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Crisis-Driven Tax Law: The Case of Section 382

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CRISIS-DRIVEN TAX LAW: THE CASE OF SECTION 382

by

*Albert H. Choi, Quinn Curtis, and Andrew T. Hayashi**

ABSTRACT

At the peak of the 2008 financial crisis, the Internal Revenue Service (IRS) issued Notice 2008–83 (the Notice), administrative guidance that limited Internal Revenue Code (the Code) section 382, an important tax rule designed to discourage tax-motivated acquisitions. Although styled as a mere interpretation of existing law, the Notice has been widely viewed as an improper exercise of the IRS's authority that undermined its legitimacy. But did the Notice work? There were many extraordinary interventions during the financial crisis that raised questions about eroding the rule of law and the long-term destabilizing effects of bail-outs. In a financial crisis, regulators must weigh these real, but distant and uncertain, costs against the immediate benefits of the intervention. Toward that end, we report the first evidence of the effects of limiting Code section 382 during the 2008 financial crisis. Although we find little evidence that the Notice affected bank merger activity, those mergers that occurred while the Notice was in effect produced lower post-merger income growth. The results suggest that Code section 382

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may have some benefits in terms of discouraging tax-motivated acquisitions. We use the Notice to illustrate the concerns that should guide lawmakers' decisions about if and how to make law during a crisis.

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Introduction

There is an old adage that hard cases make bad law,[1] but what about hard times? In times of crisis, regulators face enormous pressure to bend rules and stretch regulations, sometimes to the breaking point. Thousands of pages have been written on the response of bank regulators to the 2008 financial crisis. In the aftermath of the crisis, scholars of financial regulation have sought ways to contain regulators' discretion in times of crisis while also facing the reality that aggressive intervention during a financial panic might stave off economic disaster. Tax law has been largely overlooked in this discussion. This Article examines a critical change to tax law that was made to support the banking sector during the financial crisis but that has not attracted scholarly attention. By studying this intervention, we shed light on both the importance of the underlying tax provision and the usefulness of tax law in responding to an economic emergency.

At the height of the financial crisis in the fall of 2008, the Internal Revenue Service (IRS) released a remarkable piece of administrative guidance. Issued on September 30th of that year and less than a page long, IRS Notice 2008–83 (the Notice) was styled as a mere interpretation of existing law.[2] Nevertheless, the Notice had a dramatic effect on the value of banks' tax assets.[3] The Notice effectively turned off an aspect of Code section 382 that restricts the ability of a corporation to use unrecognized tax losses from underperforming loans to offset taxable income from other sources if that corporation undergoes a significant change in equity ownership, including an acquisition. The purpose of Code section 382 is to discourage tax-motivated corporate acquisitions, but during the financial crisis this policy objective came into conflict with the urgent need to encourage consolidation in the financial sector and inject capital into distressed banks.

1. Northern Sec. Co. v. United States, 193 U.S. 197, 400 (1904) (Holmes, J., dissenting) (stating "Great cases like hard cases make bad law."). One prominent scholar has raised questions about whether all cases make bad law: Frederick Schauer, *Do Cases Make Bad Law?*, 73 U. Chi. L. Rev. 883 (2006).

2. *See* Notice 2008–83, 2008–2 C.B. 905.

3. *See id.* Tax assets include net operating loss carryforwards, credits, and other tax attributes that can be used to reduce tax liability.

The direct result of the guidance was that the unrecognized losses on target banks' loan portfolios, which otherwise would have been impaired following an acquisition, could be fully utilized by an acquirer, thereby making banks with distressed loans much more attractive to potential acquirers. There was also a distributional consequence of freeing up tax assets for potential acquirers: acquisition targets with these tax assets became *more* attractive to more profitable acquirers, because the more profitable an acquirer is the more rapidly it can exploit those tax assets to offset their taxable income. This implication played out only a few days after the Notice was issued when Wells Fargo re-entered negotiations for the acquisition of Wachovia and outbid Citibank after determining that its ability to utilize Wachovia's tax assets would allow it to acquire Wachovia without FDIC assistance.[4] One estimate placed the value of the Notice in respect of Wachovia's tax assets to Wells Fargo at roughly $20 billion.[5] Controversy over the Notice, including whether it was a proper exercise of the Treasury Department's authority and whether it was issued specifically to favor Wells Fargo, followed quickly and the Notice was overruled when the American Recovery and Reinvestment Act was signed into law in early 2009.[6] Thus, there was a window of roughly three and a half months in which the Notice was in effect and part of Code section 382 was disabled with respect to banks.

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4. *See The Acquisition of Wachovia Corporation by Wells Fargo & Company: Testimony Before the Financial Crisis Inquiry Commission*, Bd. Governors Fed. Reserve Sys. (Sept. 1, 2010), https://www.federalreserve.gov/newsevents/testimony/alvarez20100901a.htm (statement of Scott G. Alvarez, General Counsel; "Based on an IRS notice issued September 30, Wells Fargo had determined that certain U.S. federal income tax benefits resulting from the proposed Wachovia transaction would allow it to acquire Wachovia without FDIC assistance.").For a timeline of the events, see David Enrich & Dan Fitzpatrick, *Wachovia Chooses Wells Fargo, Spurns Citi*, Wall St. J. (Oct. 4, 2008, 11:59 PM), http://www.wsj.com/articles/SB122303190029501925.

5. *See* Dan Freed, *How Wells Fargo Won the Tax-Dodging Trophy*, The Street (Nov. 10, 2011, 6:35 AM), https://www.thestreet.com/story/11306521/1/how-wells-fargo-won-the-tax-dodging-trophy.html; *see also* Binyamin Appelbaum, *After Change in Tax Law, Wells Fargo Swoops In*, Wash. Post, (Oct. 4, 2008), http://www.washingtonpost.com/wp-dyn/content/article/2008/10/03/AR2008100301042.html.

6. American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, 123 Stat. 115 (2009).

While it may be easy to overlook in the dramatic history of the 2008 financial crisis, the quiet release of a one-page Notice on a Friday afternoon in late September, styled as an interpretation of an obscure and convoluted provision of corporate tax law, sent shockwaves through the tax world. Among scholars, reactions were generally negative on account of its perceived illegitimacy and undermining of the rule of law. Although described as an interpretation of Code section 382, most observers viewed it as a substantive change in law of the kind that requires congressional action. Among economic and business observers, the most dramatic effect of the Notice was that it enabled Wells Fargo's 11th-hour bid for Wachovia, setting in motion a sequence of events that is now a case study published by Harvard Business School.[7] Lost in the questions about the legal authority for the Notice,[8] the effects of the Notice on the rule of law,[9] and the high drama of the Wachovia sale, were the effects of the rule change itself. Section 382 is a much-maligned provision of the Code. Its detractors argue that it imposes burdensome costs on corporations that must track ownership of their stock to avoid triggering its draconian consequences, and further argue that it can be triggered by ordinary business transactions that do not pose a risk of the abusive "loss trafficking" that motivated the adoption of Code section 382 in the first place.

This is the first Article to examine the impact of Notice 2008–83 and, more generally, the effects of Code section 382. The adoption and subsequent repeal of the Notice presents a unique opportunity to explore the significance of taxes in the merger decision and contribute to a literature with mixed results on the importance of taxes in that context.[10] In general, the evidence suggests the effects of taxes (including

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7. Guhan Subramanian & Nithyasri Sharma, Citigroup-Wachovia-Wells Fargo (Nov. 2011) (unpublished Harvard Business School Case 910-006).

8. *See, e.g.*, Nathaniel Cushman, Comment, *The Impact of Illegal Tax Guidance: Notice 2008–83*, 62 TAX LAW. 867 (2008).

9. *See* Alice G. Abreu & Richard K. Greenstein, *Tax as Everylaw: Interpretation, Enforcement, and the Legitimacy of the IRS*, 69 TAX LAW. 493 (2015); Lawrence Zelenak, *Custom and the Rule of Law in the Administration of the Income Tax*, 62 DUKE L.J. 829 (2012).

10. *See, e.g.*, Alan J. Auerbach & David Reishus, *The Impact of Taxation on Mergers and Acquisitions*, *in* MERGERS AND ACQUISITIONS 69–86 (A.J. Auerbach ed., 1988); Alan J. Auerbach & David Reishus, *Taxes and the Merger Decision*, *in* KNIGHTS, RAIDERS AND TARGETS: THE IMPACT OF THE HOSTILE TAKEOVER 301–03 (John C. Coffee, Jr., et al. eds., 1988); Julie H. Collins

shareholder-level taxes) on the frequency of acquisitions are modest, but the effects of taxes on the price and structure of corporate acquisitions are robust.[11] Understanding these effects is important, not least because tax rules such as Code section 382 that target tax-motivated acquisitions also impose compliance and monitoring costs and create other distortions in merger decisions.[12] If taxes have little effect on merger activity to begin with, then a reconsideration of these rules may be in order. Our study exploits the unexpected nature of the Notice to disentangle cause and effect in the relationship between tax assets and merger activity. The Notice was a surprise to just about everyone[13] and was issued without

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et al., *Tax Reform and Foreign Acquisitions: A Microanalysis*, 48 NAT'L TAX J. 1 (1995); Erik Devos et al., *How Do Mergers Create Value? A Comparison of Taxes, Market Power, and Efficiency Improvements as Explanations for Synergies*, 22 REV. FIN. STUD. 1179 (2008); Merle M. Erickson & Shiing-wu Wang, *Tax Benefits as a Source of Merger Premiums in Acquisitions of Private Corporations*, 82 ACCT. REV. 359 (2007); Kenneth Lehn & Annette B. Poulsen, *Sources of Value in Leveraged Buyouts*, *in* PUBLIC POLICY TOWARDS CORPORATE TAKEOVERS 46–62 (Murray L. Weidenbaum & Kenneth W. Chilton eds., 1988).

11. *See* Benjamin C. Ayers et al., *Shareholder Taxes in Acquisition Premiums: The Effect of Capital Gains Taxation*, 58 J. FIN. 2783 (2003); Benjamin C. Ayers et al., *The Effect of Shareholder-Level Capital Gains Taxes on Acquisition Structure*, 79 ACCT. REV. 859 (2004); Wei-Chih Chiang et al., *Pricing Target NOLs in Mergers and Acquisitions from the Participating Firms' Perspective*, 30 ADVANCES ACCT. 32 (2014); Elizabeth Plummer & John R. Robinson, *Capital Market Evidence of Windfalls from the Acquisition of Tax Carryovers*, 43 NAT'L TAX J. 481 (1990). For a summary of the accounting literature, see Sandra Betton et al., *Corporate Takeovers*, *in* HANDBOOK OF CORPORATE FINANCE: EMPIRICAL CORPORATE FINANCE 291–430 (B. Espen Eckbo ed., 2d ed. 2008); Michelle Hanlon & Shane Heitzman, *A Review of Tax Research*, 50 J. ACCT. & ECON. 127 (2010); Douglas A. Shackelford & Terry Shevlin, *Empirical Tax Research in Accounting*, 31 J. ACCT. & ECON. 321 (2001).

