC material loss reviews<sup>2</sup> following bank failures in 2007–2009 concludes that banks artificially inflated regulatory capital, sometimes with examiner complicity. In almost all cases, examiners failed to exercise discretionary corrective actions to discipline banks who intentionally misstated their financials (Garcia, 2010). Huizinga and Laeven (2012) study U.S. banks from 2001 to 2008 and find that banks overstated the value of distressed assets with the intent of bolstering their profitability and levels of regulatory capital. They conclude that bank balance sheets offer “a distorted view of the financial health of the banks and provide suggestive evidence of regulatory forbearance and noncompliance with accounting rules.” Chernykh and Cole (2015) study bank failures for the 2007–2012 period and find evidence of distressed banks with high levels of non-performing assets and insufficient loan loss reserves, yet adequate levels of regulatory capital. The authors suggest that regulators were complicit in this capital conservation scheme and assert that forbearance allowed regulators to avoid enacting the disciplinary measures called for by PCA.

While the occurrence of forbearance during the crisis is still being explored, the cause of the financial distress analyzed in the above studies is comparatively well established in the literature. While subject to some debate, most agree that declining home prices, prompted by the bursting of the U.S. housing bubble, caused a spike in mortgage delinquencies and foreclosures which spilled over to the mortgage-backed securities market (Thakor, 2015). As a result, the market value of real estate-related assets held by banks dropped significantly relative to historic cost (Bhat et al., 2011; Diamond and Rajan, 2011). As the financial crisis deepened, real estate development loan portfolios also experienced significant losses (Cole and White, 2012). The ensuing write-downs, in concert with severe funding problems, pushed many banks to the brink of insolvency.

This paper examines the valuation of bank loan portfolios during the height of the financial crisis – the years 2008–2010 – to determine the incidence of regulatory forbearance during this time. To do so, I examine two related issues: first, given the drop in real estate values and high loan loss rates during the crisis, did bank financial statements reasonably reflect asset impairment and capital adequacy? Second, given the scope of impairment in comparison to bank capital, was loan loss provisioning adequate to cover probable losses? Because PCA requires that undercapitalized banks receive more rigorous and frequent regulatory supervision as they become more distressed, evidence of inadequate recognition of asset impairment can also be considered evidence of regulatory forbearance.<sup>3</sup>

In order to gauge the extent to which asset impairment is reflected in bank financial reporting, I estimate the market values of bank loan portfolios (which make up the bulk of assets held on bank balance sheets and for which there is typically no exchange-determined price) from bank stock prices using an option valuation technique. If asset impairment is severe and demonstrable, as was the case during the crisis period, the increased probability of future loss should be reflected as an asset write down in the current period via loan loss provisioning. Thus, conditioned on significant deterioration in the likelihood of receiving future cash flows, loan portfolio

values reported on the balance sheet, net of loan loss allowance, should be roughly equivalent to the economic or market value of the loan portfolio. The extent to which they are not – the difference between loan portfolio book value, net of loan loss allowance, and loan portfolio market value – can be thought of as a market-implied measure of asset impairment.

In concert with estimated loan portfolio values, I also use valuation data gathered from failed bank sales during the recent financial crisis to examine these questions. I find that while the market heavily discounts the loan portfolios of both failed and solvent banks during the financial crisis, the market values of failed bank loan portfolios are consistently and significantly lower than that of surviving industry peers; reflecting the lower quality/higher risk of their portfolios.

Additionally, I find evidence that both bank groups understate asset impairment on the balance sheet and consequently overstate regulatory capital. An examination of *ex-post* failed banks shows that capital ratios adjusted for market-implied asset impairment are more efficient in diagnosing distress than book value ratios. Moreover, impairment-adjusted capital ratios provide evidence of regulatory forbearance for up to 18 months prior to seizure.

This study contributes to the existing literature in three ways. First, I contribute to the literature on regulatory forbearance and prompt corrective action by examining the incidence of forbearance during the latest banking crisis. While the above-mentioned studies use agency performance reviews, Q-theory and regulatory capital ratios to diagnose forbearance (Garcia, 2010; Huizinga and Laeven, 2012; Chernykh and Cole, 2015, respectively), I use actual market values of failed bank loan portfolios sold at auction to help empirically estimate loan market values and loan impairment. To the best of my knowledge, this is the first study to do so. I show that the estimated impairment amounts are an accurate proxy for the probable future credit losses; the accuracy of these impairment estimates allows me to estimate “true” capital levels with which to determine solvency.

Second, this study contributes to a literature that examines the use of loan loss provisioning to manage earnings and capital. While existing studies on provisioning and loss coverage during the crisis (e.g., Huizinga and Laeven, 2012; Chernykh and Cole, 2015) rely on book value loan impairment and capital data I am able to use estimates of true impairment and impairment-adjusted capital. This allows me to examine the effect of actual capital inadequacy on the provisioning behavior of distressed banks, a research design feature that reveals the incentive for bank managers to use discretionary accounting to conserve capital during times of distress.

Third, this study contributes to the growing literature on the effects of the financial crisis and provides robust evidence useful in discussions about prudential banking regulation. I show that loan impairment and related loan losses are a primary channel through which many banks experienced capital distress and ultimately failed (see, e.g., Cole and White, 2012; Ng and Roychowdhury, 2013). Given the evidence presented in this paper that regulators permitted failed banks significantly lower allowance levels to cover probable loss than their industry peers, this study should provide ammunition to proponents of more stringent capital requirements and stricter regulatory supervision in the current bank regulatory debate.

The paper proceeds as follows: Section 2 reviews the pertinent literature. Section 3 provides background on capital adequacy regulation, PCA and bank resolution procedures. Section 4 explains the methodology and empirical approach to testing. Section 5 outline sample formation and describes the data used in the empirical analysis. Section 6 presents empirical analysis of market value-adjusted loans and regulatory capital. Section 7 presents empirical analysis of loan impairment recognition. Section 8 presents robustness analysis and Section 9 concludes.

<sup>2</sup> A material loss review is required by FDICIA in the event of a loss to the DIF, from bank failure, deemed to be material. The review is meant to ascertain why the bank's performance resulted in a material loss to the DIF and analyze the supervisory performance of examiners, include their employment of PCA provisions.

<sup>3</sup> Allowing a distressed bank to delay impairment recognition through inadequate loss provisioning has historically been a common form of forbearance, and one of the reasons that specific remedial steps were codified into PCA.

Download English Version:

<https://daneshyari.com/en/article/998797>

Download Persian Version:

<https://daneshyari.com/article/998797>

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