12. *See* Appendix *infra* for a model of how Code section 382 distorts merger decisions.

13. *See Grassley Seeks Inspector General Review of Treasury Bank Merger Move*, S. COMM. ON FIN. (Nov. 14, 2008), https://www.finance.senate.gov/ranking-members-news/grassley-seeks-inspector-general-review-of-treasury-bank-merger-move ("'Treasury's move took a lot of people by surprise,' Grassley said. 'It was a big policy change for an agency to take administratively. Treasury didn't involve Congress, so there were no checks and balances to vet the policy.'").

the notice and comment process ordinarily required when the Treasury Department promulgates regulations.[14] As we discuss in Part IV, this surprise provides a natural experiment for testing the effects of Code section 382.

The Notice also provides lessons about how tax law might be used by policymakers during times of economic stress. The Notice was not the first time that substantive tax law changed during a crisis, and not even the first time that tax law changed in a way that facilitated infusions of cash from the Treasury to distressed financial institutions. Twenty-seven years earlier, the U.S. Supreme Court decided *Cottage Savings v. Commissioner*,[15] a decision that inaugurated the modern "hair-trigger" rule for the realization of gains and losses on the disposition of property. Under current law, the exchange of property results in the realization (i.e., taxable inclusion of income or, generally, deduction of loss) of gains and losses even if that property is exchanged for other property that is virtually indistinguishable in terms of its economic risks and rewards. The important consequence of this rule is that taxpayers can selectively recognize losses on property that has fallen in value while deferring the taxation of their gains. Whatever the merits of this rule as a general matter, the most immediate effect of the Court's decision was to allow Savings and Loan (S&L) institutions during the S&L crisis of the 1980s and 1990s to recognize their tax losses without running into the regulatory difficulties that would have ensued if they had actually sold the distressed loans that they owned.

Crisis-driven tax law is not a new phenomenon, particularly for financial institutions. It is crucial to understand the broader context of the financial crisis to understand the pressure to make crisis-driven tax law, and so we provide a sketch of the context for the Notice in Part I. In Part II, we explain the significance of Code section 382 and how it operates to deter tax-motivated corporate acquisitions, as well as the

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14. The importance of public participation in rulemaking has been described as "axiomatic" by scholars. *See* Juan J. Lavilla, *The Good Cause Exemption to Notice and Comment Rulemaking Requirements Under the Administrative Procedure Act*, 3 ADMIN. L.J. 317 (1989) (citing Ernest Gellhorn, *Public Participation in Administrative Proceedings*, 81 YALE L.J. 359, 369 (1972)); *see also* Fund for Animals v. Frizzell, 530 F.2d 982, 990 (D.C. Cir. 1975); ARTHUR EARL BONFIELD, STATE ADMINISTRATIVE RULEMAKING pt.6, § 6.4 (1986); CHARLES H. KOCH, JR., ADMINISTRATIVE LAW AND PRACTICE 128 (1985).

15. 499 U.S. 554 (1991).

timeline leading up to, and following, the Notice. We then present a simple numerical example in Part III that illustrates the theoretical effect of the Notice on bank mergers. This numerical example is derived from a more general model of corporate acquisitions that we include in the Appendix. Part IV reports the results of our study on the Notice. We use data from bank regulators and merger data from the Federal Reserve to measure changes in bank mergers around the time of the Notice. We compare mergers during the Notice window to pre-Notice mergers and examine whether the determinants of mergers differed before and during the Notice window. We also present data on the post-merger performance of Notice and pre-Notice mergers, and we present evidence about strategic decisions made by banks to choose the timing of recognition for built-in losses on their loan portfolios.

Drawing conclusions about the effect of the Notice is complicated to a substantial degree by the unusual (to say the least) period during which it was in effect. The 2008 financial crisis put enormous stress on banks, and there is not a control group of firms subject to these same stresses but not subject to the Notice against which banks can easily be compared to estimate the effect of the Notice. Nevertheless, because of the importance and controversy around Code section 382 and the absence of empirical evidence on the efficacy of such anti-avoidance tax rules, documenting what happened when Code section 382 was partially disabled, even during a period of market turmoil, provides valuable information.

We find only modest evidence that the Notice affected merger activity. While there is a visible increase in mergers during the Notice period, this period corresponds to the peak of the financial crisis and the increase is only barely statistically significant when we control for other determinants of merger activity, such as the TED spread.[16] We find no important differences in the determinants of mergers during the Notice period, relative to the pre-notice period, such as we would expect if the suspension of 382 drove a wave of tax-motivated acquisitions. All of this is broadly consistent with the modest findings in the literature

16. TED spread, or Treasury-EuroDollar rate spread, is the difference between three-month Treasury bill and three-month LIBOR based US dollars. TED spread is often used as an indicator of credit risk in the economy. *See* James Chen, *TED Spread*, Investopedia, https://www.investopedia.com/terms/t/tedspread.asp (last updated Apr. 9, 2019).

on the effects of taxes on merger frequency. We do, however, find that banks that engage in acquisitions during the Notice window show lower income growth in the two years after the Notice, consistent with results in the existing literature about tax-motivated mergers leading to lower operational synergies and higher acquisition premiums due to the pricing of tax assets. We also find suggestive evidence that banks that merged during the Notice window deferred recognition of the losses on their loan portfolios to exploit the benefits of the Notice.

Although we resist drawing strong conclusions given the limitations of our setting, the empirical evidence casts doubt on the view that Code section 382 is an important constraint on tax-motivated mergers. Given that Code section 382 is a costly and controversial tool for policing tax-motivated activity and our model shows its welfare consequences are ambiguous, our results provide some support for those who question Code section 382's value. Moreover, our results provide additional evidence that taxes tend to affect merger matching and pricing, but not frequency.

But the Notice's lessons are broader than just its importance for tax-motivated acquisitions; it is also an example of using tax policy to address financial panic. Given the controversy over the Notice, how should regulators approach changes to the tax law in a future crisis? In Part V of the Article, we describe a framework for thinking about crisis-driven tax law, identifying some of the important procedural concerns that should guide lawmakers' decisions about if and how to make tax law changes that respond to the urgency of the moment without compromising the efficiency of the tax system once things revert to normal. The last Part concludes.

I. Regulatory Responses to the Financial Crisis

The Notice was issued during the height of the 2008 financial crisis, a time when federal financial regulators were reaching for all available policy levers, including some that involved questionable legal interpretations, in order to avoid economic catastrophe. The Notice was one of several interventions aimed at shoring up banks' balance sheets. In the case of the Notice, the intended mechanism was by encouraging banks to consolidate on favorable terms. Other interventions included asset purchases, direct investments, and a host of ad hoc initiatives aimed at both the financial and non-financial sector. A complete accounting of these actions could fill several volumes. This Part briefly

summarizes a selection of these interventions in order to provide context for the Notice.

Beginning in 2007, the prices of mortgage-backed securities and related financial instruments declined as an unprecedented rise in housing prices began to reverse.[17] Many large banks carried vast quantities of these securities on their balance sheets, regarding them as safe investments, and the decline in value was not anticipated in banks' risk projections.[18] As the decline accelerated, banks' capital was depleted, pushing many institutions to the brink of failure and sparking rising panic in the markets.[19] The complexity and non-transparency of mortgage-backed securities, as well as interconnections among the banks, meant that investors had little information about which banks were most vulnerable to the downturn. As a result, by the fall of 2008 and following the abrupt collapse of Lehman Brothers,[20] banks faced a crisis that was not isolated to institutions with the greatest exposure to mortgage-backed securities but threatened the entire financial system as well as the broader economy. In order to stave off collapse, regulators and policymakers acted aggressively to shore up the banking sector and support other financial institutions that were viewed as "too big to fail."[21]

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17. *See* Fin. Crisis Inquiry Comm'n, The Financial Crisis Inquiry Report 226–27 (2011).

18. *See id.* at 228–29.

19. Many banks did in fact fail. For a discussion of the resolution of these banks, see Richard M. Hynes & Steven D. Walt, *Why Banks Are Not Allowed in Bankruptcy,* 67 Wash. & Lee L. Rev. 985 (2010).

20. Lehman Brothers officially filed for bankruptcy on September 15, 2008, after a sale to Barclay's fell through on September 12, 2008. The collapse of Lehman sent financial markets reeling, with the Dow closing down 4.4% on September 15th and the market for commercial paper—borrowing critical to working capital for many firms—nearly seizing up in the aftermath, marking a dangerous new phase of the crisis and spurring aggressive intervention by financial regulators. *See* Mark T. Williams, Uncontrolled Risk 176–88 (2010).

21. For an extensive overview of interventions, see Marc Labonte, Cong. Research Serv., R44185, Federal Reserve: Emergency Lending 8 (2016); Baird Webel & Marc Labonte, Cong. Research Serv., R43413, Cost of Government Interventions in the Response to the Financial Crisis: A Retrospective (2018).

The financial crisis presented several distinct problems to policymakers. First, banks' exposure to subprime mortgage-backed securities meant that they were facing substantial losses. It was these losses that led to the failure of Bear Stearns and Lehman Brothers.[22] But losses alone were not the only issue. It was also unclear which banks were solvent and which were not, and which mortgage-backed securities were worthless and which might still have some value.[23] Finally, firms were interconnected in ways that made the failure of one bank endanger the survival of others, and these connections were opaque to investors and—to a large degree—to regulators.[24] These factors meant that the decline in the value of mortgage-backed securities endangered the survival of relatively healthy banks as well as struggling ones, since investors couldn't easily discern which was which, and that the failure of a large bank might have caused cascading failures of others, ultimately drying up sources of credit on which the rest of the economy depended. The interventions below were aimed at preventing such a scenario.

A. The Troubled Asset Relief Program

The most dramatic response to the financial crisis was the Troubled Asset Relief Program (TARP), created by the Emergency Economic Stabilization Act of 2008, which was signed into law by President George W. Bush on October 3, 2008.[25] TARP was designed to mitigate the financial crisis by providing a lifeline to banks whose balance sheets were clouded by so-called "toxic assets"—illiquid and difficult to value financial products—from banks. The TARP legislation allocated $700 billion to the Treasury to purchase or insure assets that, in the view of the Secretary of the Treasury and Chair of the Federal Reserve, were necessary to promote financial stability.[26] Under the Emergency Economic Stabilization Act of 2008, banks selling assets to the Treasury under the TARP program were required to issue warrants for non-voting

22. *See* FIN. CRISIS INQUIRY COMM'N, *supra* note 17, at 226–27.

23. *Id.* at 373.

24. *See, e.g.*, Hal S. Scott, *Interconnectedness and Contagion: Financial Panics and the Crisis of 2008* (June 26, 2014), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2178475.

25. Pub. L. No. 110–343, 122 Stat. 3765 (2008).

26. *See* FIN. CRISIS INQUIRY COMM'N, *supra* note 17, at 371–76.

shares of stock to the Treasury.[27] These warrants would ensure that, if the stock prices of the banks accessing TARP funds recovered, the Treasury (and therefore taxpayers) would share in the value created alongside the banks' ordinary investors.

TARP was meant to achieve several related goals. First, the sheer size of the program was intended to boost market confidence by signaling the government's willingness to support the financial sector. Second, by buying toxic assets, banks would receive an injection of capital that would support lending. Third, the purchases would clarify banks' balance sheets by removing the hard-to-value mortgage-backed securities. Relatively quickly after the enactment of TARP, though, it became clear that purchasing troubled assets and selling them at auction, as originally intended,[28] would not provide capital to banks quickly enough to support lending activity.[29] Reacting to these concerns, the TARP program pivoted to making direct financial investments in banks' preferred stock.[30] While this approach—taking direct financial stakes in banks—was not the anticipated use of TARP funds, the legislation gave enormous discretion and, by the end of 2008, the use of TARP funds had expanded to include not just traditional financial institutions but the auto companies as well.[31]

The result was an alphabet soup of hastily designed programs meant to address the causes and symptoms of the crisis. Treasury purchased more than $200 billion in bank equity as part of the Capital Purchase Program (CPP).[32] The collapsing insurance giant AIG took a nearly $40 billion investment through the Systemically Significant Failing Institutions program.[33] Treasury also purchased $20 billion in preferred stock from both Citigroup and Bank of America through the

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27. *Id.*

28. *Id.*

29. *Id.* at 373.

30. *Id.*

31. *See* David M. Herszenhorn & David E Sanger, *Bush Approves $17.4 Billion Auto Bailout*, N.Y. Times (Dec. 19, 2008), https://www.nytimes.com/2008/12/19/business/worldbusiness/19iht-20autoB.18826530.html.

32. *See* Webel & Labonte, *supra* note 21, at 12.

33. *See* Office of the Inspector Gen. for the Troubled Asset Relief Program, Quarterly Report to Congress: October 26, 2010, at 51. Only one firm, AIG, participated in this program. *Id.*

Targeted Investment Program.[34] Major auto manufacturers took loan guarantees and capital totaling $80 billion.[35]

The largest TARP programs were aimed at supporting the financial sector through direct injections of capital, but some of the TARP funds were used to provide relief to homeowners by subsidizing modifications to certain mortgages to make them easier for consumer borrowers to repay. Making Home Affordable (MHA)[36] was designed to help struggling homeowners by providing incentives for mortgage servicers to refinance loans and reduce payments to affordable levels through the Home Affordable Modification Program (HAMP).[37] Ultimately, HAMP modified 1.8 million mortgages before the program expired in 2016.[38]

All told, the Treasury operated 13 programs of various sizes funded by TARP.[39] The unique nature of the Treasury's intervention, with the federal government investing directly in major private companies, is indicative of the extreme measures that financial regulators felt were warranted by the financial crisis. Precisely because of this novel approach, though, the cost of TARP ended up at much less than its top-line price tag of $700 million. In fact, by most accounts, the net result of the TARP investments was to turn a profit for the Treasury, since—as the economy improved—Treasury's investments in many firms ended up earning positive returns.[40]

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34. *Targeted Investment Program*, U.S. TREAS. DEP'T, https://www.treasury.gov/initiatives/financial-stability/TARP-Programs/bank-investment-programs/tip/Pages/default.aspx (last updated Dec. 9, 2013, 4:43 PM).

35. *See* Thomas H. Klier & James Rubenstein, *Detroit Back from the Brink? Auto Industry Crisis and Restructuring*, 2Q FED. RES. BANK CHI. 31, 38 (2012).

36. *Housing*, U.S. TREAS. DEP'T, https://www.treasury.gov/initiatives/financial-stability/TARP-Programs/housing/Pages/default.aspx (last updated Apr. 23, 2019, 10:28 AM).

37. *Id.*

38. *Id.*

39. *See* Richard G. Anderson & Charles S Gascon, *A Closer Look: Assistance Programs in the Wake of the Crisis*, REGIONAL ECONOMIST, Jan. 1, 2011, at 6.

40. *See id.*

B. Federal Reserve Emergency Lending

One of the early signs of the unfolding crisis was the inability of Bear Stearns to secure financing in March 2008. With the firm facing the imminent threat of bankruptcy, the Federal Reserve agreed to provide twenty-eight days of financing via its emergency lending authority on March 14, 2008, only to reverse course almost immediately and insist that Bear Stearns find a fire-sale buyer for its assets in the course of a weekend.[41] On March 16, Bear Stearns signed a merger agreement with JP Morgan to be acquired for $2 a share, less than seven percent of its closing price just days prior.[42] The Federal Reserve's decision to lend to Bear Stearns and then insist on a sale reflected the rapidly shifting approaches taken by regulators as they sought to avoid panic while also holding firms responsible for their poor investments.

The unusual intervention into Bear Stearns was not the last use of the Federal Reserve's emergency lending authority. As the crisis evolved, the Federal Reserve made dramatic and extensive use of its emergency lending authority to keep credit flowing to areas of the economy that it deemed critical. During and after the financial crisis, the Federal Reserve extended credit through more than 21,000 transactions totaling more than $3.3 trillion.[43] Companies that received Fed support were not just Bank of America, Wells Fargo, and other giant financial institutions, but also more traditional companies. Manufacturers such as Caterpillar, Harley Davidson, and General Electric also were on the receiving end of Fed loans.[44] Even foreign firms received assistance.[45] Ultimately, the lending undertaken by the Federal Reserve to provide liquidity to firms across the economy dwarfed the TARP

41. *See* Robert K. Rasmussen & David A. Skeel, Jr., *Governmental Intervention in an Economic Crisis*, 19 U. Pa. J. Bus. L. 7, 16 (2016).

42. Andrew Ross Sorkin, *JP Morgan Pays $2 a Share for Bear Sterns*, N.Y. Times (Mar. 17, 2008), https://www.nytimes.com/2008/03/17/business/17bear.html.

43. *See* John Nichols, *Fed's 'Backdoor Bailout' Provided $3.3 Trillion in Loans to Banks, Corporations*, Nation (Dec. 2, 2010), https://www.thenation.com/article/feds-backdoor-bailout-provided-33-trillion-loans-banks-corporations/.

44. *See id.*

45. *See id.*

program.[46] This expansive use of emergency lending authority was designed to avoid economic catastrophe by ensuring that operating companies remote from the financial sector, like Verizon and McDonalds (two other loan recipients), were not forced into bankruptcy by an inability to access cash due to the stresses on the financial sector.

The ability of the Federal Reserve to lend to non-banks emanated from section 13(3) of the Federal Reserve Act of 1913,[47] an obscure provision of the law that had not been invoked since the 1930s. Ordinarily, the Federal Reserve faces significant restrictions on to whom it may extend credit and on what terms.[48] Under section 13(3), however, at the time of the financial crisis the Federal Reserve was permitted to extend credit to "any individual, partnership, or corporation" provided that a supermajority of the Federal Reserve Board of Governors determined that "unusual and exigent circumstances apply."[49] It was this authority that the Federal Reserve invoked to rescue Bear Stearns.[50]

These emergency loans, though technically within the Federal Reserve's authority, were criticized as being far beyond the scope and scale envisioned for emergency lending and deemed a "backdoor bailout" by critics.[51] Ultimately, the Dodd-Frank Act[52] restricted the power of the Federal Reserve to lend to non-banks, though the restrictions have been criticized as creating limits on the Federal Reserve's authority that would ultimately be waived in another crisis.[53]

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46. It should be noted that the Federal Reserve's emergency loans were, in accordance with its lending rules, fully collateralized. *See* 12 U.S.C. § 343.

47. 38 Stat. 263, as amended; *Federal Reserve Act*, FED. RESERVE https://www.federalreserve.gov/aboutthefed/fract.htm (last updated Mar. 10, 2017).

48. *See* LABONTE, *supra* note 21, at 8.

49. 12 U.S.C. § 343(A).

50. *See id.*

51. *See id.*

52. *See* Dodd-Frank Wall Street Reform and Consumer Protection (Dodd Frank) Act, Pub. L. No. 111-203, 124 Stat. 1376 (2010).

53. *See* Charles Calomiris et al., *Establishing Credible Rules for Fed Emergency Lending,* 9 J. FIN. ECON. POL'Y. 260 (2017).

C. Ad Hoc Interventions

While TARP and the Federal Reserve's use of its emergency lending authority were large-scale systemic interventions. Other actions taken by regulators and others during the financial crisis were ad hoc in nature, aimed at solving problems at specific firms. Many of these actions, like the Notice, stretched the bounds of precedent and regulatory authority. This Section reviews some of these cases.

1. The Bear Stearns Merger

In retrospect, the collapse of Bear Stearns in the spring of 2008 was a striking warning sign of the looming financial crisis. Bear Stearns' collapse was caused by losses in asset-backed securities in an internal hedge fund, the same types of losses that would doom other banks just months later. As described above,[54] Federal Reserve Chairman Ben Bernanke briefly extended financing to Bear Stearns and then orchestrated the acquisition of the bank by J.P Morgan Chase just days later.[55]

The Federal Reserve's support of Bear Stearns was within its power,[56] but the structure of the merger agreement was inconsistent with corporate law as generally understood. Corporate shareholders generally have the power to accept or reject a merger through a shareholder vote, but the merger agreement between Bear Stearns and J.P. Morgan was structured so that J.P. Morgan acquired a 49% stake in Bear Stearns before the vote took place, effectively rendering the vote a fait accompli.[57] Professors Kahan and Rock note that, under ordinary circumstances, such an agreement would have been enjoined as impermissibly overriding shareholders' right to approve the merger.[58] In reality, with markets already roiled, JP Morgan agreed to increase the purchase price for Bear Stearns stock, from $2 to $10 per

54. *See supra* Section I.B.

55. *See* Sorkin, *supra* note 42.

56. Rasmussen & Skeel, *supra* note 41.

57. *See id.* at 16.

58. *See* Marcel Kahan & Edward B. Rock, *How to Prevent Hard Cases from Making Bad Law: Bear Stearns, Delaware, and the Strategic Use of Comity*, 58 Emory L. J. 713, 716–21 (2009).

share,[59] but Delaware courts did not intervene in the voting arrangement despite its tension with generally accepted principles of corporate law.

2. Support for AIG

Insurance giant AIG sat near the epicenter of the financial crisis as it had written derivatives backing the value of many mortgage-backed securities.[60] As these securities declined in value, AIG was obligated to pay out on these derivatives and faced capital shortfalls that would have led to the failure of the firm. Because AIG's counterparties for these derivatives were other large financial firms that were already in distress, federal regulators thought it essential to provide financial support to AIG, and thereby indirectly to their counterparties.

The decision to support AIG came on the heels of the decision to let Lehman Brothers collapse, and the different approaches to the two firms demonstrates the rapidly evolving nature of the federal response. Perhaps in response to the distaste for "bailouts," the Federal Reserve extended credit to AIG only on draconian terms.[61] The Federal Reserve demanded that AIG issue a 79.9% equity stake to the U.S. government in exchange for providing access to the Federal Reserve emergency lending facility. This equity stake was not collateral, but rather would be forfeit even if the loan were repaid in full.[62] The extraction of this concession in exchange for financial support was unique to AIG among the hundreds of firms that accessed Federal Reserve emergency lending during the financial crisis.[63]

The Federal Reserve's unique approach to AIG resulted in a lawsuit by AIG's largest shareholder, alleging that the extraction of equity from AIG was an impermissible taking under the Fifth

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59. Andrew Ross Sorkin, *JPMorgan Raises Bid for Bear Stearns to $10 a Share*, N.Y. Times (Mar. 24, 2008), https://www.nytimes.com/2008/03/24/business/24deal-web.html.

60. *See* Julia Mahoney, *Takings, Legitimacy, and Emergency Action: Lessons from the Financial Crisis,* 23 Geo. Mason L. Rev. 299, 304 (2016).

61. *Id.*

62. *Id.*

63. *Id.*

Amendment.[64] A decision of the Court of Federal Claims held that, in fact, while the Federal Reserve had authority under its emergency lending power to support AIG as it did, it exceeded its authority when it demanded an equity stake as consideration for the loan, and that the dilution of AIG shareholders therefore had exceeded the Federal Reserve's powers.[65]

3. *Chrysler and GM Bankruptcy*

Even with respect to funds authorized by the TARP program, there were controversies about the legal support for financial crisis interventions. When GM and Chrysler were struggling as a result of the recession that accompanied the crisis, the Treasury used TARP funds, which had initially been intended for financial firms, to rescue the automakers.[66] As with Federal Reserve emergency lending, there was sufficient flexibility in the statutory framework to permit this use of funds, but the expansion of the use of TARP was nevertheless controversial.[67]

The actual structure of the rescue was more legally problematic. In a packaged transaction, the Treasury Department had GM and Chrysler declare bankruptcy and sell their assets to a new entity under rules which essentially ensured that the government-favored bidder would win the auction. The new entities guaranteed some of the automakers' pension obligations and promised to repay significant unsecured trade debt. Under the rules of the auction, any other bidder would have to agree to do the same.[68] This was particularly problematic in the case of Chrysler, whose debtors were forced to take losses that might have been mitigated had another bidder been able to enter a competitive bid.

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These examples capture only a portion of the extraordinary interventions undertaken during the financial crisis, focusing on actions

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64. Starr Int'l Co. v. Fed. Reserve Bank of N.Y., 742 F.3d 37 (2d Cir. 2014).

65. Starr Int'l Co. v. United States, 121 Fed. Cl. 428 (Fed. Cl. 2015), *vacated in part, aff'd in part, & remanded by* 856 F.3d 953 (Fed. Cir. 2017).

66. *See* Rasmussen & Skeel, *supra* note 41, at 16 (2016); Herszenhorn & Sanger, *supra* note 31.

67. Herszenhorn & Sanger, *supra* note 31.

68. *See id.*

taken by Congress, the Treasury Department, and the Federal Reserve Bank. While the legality and propriety of these actions have been criticized, the regulators and policy makers who advocated these interventions clearly saw them as essential to staving off significant economic damage. What would have happened had the government not intervened is a counterfactual that remains a subject of debate. The balance of this Article turns to an action taken by the IRS that has received far less attention than those described above but that is instructive in its own way about making law in a time of crisis.

II. A Tax Response to the Financial Crisis

This Part reviews the background of Code section 382 and the adoption of IRS Notice 2008–83 and its aftermath. We present a timeline of events from the adoption of the Notice through the ensuing controversy to its eventual repeal. This timeline highlights the controversy around the Notice.

A. Section 382 of the Internal Revenue Code

U.S. federal income tax law includes a variety of statutory, regulatory, and doctrinal tools, discouraging taxpayers from undertaking transactions that are motivated by tax avoidance. Some of the tools are broad standards, such as the requirement that a transaction have "economic substance" to be respected,[69] while others are detailed rules that go to great lengths to anticipate the variety of ways that taxpayers might try to circumvent the intent of the rule. Code section 382 is an example of the latter type.[70] Section 382 was first added to Code in 1954, but was subsequently revised, most significantly in 1986. At a high level, Code section 382 restricts the rate at which a corporation can use certain tax assets to offset taxable income following a significant change in equity ownership of the corporation. Whereas a corporation that has not triggered an ownership change can generally "carry forward" its net operating losses from prior years to offset taxable income in subsequent years

69. *See* I.R.C. § 7701(o).

70. The objective approach adopted by Code section 382 is sharply contrasted with the intent-based test in Code section 269. For a summary of the history, see Samuel Dimon, *Limit My Practice Instead! Thoughts on Reforming Section 382*, Taxes Mag., Mar. 2010, at 88.

without limitation, a corporation that has triggered an ownership change can only use a small portion of those losses each year. This portion is generally equal to the amount of equity in the corporation before the ownership change multiplied by a fraction of the Federal government's long-term borrowing rate.

The fundamental tension between the expectation that taxpayers will respond to taxes and the desire that they should not respond *too* much is reflected in the complex motivations behind Code section 382 and related doctrines.[71] Those motivations are multiple: discouraging "loss trafficking,"[72] preventing windfalls to new owners of loss corporations by enabling them to receive higher after-tax rates of return on account of losses that accrued before they were owners, preventing a corporation from offsetting the income from one business line with the losses from another line, limiting the incentive to continue loss corporations solely for the sake of using their tax assets, and preventing the distortion of business transactions that should ideally be based solely on pre-tax economic returns.[73] The 1986 amendments to Code section 382 drew heavily on Senate Finance Committee recommendations[74] that reflected a new emphasis on this last motivation and an overriding concern with "tax neutrality," that is, preventing tax considerations from distorting economic decisions.[75]

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71. The evolution of laws aimed at "loss trafficking" has tended to also reflect ambiguity about whether net operating losses should be tied to the corporation, or its shareholders, or a business line. *See, e.g.*, Libson Shops, Inc. v. Koehler, 353 U.S. 382 (1957).

72. Federal Income, Estate and Gift Tax Project: Income Tax Problems of Corporations and Shareholders, pt. 5, at 341 (Am. Law Inst. 1958) (noting that the transferability of tax losses "does appear to many as partaking of tax immorality").

73. Dimon, *supra* note 70, at 92.

74. *Id.* at 93.

75. Those recommendations were supported by the testimony of Assistant Secretary of the Treasury (Tax Policy) Ronald Pearlman, which was submitted to the Senate Finance Subcommittee on Taxation and Debt Management. *Id.* The desire to achieve neutrality animated the adoption of Code section 382. *See* Daniel L. Simmons, *Net Operating Losses and Section 382: Searching for a Limitation on Loss Carryovers*, 63 Tul. L. Rev. 1045, 1045 (1988) ("Congress recently adopted tax neutrality as its goal for structuring a limitation on net operating loss carryovers."). In this context, "neutrality is achieved if the existence of a net operating loss carryover is neither an

If it were not for Code section 382, corporations with large amounts of built-in losses and net operating loss carryforwards would be attractive vehicles for sheltering income from other sources. Such corporations would also be capable of providing a higher after-tax rate of return on an investment than would be available without those losses, because the tax losses could be deducted from the investment's income thereby shielding it from tax. For these reasons, a profitable corporation might seek out a merger with a loss corporation to shelter its own active income, or it might acquire the loss corporation solely to hold passive investment assets. All else equal, a corporation with built-in losses is a more attractive merger target than one without such tax assets and will also be able to attract capital at a lower cost, because it can offer a higher after-tax rate of return to investors. Moreover, because these tax

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inducement nor an impediment to a business transaction, so that business combinations will be based upon economic factors separate from tax considerations related to the value of loss carryovers. This neutrality requires that the value of a net operating loss carryover to the purchaser be limited to the value of the carryover to the selling loss corporation." *Id.* at 1070 (footnote omitted). Some scholars have asked whether the neutrality concerns about NOLs distorting behavior are more theoretical than real. *See, e.g.*, Michael L. Schultz, *Section 382 and the Pursuit of Neutrality in the Treatment of Net Operating Loss Carryovers*, 39 U. KAN. L. REV. 59 (1990). For a critical evaluation of limitations on NOL carryovers predating new Code section 382, see J. Clifton Fleming, Jr., *Reflections on Section 382: Searching for a Rationale*, 1979 BYU L. REV. 213, 223 ("The only compelling argument against free trade in corporate NOL carryovers is one of practical politics."). As is often the case, the effects of Code section 382 have often been exaggerated. "Indeed, new section 382 was enacted over warnings from a leading contributor to the NOL carryover debate that adoption of rules similar to those ultimately reflected in the statute 'would be like throwing a hand grenade into a village and killing innocent civilians.'" Richard L. Parker, *The Innocent Civilians in the War Against NOL Trafficking: Section 382 and High-Tech Start-Up Companies*, 9 VA. TAX REV. 625, 626 (1989) (quoting *Staff Recommendations to Revise Subchapter C: Hearings Before the Subcomm. on Taxation & Debt Management of the S. Comm. on Finance*, 99th Cong. 391 (1985) (statement of Richard L. Bacon)). Professor Parker himself asserted that "[h]igh-tech, start-up companies are, in this way, the innocent civilians in the war being waged against those who would otherwise traffick in NOL carryovers." *Id.* at 708. In fact, neutrality, in the sense of aiming for taxes to have as small an effect as possible on consumption and investment decisions is generally accepted to be one of the overarching goals of tax law and policy.

assets are more valuable in the hands of an acquirer with more income to shelter, a profitable acquirer should be willing to pay more than another potential acquirer for a loss corporation even if the profitable acquirer cannot operate the assets of the loss corporation as efficiently.

The emphasis in discouraging tax-related distortions, wherever they might arise, explains (even if it doesn't justify) the broad applicability of Code section 382 and the wide set of circumstances in which it can be triggered. At its simplest, the Code section 382 limitation is triggered when the aggregate percentage of the stock in the corporation owned by shareholders who own five percent of the corporation increases by more than 50 percentage points between any two dates in a three-year window. Thus, the sale by a corporate parent of 51% of the stock of a subsidiary will trigger the limitation. But the limitation will also apply to a corporation that is owned 51% by one parent and 49% by another parent, if the first parent sells all its stock to the public in a registered stock offering.[76] Indeed, Code section 382 applies in a variety of circumstances where it is unlikely that tax is a driving concern even if, in theory, the benefits of the tax losses could cause the loss corporation's assets to be owned by acquirers solely because of their greater tax capacity or otherwise lead to a misallocation of new capital.

B. Notice 2008–83 and Its Aftermath

On September 30, 2008, the IRS issued Notice 2008–83.[77] The Notice provided that:

> For purposes of section 382(h), any deduction properly allowed after an ownership change (as defined in section 382(g)) to a bank with respect to losses on loans or bad debts (including any deduction for a reasonable addition to a reserve for bad debts) shall not be treated as a built-in loss or a deduction that is attributable to periods before the change date.[78]

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76. The stock will be treated as purchased by a single "public group," the ownership of which will be aggregated for purposes of classifying that group as a 5-percent shareholder. See generally the segregation rules of Treas. Reg. §§ 1.382–1T to –2T.

77. *See* Notice 2008–83, 2008–2 C.B. 905.

78. *Id.*

The effect of the Notice was to exclude *unrealized* losses on loans from the Code section 382 limitation. For large banks, losses on loans are realized for tax purposes (and hence deductible) when the debt becomes worthless or is recoverable only in part.[79] The determination of when these events have occurred is generally a facts and circumstances determination taking into account the circumstances of the debtor and the value of any collateral.[80] However, there is a presumption that a debt that is charged off for accounting and regulatory purposes will be deemed worthless. Following the Notice, this presumption gave banks a reason to delay the realization of losses on their loan portfolios. By deciding not to discharge a delinquent loan for accounting purposes, a bank could influence whether that bad debt remained unrealized for tax purposes. As long as the loan loss was not realized, it would be outside the scope of Code section 382.

The treatment of unrealized losses by the Notice was viewed as a strained interpretation of the statute by some, and an unauthorized statutory override by others.[81] The Notice also had significant benefits for certain banks. For example, the Notice was seen as directly responsible for the ability of Wells Fargo to make an 11th-hour bid for Wachovia in excess of the price offered by Citibank. Wells Fargo stated at the time that it expected to use $74 billion in tax losses on the Wachovia loan portfolio.[82] The perception that the Treasury Department was intervening in the market and picking winners and losers through selective

79. I.R.C. § 166(a)(1), (a)(2).

80. Treas. Reg. § 1.166–2(a).

81. Professor Zelenak has argued that the Notice was an intervention of great economic significance. Zelenak, *supra* note 9, at 846. He asserts that "[t]he primary purpose of the notice appears to have been the facilitation of the acquisition of failing Wachovia—by Wells Fargo, as it turned out. Although the notice generated considerable outrage in the media, among tax experts, and on Capitol Hill, it achieved the desired result." *Id.* (footnote omitted). He goes on to say that, "The recent § 382 notices should be troubling to anyone who values the application of the rule of law to tax administration." *Id.* at 847.

82. Jesse Drucker, *Obscure Tax Breaks Increase Cost of Financial Rescue*, WALL ST. J. (Oct. 18, 2008, 12:01 AM), https://www.wsj.com/articles/SB122428410507346351. The whole episode raises doubts about the legitimacy of the IRS. *See* Abreu & Greenstein, *supra* note 9, at 511 ("Now consider an alternative narrative, one in which instead of purporting to be 'studying' the interpretation of section 382, the IRS felt free to acknowledge what many, including us, believe it was doing: exercising enforcement authority to suspend

application of the tax law caused some scholars to argue that the guidance was an unreasonable interpretation of the law and an invalid exercise of the Treasury's regulatory authority[83] and to argue that taxpayers should have standing to challenge IRS actions that favor their competitors.[84] Others, including some prominent law firms, argued that the Notice was merely an interpretation of existing law and designed to provide guidance about the thorny question of how to identify and measure built-in losses on distressed debt.[85]

Banks were entitled to rely on the Notice until subsequent guidance was issued.[86] The IRS did not issue any subsequent guidance, but the interpretation of Code section 382 provided in the Notice was overruled by the American Recovery and Reinvestment Act of 2009.[87] As a result, the Notice was effective only for transactions that were signed on or before January 16, 2009.[88] Although the Notice was only overruled

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the application of section 382 because exigent circumstances—the threat of wholesale economic collapse—required it.").

83. *See, e.g.*, Cushman, *supra* note 8.

84. *See, e.g.*, Sunil Shenoi, Note, *Undoing Undue Favors: Providing Competitors with Standing to Challenge Favorable IRS Actions*, 43 U. Mich. J.L. Reform 531 (2010).

85. *See, e.g.*, *Insights: Revisiting Notice 2008–83*, Jones Day (Dec. 2008), https://www.jonesday.com/en/insights/2008/12/revisiting-notice-2008-83.

86. The term "bank" is defined in Code section 581. It reads:

> For purposes of sections 582 and 584, the term 'bank' means a bank or trust company incorporated and doing business under the laws of the United States (including laws relating to the District of Columbia) or of any State, a substantial part of the business of which consists of receiving deposits and making loans and discounts, or of exercising fiduciary powers similar to those permitted to national banks under authority of the Comptroller of the Currency, and which is subject by law to supervision and examination by State, Territorial, or Federal authority having supervision over banking institutions. Such term also means a domestic building and loan association.

87. Pub. L. No. 111-5, 123 Stat. 115 (2009).

88. Despite its repeal, some argue that Congress supported the Notice. *See, e.g.*, Matthew Cline, Comment, *The Economics and Politics of*

in early 2009, expressions of concern began to appear much earlier. In October 2008, Senator Schumer wrote a letter to Secretary Paulson and IRS Commissioner Shulman expressing concern that the Notice, "which was never debated by Congress," could cost tens of billions of dollars in foregone tax revenue and lead to excessive consolidation of the financial industry.[89] On November 14, Senator Grassley requested that the Office of the Inspector General of the Treasury conduct an investigation of the circumstances of the issuance of Notice 2008–83, particularly as it pertained to the acquisition of Wachovia by Wells Fargo.[90] Five days later, Senator Sanders introduced a bill, which never passed, to rescind the Notice.[91] On January 26, 2009, H.R. 1, which would subsequently become the American Recovery and Reinvestment Act, was introduced in the House of Representatives with language overturning Notice 2008–83. The following is a timeline of events between the issuance of the Notice and its repeal:[92]

Tax Loss Carryforwards in the Great Recession: Why GM Gets a $16 Billion Subsidy, 65 TAX LAW. 399 (2012). The Notice was effective as to ownership changes pursuant to contracts signed on or before 1/16/2009 or for which there was a written agreement and either a public announcement or SEC filing on or before that date.

89. Press Release, Sen. Charles E. Schumer, Schumer Seeks Answers from IRS, Treasury on Tax Code Change That Subsidizes Bank Acquisitions (Oct. 30, 2008).

90. *See Grassley Seeks Inspector General Review*, *supra* note 13.

91. S. 3692, 110th Cong. (2008).

92. During this eventful period, the IRS issued other notices that affected the application of Code section 382. *See* Notice 2008–101, 2008–44 I.R.B. 1082 (issued Nov. 3, 2008) (providing that TARP funds are not taxable income to the recipients); Notice 2008–100, 2008–2 C.B. 1081 (issued Nov. 3, 2008) (disregarding stock or warrants acquired by the U.S. government for purposes of triggering application of Code section 382); Notice 2008–91, 2008–43 I.R.B. 1001 (issued Oct. 27, 2008) (loosening short-term lending rules under Code section 956 to facilitate subsidiary financing to U.S. parents); Notice 2008–84, 2008–41 I.R.B. 855 (issued Oct. 14, 2008) (providing that so long as the United States or one of its agencies or instrumentalities owns more than 50% of the stock in a corporation no date with constitute a testing date for determining an ownership change); Notice 2008–78, 2008–41 I.R.B. 851 (issued Oct. 14, 2008) (loosening the anti-stuffing rules of 382(*l*)(1)); Notice 2008–76, 2008–39 I.R.B. 768 (issued Sept. 29, 2008) (preventing application of 382 resulting from acquisition by U.S. government of stock of Fannie Mae and Freddie Mac).

Timeline of Events Around Notice 2008–83

Date	Event
Sept. 30, 2008	IRS Releases Notice 2008–83.
Early Oct., 2008	Law firms begin publishing guidance on the Notice.[93]
Mid Oct., 2008	Articles appear in popular press.
Oct. 30, 2008	Sen. Schumer sends letter to Secretary Paulson and Commissioner Doug Shulman.
Nov. 14, 2008	Sen. Grassley asks Treasury IG to review Notice.
Nov. 19, 2008	Sen. Sanders introduces bill to rescind Notice. (The bill goes nowhere.)
Jan. 26, 2009	H.R. 1, which would become the American Recovery and Reinvestment Act, introduced in the House with language to overturn Notice.
Jan. 27, 2009	H. Rep. 111-8 states, "legal authority to prescribe Internal Revenue Service Notice 2008–83 is doubtful."
Feb. 12, 2009	Conference Report to Accompany H.R. 1 is published. It repeats the language used in H. Rep 111-8, at 555–560, 111th Cong. (2009).
Feb. 17, 2009	American Recovery and Reinvestment Act (Pub. L. No. 111-5) signed into law, which overturns Notice 2008–83.

It is important to understand how the events leading up to and following the Notice evolved, because it was clear only a month after the Notice was issued that the tax benefits it provided might not last indefinitely and that putting off a transaction that would trigger the Code section 382 limitation risked subjecting large unrealized losses on loan

93. *See, e.g.*, *Notice 2008–83: The IRS Offers Reassurance to Troubled Banks*, Morrison Foerster (Oct. 2, 2008), https://www.mofo.com/resources/publications/notice-2008-83-the-irs-offers-reassurance-to-troubled-banks.html.

portfolios to Code section 382. In the next Part, we provide a numerical example that illustrates the effects of Code section 382 on merger activity and, by implication, the effects that the Notice would be expected to have by curtailing Code section 382.

III. The Effects of Section 382: Economic Theory and an Example

In this Part, we provide a simple numerical example that demonstrates the effect of Code section 382 on corporations' incentives and decision to merge. The example also generates predictions that guide our empirical analysis in Part IV. In the Appendix, we present a more generalized analytical model that substantially expands the analysis in the numerical example. The example is based on two hypothetical firms: one target firm that has amassed net operating or "built-in losses" on property that it owns (which, together, we call "NOLs"), and one acquiring (or buyer) firm, with no NOLs of its own. In case the firms merge, they may or may not be able to generate additional profits, which we refer to as synergies, as a unitary entity. The example focuses on two possible legal regimes. In the first regime, the combined firm that results from the merger is free to use any or all the target corporation's NOLs to reduce its taxable income (No 382 Limitation Regime). In the second regime, the amount of the target's NOLs that the combined firm can use is limited based on the target's earnings potential (382 Limitation Regime). This approximates the situation when Code section 382 is in effect.

Although the numerical example is simple, it will demonstrate several important results. First, in the No 382 Limitation Regime, the companies will have a strong incentive to merge to take advantage of the NOLs, and the combination will take place even when there is no (or even negative) synergy. The regime can lead to inefficient mergers. Second, in the 382 Limitation Regime, the opposite happens: because the combined firm is restricted in its ability to use the target's NOLs, the amount of synergy must be quite large for the merger to make sense. That is, even with a positive synergy, the firms may decide not to merge even though this may be efficient. As we move from 382 Limitation Regime to No 382 Limitation Regime—which was the effect of the Notice—more mergers are likely to take place and, at least on average, the mergers that do take place will exhibit lower (or even negative) synergy. That is, the mergers that take place under the No 382 Limitation Regime are likely to perform worse than those under the 382 Limitation Regime.

A. The Basic Setup

Consider a target corporation that has accumulated NOLs in the amount of $1,000. The target firm's prospects going forward are poor. In the future, the firm expects to generate (in present value terms) a pre-tax profit of $600. To make our calculation easy, suppose the corporate income tax rate is 50%. If the target corporation were to stay independent and generate a pre-tax profit of $600 in the future, given that the firm can utilize all of its NOLs, the firm will have a taxable income of $0 (because $600 of the target's losses will be deducted against its $600 of income). The firm will be able to capture its entire $600 of profits, implying that its stand-alone value will be $600. Unfortunately, however, the target's pre-tax profit is too small, by $400, to use all of its NOLs.

Now suppose that there is a potential buyer for the target corporation. Unlike the target corporation, the buyer has been profitable and has no NOLs. Going forward, the buyer corporation expects to realize a profit of $800. Assume, for the sake of simplicity, that the buyer is also subject to a tax rate of 50% so that the after-tax income of the buyer is $400 and, therefore, the buyer corporation's stand-alone value is $400. Even though the buyer generates more pre-tax profit than the target, the target corporation is worth more than the buyer corporation because of the target's NOLs. The Table below summarizes the stand-alone values for the respective companies.

	Accumulated Net-Operating and Built-In Losses (NOLs)	**Future Pre-Tax Income**	**Future After-Tax Income (50% tax rate)**
Target Corporation	$1,000	$600	$600
Buyer Corporation	$0	$800	$400

B. No Section 382 Limitation Regime

Suppose that there is no limitation on how much of the target's NOLs the combined company can use to reduce its taxable income. In our example, given that the target corporation has NOLs of $1,000, while the buyer corporation has no NOLs, if the buyer corporation were to acquire the target corporation, the combined company can use up to

$1,000 of the NOLs to reduce its taxable income. Also, to make the example interesting, suppose that not only is there no synergy from this combination, but instead the merger will reduce the combined company's pre-tax profit by $200. That is, if the target and the buyer were to stay independent, the sum of their pre-tax profits is $1,400, but if they were to merge, then they would have a combined pre-tax profit of $1,200. Because this merger is destroying value, this merger is inefficient and should not take place.

Nevertheless, the target and the buyer will decide to merge, and the reason is the NOLs. To see why, recall that if the two companies were to stay independent then they would generate a total *after-tax* income of $1,000. Now, consider what happens if they were to merge. If they combine their operations, their pre-tax income, after accounting for the $200 destruction of value, becomes $1,200, but because the combined company can fully utilize the target's $1,000 of NOLs, its taxable income will be only $200. With a 50% income tax rate, the combined company only has to pay $100 in taxes, and its after-tax income becomes $1,100 ($1,200 in profits less $100 in taxes). This is greater than $1,000, which is the aggregate after-tax income of the two firms if they were to stay independent. The fact that the combined company will generate a higher after-tax income will produce a strong incentive for them to merge, even though the merger destroys value. The Table below summarizes this incentive.

	Aggregate Pre-Tax Income	**Aggregate Post-Tax Income**
Buyer and Target Stay Independent	$1,400	$1,000
Buyer and Target Merge	$1,200	$1,100

This portion of the example has shown that allowing merged companies to use the NOLs of the target and the buyer without limitations will lead to a "distortion"; the presence of NOLs will encourage firms to combine even if the merger would generate no (or even negative) economic value. The intuition for this result is clear. If the target stays independent, a lot of valuable NOLs ($400 worth) are lost because the target does not generate enough profit to use them. This implies that the merger will generate more after-tax income as long as the combined company destroys no more than $400 of value.

C. Section 382 Limitation Regime

Given that allowing the combined company to fully use the target's accumulated NOLs will lead to a distortion, what if we were to limit the amount of NOL use? It turns out that prohibiting the combined company from using accumulated NOLs will create the opposite problem: it will discourage companies from merging even when it creates value. To see this, suppose that an independent target company is free to use all of its accumulated NOLs, but if the target company were to be acquired by the buyer, the combined company could use only a portion of the target's NOLs. Let's assume that the combined company can use only $300 (out of $1,000) of the target's NOLs.[94] At the same time, in contrast to the previous example, suppose the combined company will generate an additional $200 of synergistic profits. That is, the aggregate pre-tax income of the companies is $1,400 if they stay independent, but the merged company will generate $1,600 of pre-tax income.

Will the $200 of merger synergy be sufficient for the companies to combine? With the limitation on NOLs, the answer is no. If the companies merge, they will generate $1,600 of pre-tax income. At the same time, due to the section 382 limitation, they can use only $300 of the target's $1,000 of NOLs. This implies that, with the assumed 50% income tax rate, the merged company will have to pay $650 in taxes (this is 50% of $1,600 – $300) and the merged company's after-tax income will be only $950. Since the aggregate after-tax income of the two independent companies was $1,000, the merger is no longer attractive for the companies on an after-tax basis. The results are summarized in the Table below.

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94. The section 382 limitation rules are complex, and we are using the $300 limitation as a simplification. As discussed earlier, the section 382 limitation depends on the amount of equity in the (target) corporation before the ownership change (e.g., merger). We can roughly equate this with the target corporation's earnings potential (of $600). If we were to assume that the combined company can use only 50% of the target's earnings as NOLs, this produces $300 (= (0.5) × $600). NOLs that are not used are carried forward indefinitely, but can only reduce taxable income by 80% in any one year. I.R.C. § 172.

	Aggregate Pre-Tax Income	Aggregate Post-Tax Income
Buyer and Target Stay Independent	$1,400	$1,000
Buyer and Target Merge	$1,600	$950

This example demonstrates that constraining the use of NOLs creates the opposite problem of that created by placing no limitation on NOL use. With NOL limitations, some value-creating mergers will not take place because of the limitation on how much the combined company can reduce its tax burden. In the example, when the target stayed independent, it was able to use $600 of NOLs to reduce its taxable income. When the companies merged, however, the amount of NOLs the combined company could use went down to $300. The $200 increase in pre-tax profits from the merger is insufficient to overcome the loss of $300 in after-tax income. In the Appendix we show, using a more general model, that these results are quite robust: the outcome does not depend on the numerical values.

D. Comparison

The numerical example generates at least a few interesting empirical predictions that are relevant for our analysis of Notice 2008–83 as well as about Code section 382 limitations more generally. Foremost, as we moved from 382 Limitation Regime to No 382 Limitation Regime—as was done (at least in part) by IRS Notice 2008–83—we should observe a few things. First, given that the companies have a stronger incentive to merge under No 382 Limitation Regime, more mergers are likely to take place under No 382 Limitation Regime than under 382 Limitation Regime. This is because, under No 382 Limitation Regime, the parties may want to execute the merger largely for the purpose of being able to utilize the target company's NOLs. Furthermore, when we move from 382 Limitation Regime to No 382 Limitation Regime, the mergers that do take place will exhibit lower (or even negative) post-merger performance. That is, the mergers that take place under the No 382 Limitation Regime are likely to perform worse than those under the 382 Limitation Regime. We test these hypotheses in Part IV.

IV. Empirically Measuring the Effects of the Notice

We combine several data sources to empirically evaluate the effect of Code section 382 on merger activity. Data on bank and bank holding company mergers was collected from the Federal Reserve Bank of Chicago and combined with stock return data from the Center for Research in Security Prices (CRSP).[95] Each bank and bank holding company is assigned a unique identifier known as its RSSD ID.[96] The merger data include identifiers for both the target and surviving entities for the merger as well as the top company in each bank's corporate structure. We retained this information because often it is the bank holding company, and not the bank itself, that is publicly listed.

Additional bank data were collected from regulatory filings known as Call Reports, available on the Federal Financial Institutions Examination Council website.[97] Call Reports, which contain detailed financial disclosures for banks, are filed quarterly, and we compiled a panel dataset of these reports from 2004–2014, a symmetric window around the issuance of the Notice.[98] A similar panel dataset was constructed from regulatory filings for bank holding companies on file with the Chicago Federal Reserve Bank.[99] If multiple reports were filed on behalf of the bank holding company, we used the figures for the consolidated group. For small bank holding companies that do not file consolidated financials, we imputed the data from all majority-held subsidiaries directly to the small bank holding company. For both banks and bank holding companies, we selected a subset of the available variables,

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95. The Chicago Fed provides a linking table that connects bank identifiers to the CRSP data files. *See Commercial Bank Data*, Fed. Res. Bank Chi., https://www.chicagofed.org/banking/financial-institution-reports/commercial-bank-data (last visited Oct. 12, 2019); *see also Data Access Tools*, Ctr. for Res. Sec. Prices, http://www.crsp.com/products/software-access-tools (last visited Oct. 12, 2019).

96. *See Definitions of Banking Terms*, Nat'l Info. Ctr., https://www.ffiec.gov/nicpubweb/Content/HELP/DefinitionsOfBankingTerms.htm (last visited Oct. 12, 2019).

97. https://cdr.ffiec.gov/public/ (last visited Oct. 12, 2019).

98. For firms missing a June 30, 2008, Call Report, we use the prior Call Report.

99. *See Holding Company Data*, Fed. Res. Bank Chi., https://www.chicagofed.org/banking/financial-institution-reports/bhc-data (last visited Oct. 12, 2019).

focusing on those related to the tax position of the bank and the strength of its loan portfolio. These include the amount of chargeoffs and loan loss reserves, as well as the amount of loans that are nonperforming (i.e., at least 90 days past due and still accruing interest, or not accruing interest).

We restrict the data sample to exclude acquisitions where the acquirer was another bank with the same parent as the target bank, since these do not represent arm's-length acquisitions. Because the definition of a bank for regulatory purposes does not perfectly overlap with the definition of a bank for tax purposes, we include in our analysis only entities that, based on their description, we believe are engaged in taking deposits and lending, the touchstone of banking for tax purposes: bank holding companies, member and non-member banks of the Federal Reserve System, Savings and Loan Associations, State Member Banks, and certain other domestic entities that engage in banking activities in the U.S.

This Part lays out our empirical tests of the effect of the Notice. We begin by discussing issues with identifying mergers affected by the Notice and then turn to tests of merger activity, post-merger performance, and changes to the market capitalization of banks.

A. Identification

There were a variety of tax and non-tax interventions in the financial sector during the crisis, including a series of notices related to the application of Code section 382 to unprecedented actions by the U.S. Treasury and Federal Reserve in taking ownership stakes in banks. Notice 2008–83 was the first such notice. News articles and memos from law firms at the time indicate the unexpected nature of this guidance.[100] The fact that the Notice was widely panned as an improper exercise of Treasury's authority and repealed three months later may also be viewed as evidence that the Notice was unexpected. Although the Notice applied retroactively to ownership changes that had already occurred, we think it is reasonable to assume that any merger signed before September 30th was not negotiated in anticipation of the Notice.

However, by November 19, when Senator Sanders introduced a bill to rescind the Notice, parties to a potential bank merger should have been aware that the favorable treatment of unrealized loan losses provided by the Notice would not last. Although the ultimate resolution of

100. *See, e.g.*, *Notice 2008–83: The IRS Offers Reassurance*, *supra* note 93.

how unrealized loan losses would be treated under Code section 382 and which (if any) transactions the Notice would apply to could not be known with certainty, the possibility that the Notice would only apply to mergers signed or closed by a certain date should have provided merger parties with an incentive to accelerate negotiations and consummate the transactions as quickly as possible. Because of the uncertainty about when the Notice would be overruled, some mergers that closed in January 2009 may have been finalized with the mistaken belief that the target would be subject to the Notice.

Cleanly identifying the mergers that were subject to the Notice is made more difficult by the fact that the merger date provided by the Chicago Fed is the closing date, while the American Recovery and Reinvestment Act generally limited the Notice to contracts that had been *signed* by January 16, 2009.[101] This difference introduces measurement errors at both the beginning and end of the Notice window; some mergers that were negotiated before the Notice was issued may not have closed until after September 30th, and some mergers that signed before January 16th did not close until after that date. Although there is anecdotal evidence that bank mergers were consummated very quickly during this time, there is almost certainly some measurement error in how we identify which mergers were subject to the Notice. Practically, what this means is that we are missing from some of our empirical tests mergers that signed in the Notice window but did not close until after it ended and that we have included in our sample of Notice mergers some that were negotiated before the window. This latter group of mergers will tend to attenuate any effects that we observe. The mergers that were signed during the Notice window but closed after it could bias our empirical estimates if the mergers that took longer to close differ in relevant ways from the mergers that signed and closed in the Notice window. The increased merger activity we observe during the Notice window does not appear to extend past the end of January (see Figure 1), suggesting that any effect of such mergers on our estimates is small.

B. M&A Activity During the Notice Period

Figure 1 shows the number of bank and bank holding company mergers and acquisitions by month around the date of the Notice. The shaded

101. American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, 123 Stat. 115 (2009).

bars indicate the four-month period from October 2008 to January 2009. The chart shows a general decline in the number of mergers before the Notice period, but with considerable variability and some apparent cyclicality, with more mergers closing late in the calendar year. Nevertheless, there is a visible increase in the number of mergers in the last three months of 2008 and the first month of 2009. This period corresponds with the peak of the financial crisis, so it is difficult to draw causal conclusions about the Notice, particularly as banks tend to consolidate during times of financial distress. Statistical regression estimates in Table 5 suggest that the increase in merger activity during the notice period is statistically marginal, once we control for year and quarterly cyclicality. Nevertheless, the increase in merger activity is consistent with the prediction of the model that lifting the NOL restriction would lead to an increased number of mergers.

How do the mergers that took place within the Notice window differ from mergers that took place before September 30th? Table 3 presents summary statistics as of June 30, 2008, for all banks, as well as univariate tests of the characteristics of bank merger targets for mergers consummated before and during the Notice period.[102] This gives a sense of how target banks differed from other banks, as well as how mergers during the Notice period differed from mergers before the Notice period. We look at how target banks charged off and added to reserves for bad loans for accounting purposes. We also include a collection of variables that predict bank failures and acquisitions.[103]

Although the sample size is relatively small, we see no significant differences between window and non-window mergers, with the exception that pre-Notice mergers were larger than mergers during the Notice period, but even this difference is not robust to alternative measures of size. We see no other significant differences in target bank characteristics during the merger period.

To get more insight into whether the characteristics of bank mergers differed during the Notice period, we present estimates from a series of statistical regressions that explore the determinants of becoming

102. We use *t*-tests for the differences in means between the two groups of mergers.

103. By comparing data for all of the banks on June 30, 2008, we avoid picking up time trends, which were certainly negative during this period.

a merger target in Table 4.[104] In the first regression model (in column 1), we include only the control variables and find sensible results. Banks with less liquidity (cash and cash-equivalent assets) and banks with lower capital adequacy are more likely to be merger targets. In model 2, we add a variable that is equal to one if the merger was in the Notice window and find no effect of the Notice on merger probability. In model 3, we interact the Notice window variable with the amount of bad loans reported in the Call Report. This "bad loans" variable corresponds most closely with the unrealized losses potentially made available to an acquirer by the Notice. We find no increased effect of bad loans on being a merger target during the Notice period. Fully interacting the control variables with the Notice variable in model 4, we find that none of the interaction terms are significant. We interpret this as showing that the determinants of mergers during the Notice window do not differ measurably from the determinants in other time periods, suggesting that tax losses did not become a more important driver of mergers when the Notice was in effect.

Table 5 presents a parallel set of regression results where the dependent variable is the number of acquisitions undertaken by a bank during the period covered by each Call Report. The variables again show intuitive results; banks with stronger financial circumstances are more likely to acquire other banks, but we see no differential effect on firms' acquisition activity during the Notice period when we interact the Notice variable with the other variables in models 3 and 4.

Together, Tables 4 and 5 suggest that the effect of the Notice on merger activity was relatively weak. The variable for the effect of the Notice is statistically significant in only one of the models, and none of the variables interacted with the Notice is significant in either regression. A caveat in interpreting these results is that, although the panel of observations is large, the number of Notice-period mergers is relatively small, limiting our ability to detect small differences during the period. It is possible that the Notice had effects that are beyond the power of our tests to detect.

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104. These are pooled panel logit regressions with covariates drawn from the literature on bank mergers. Because our data includes a number of extreme outliers, we Winsorize our data at the 99% level. All models include quarter and year dummies to control for time trend and seasonality.

C. Post-Merger Performance

Another implication of the model is that mergers motivated by tax considerations are likely to have smaller synergies and worse post-merger performance. To test this possibility, we look at the change in net income of banks that made acquisitions during the Notice window period and compare it to the change in net income for banks that made acquisitions during the immediately preceding quarter. We measure the bank-level change in both net income and net income/assets one and two years after the Notice window relative to the June 2008 Call Report. Because we are limited to looking at banks that remain in existence for these two years, we are only able to observe acquirers (not targets) and the sample size is relatively small. Moreover, the rapid pace of change during the financial crisis means that even a one-quarter difference in merger timing may introduce unobserved differences between groups of banks that are unrelated to the Notice.[105]

Table 6 presents regressions that test whether merging in the Notice window affected the change in bank income (or income/assets) either one year or two years after the Notice. The sample includes mergers that occurred either during the Notice period or in the quarter immediately before the Notice period. The mergers that took place immediately before the Notice window are our control group. The sample sizes are therefore rather small, and we do not include additional controls for this reason.

We find that banks that undertook mergers during the Notice period had lower growth in net income/assets and net income one year after the Notice. Two years after the Notice, the result is directionally consistent, but statistically weaker. These results are consistent with the hypothesis that mergers in the Notice period had lower synergies, but the small number of mergers and the other disruptions occurring during the financial crisis make drawing firm conclusions difficult.

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105. Banks that merged prior to the Notice were not motivated by liberalized use of tax losses. As explained above, the Notice was retroactive, so both groups of banks were, in fact, able to utilize tax losses of the target under the Notice. Thus, these tests measure differences in the motivations of the mergers rather than the ex post tax treatment.

D. Strategic Recognition of Loan Losses

The Notice protected built-in (*unrealized*) losses on banks' loan portfolios from Code section 382, but *realized* losses were unaffected, which is to say that they continued to be impaired following a change in control of the bank. This asymmetric treatment provided banks with an incentive to avoid taking actions that would cause their tax losses to be realized. The quintessential realization event is a sale. Although we cannot observe loan sales, we can observe banks' decisions to "charge off" loans for accounting purposes from their loan reserves.

Section 166 of the Code provides a deduction for debts that become worthless in whole, or in part, during the taxable year. The determination of whether a loan is worthless or not is a facts and circumstances determination. However, amounts that are "charged off" (i.e., deemed uncollectible) for GAAP or regulatory purposes enjoy a conclusive presumption of worthlessness.[106] Banks account for impaired loans using an unusual two-step process that does not have a ready explanation apart from its connection to the tax effects. When a loan is impaired, the bank must increase its loan-loss reserve. The decision to "charge off" an amount that is already reflected in the loan-loss reserve does not reflect a meaningful change in the status of the loan from a financial accounting or regulatory perspective, but it does give the taxpayer a favorable presumption for taking a deduction for the uncollectible amount.

Whether a loan is charged off is, to some degree, within the discretion of the bank. Consumer debt is generally charged off as the debt becomes 120 or 180 days past due. Classification of commercial debt, on the other hand, is more flexible and within management's control. We expect that banks, particularly banks that anticipated being acquired during the Notice window, would charge off fewer loans than they otherwise would in the fourth quarter of 2008, and that the effect would be greatest for commercial loans where there is the greatest discretion to defer the timing of chargeoffs.

Figures 2a through 2d depict the amount of loans charged off as a share of all loans in default, for commercial loans, revolving lines of credit, credit cards, and all loans, respectively, as of December 31. Each figure shows one data series for all banks that merged during the Notice window and a second data series for banks that did not. Note that the divergence grew for chargeoffs in 2008 between banks that did and did not merge in

106. I.R.C. § 166(a)(2); Treas. Reg. § 1.166–3(a).

the Notice window, particularly for commercial loans, but also for revolving debt. For commercial loans, it appears that the graphs for merged banks and other banks move together during most of the time period, with only a short-lived divergence in 2008 and 2009. We do not see the same decline for credit cards.[107] Taken together, this evidence is consistent with banks' use of discretion to delay charging off loans strategically to maximize the value of their tax assets in anticipation of being acquired.

Table 7 reports the results from a series of regressions of the effect of the Notice window on loan chargeoffs. The unit of observation is a bank in a given quarter between 2005 and 2015. We regress the chargeoffs for each category of loans on an indicator variable for the December 31, 2008, Call Report period, an indicator for whether the bank merged in the Notice window, and the interaction between the two. The coefficient estimate for this interaction term is our estimate of primary interest. We also control for the amount of loans in default for that bank in that quarter, and a collection of month and year variables to capture seasonal and times trends in loan chargeoffs. Columns (5)-(8) also include bank fixed effects. We generally find negative effects on the interaction term, indicating that banks that merged during the Notice window had an unusually large decline in the amount of chargeoffs that they made in 2008, with the effect being largest for commercial loans.

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The evidence suggests that the Notice had modest effects on banks' merger behavior. We find little direct evidence of an increase in mergers, but we do find evidence of lower performance and strategic recognition of loan losses around the time of the Notice. As a tool for responding to the crisis, the Notice clearly resulted in a transfer of value from the Treasury to certain banks, but it is less clear that the Notice had a dramatic effect on banks' decision to merge. In the next Part, we turn to the broader question of when and how it makes sense to use the tax law to respond to a financial crisis.

V. Making Tax Law in a Crisis

Notice 2008–83 was not the first time that the exigencies of a financial crisis left their mark on tax law, and it is unlikely to be the last. In this

107. Although the zero bound on chargeoff rates may be binding in the case of credit cards.

Part, we begin with a discussion of *Cottage Savings Ass'n. v. Commissioner*,[108] which arose out of the federal government's response to the Savings and Loan (S&L) crisis in the 1980s and 1990s. We then turn to a consideration of how to weigh interventions via tax rules in times of crisis.

A. Cottage Savings and the S&L Crisis

One of the most consequential recent cases in the Supreme Court's tax jurisprudence arose in the middle of the S&L crisis of the 1980s and 1990s. In *Cottage Savings Ass'n v. Commissioner*, the Court adopted the IRS's position that an exchange of property constituted a "realization" event, thereby resulting in a deductible loss if the exchanged property were worth less than it was purchased for, only if the property were exchanged for property that was "materially different."[109] The Court then held that properties are materially different if they embody "legally distinct entitlements."[110] The implication of this holding for the taxpayer in *Cottage Savings* was that two home purchase loans were treated as materially different properties even if the obligors on the loans posed identical risks of default and the loans were secured by mortgages on adjacent, physically identical properties, which is to say that two properties can be materially different even if they there are virtually identical in terms of the economic risks and rewards that they offer.[111]

The economic context for *Cottage Savings* is important. The value of mortgage loan portfolios became impaired by rising interest rates in the late 1970s and early 1980s, but S&Ls that disposed of these mortgages so that they could recognize deductible losses for tax purposes would have also been forced to recognize them for regulatory accounting purposes. Recognizing these bad debts for regulatory purposes would risk closure by the S&L regulator, the Federal Home Loan Bank Board (FHLBB). On June 27, 1980, the FHLBB issued a

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108. 499 U.S. 554 (1991).

109. *Id.* at 560.

110. *Id.* at 566.

111. "Because the participation interests exchanged by Cottage Savings and the other S&L's derived from loans that were made to different obligors and secured by different homes, the exchanged interests did embody legally distinct entitlements. Consequently, we conclude that Cottage Savings realized its losses at the point of the exchange." *Id.* at 566.

memorandum determining that losses from mortgages exchanged for other, "substantially identical" mortgages need not be reported for regulatory accounting purposes.[112] Mortgages that qualified for this treatment were required to be of similar vintage, secured by the same kinds of properties with identical interest rates, terms to maturity, and fair market values, among other commonalities.

Thus, the FHLBB adopted a test of *economic equivalence* to determine whether the exchange triggered a loss for regulatory accounting purposes, while the Court adopted a test of *legal equivalence* for tax accounting purposes. The resulting arbitrage exploited by the taxpayer (and designed to be exploited by the FHLBB) was a loss for tax purposes but not for regulatory purposes. The deductible tax loss could be used to generate refunds from prior year taxes just when the S&Ls were most in need of liquidity. The Court granted certiorari in *Cottage Savings* "[b]ecause of the importance of this issue to the S&L industry and the conflict among the Circuits over whether memorandum R-49 exchanges produce deductible losses."[113] One way of describing the *Cottage Savings* decision is in the form of the question posed by Professor Moran in her 1990 article, *Can the Federal Home Loan Bank Board Use the Internal Revenue Code to Bail out the Ailing Savings and Loan Industry?*[114]

The legal equivalence requirement for identifying material differences changed the treatment of existing transactions and was expected to have a variety of unintended consequences.[115] By enshrining a hair-trigger rule for the recognition of built-in gains and losses on the

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112. *Id.* at 557 & n.2.

113. *Id.* at 558.

114. Beverly I. Moran, *One Tax Piece of the Savings and Loan Crisis: Can the Federal Home Loan Bank Board Use the Internal Revenue Code to Bail out the Ailing Savings and Loan Industry?*, 22 U. TOL. L. REV. 351, 351 (1990).

115. *See* Richard H. Nicholls, Cottage Savings*: More S&L Problems?*, 45 TAX LAW. 727, 727 (1992) ("The Supreme Court's decision in *Cottage Savings Ass'n v. Commissioner*, however, raised questions as to whether a new standard of realization or recognition has upended the field." (footnote omitted)); Loren D. Prescott, Jr., Cottage Savings Association v. Commissioner*: Refining the Concept of Realization*, 60 FORDHAM L. REV. 437, 438 (1991) (arguing that the "use of this new standard to evaluate other types of transactions for 'material differences' will produce unintended results"); John E. Capps, Note, *In the Wake of* Cottage Savings*: The Tax Consequences of Debt*

exchange of property, the case seems to elevate form over substance and has been mined by commentators for an understanding about the applicability of common law economic substance and substance-over-form doctrines, which are sometimes used by courts to disallow the tax consequences of certain transactions.[116] Professor Weisbach says of the mortgage swap at issue in *Cottage Savings*, "it would be difficult to imagine arranging a transaction so that less actually happens. And there was no point to the deal other than to raid the Treasury. The business purpose was precisely zero, not even one-tenth of percent. . . . Yet the taxpayer won in Cottage Savings."[117]

B. Balancing Short-Term and Long-Term Efficiency in a Crisis

Both Notice 2008–83 and *Cottage Savings* present instances in which the response to a crisis was to adopt novel readings of the Code with uncertain, and possibly negative, effects on long-term economic efficiency, but effects that might be beneficial in the midst of a financial crisis. Economic analysis of the law has tended to focus on the long-term efficiency properties of legal rules.[118] In the long run, economic output is determined by the potential output of the economy, which, in turn, is determined by the efficiency of legal rules. When legal rules are more efficient, potential output grows. But what happens when the economy is operating below its potential or when an industry is in crisis, such as during the Great Recession?

Traditionally, there have been two channels through which governments have attempted to stimulate the economy: fiscal policy and monetary policy. Traditional fiscal responses include deficit-financed

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Modifications, 72 Tex. L. Rev. 2015 (1993) (examining the effect of *Cottage Savings* on the modification of outstanding debt).

116. *See, e.g.*, Joseph Bankman, *The Economic Substance Doctrine*, 74 S. Cal. L. Rev. 5, 13–16 (2000); James S. Halpern, *Putting the Cart Before the Horse: Determining Economic Substance Independent of the Language of the Code*, 30 Va. Tax Rev. 327, 332–36 (2010); David A. Weisbach, *The Failure of Disclosure as an Approach to Shelters*, 54 SMU L. Rev. 73, 75 (2001).

117. Weisbach, *supra* note 116, at 75.

118. *See* Lewis Kornhauser, *The Economic Analysis of Law*, The Stanford Encyclopedia of Philosophy § 1.2 (Edward N. Zalta ed., Fall 2017 ed.), https://plato.stanford.edu/archives/fall2017/entries/legal-econanalysis/.

government spending and tax cuts.[119] But the Great Recession exposed significant political disagreement about fiscal stimulus policy,[120] and many countries were reluctant to incur large deficits to prop up demand for goods and services that would keep resources (including human resources) from falling idle.[121] Moreover, new government spending generally requires legislation, which can take a long time to pass even in the presence of political agreement.

The other traditional policy instrument for stimulating the economy is monetary policy. However, monetary policy appears to have been largely ineffective during the Great Recession. Nominal interest rates approached zero throughout the developed economies, leaving central banks with little room to use the traditional lever for stimulating investment.[122] The limited effectiveness of traditional monetary policy necessitated the adoption of unprecedented interventions into the economy, which were politically fraught and controversial themselves. Although historically it has been rare for interest rates to approach zero, interest rates have not rebounded along with the recovery from the Great

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119. N. GREGORY MANKIW, PRINCIPLES OF ECONOMICS 814–15 (Jack W. Calhoun et al. eds., 6th ed. 2012).

120. *See, e.g.*, Alberto Alesina, *Fiscal Policy After the Great Recession*, 40 ATL. ECON. J. 429, 430 (2012); Robert Pollin, *US Government Deficits and Debt Amid the Great Recession: What the Evidence Shows*, 36 CAMBRIDGE J. ECON. 161, 162–63 (2012). Enduring controversy over the effects of the American Recovery and Reinvestment Act is evidence of this. American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, 123 Stat. 115 (codified as amended in scattered sections of the U.S.C.). For evidence of the effect of this stimulus bill on employment, see generally Gabriel Chodorow-Reich et al., *Does State Fiscal Relief During Recessions Increase Employment? Evidence from the American Recovery and Reinvestment Act*, AM. ECON. J.: ECON. POL., Aug. 2012, at 118 (2012); Daniel J. Wilson, *Fiscal Spending Jobs Multipliers: Evidence from the 2009 American Recovery and Reinvestment Act*, AM. ECON. J.: ECON. POL., Aug. 2012, at 251 (2012).

121. *See* Pollin, *supra* note 120.

122. *See generally* Michael T. Kiley & John M. Roberts, *Monetary Policy in a Low Interest Rate World*, 2017 BROOKINGS PAPERS ON ECON. ACTIVITY 317; *see also* Jing Cynthia Wu & Fan Dora Xia, *Measuring the Macroeconomic Impact of Monetary Policy at the Zero Lower Bound*, 48 J. MONEY, CREDIT & BANKING 253, 253 (2016) ("[S]ince December 2008, the federal funds rate has been near zero, so that lowering it further to produce more stimulus has not been an option.").

Recession, and economic observers have anticipated that we will bump up against zero rates of interest more frequently in the future.

In the face of the political infeasibility and economic inefficacy of traditional fiscal and monetary instruments during the Great Recession, scholars have brought renewed attention to fiscal mechanisms that serve as "automatic stabilizers," which increase government spending and reduce taxes just as macroeconomic indicators become adverse, without requiring government action.[123] More recently, several scholars have proposed reaching outside of the traditional anti-recession toolkit to amend other laws, such as environmental regulations and zoning requirements, to stimulate the economy.[124] These scholars have drawn attention to the fact that even the traditional fiscal and monetary interventions depend for their effectiveness on the ability of businesses and households to spend and invest stimulus dollars. Regulations of various kinds can short-circuit economic stimulus if they interfere with economic actors' ability to spend or invest. Certainly, tax rules might be among the laws that could short-circuit stimulus interventions in a crisis.

This introduces a trade-off. Some legal rules may be efficient in the long term but create an obstacle to economic recovery in the short term, whereas other rules may stimulate demand and lead to increased employment and incomes in the short run but may reduce potential output if they were adopted on a long-term basis.[125] How should we

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123. *See, e.g.*, Alisdair McKay & Ricardo Reis, *The Role of Automatic Stabilizers in the U.S. Business Cycle*, 84 Econometrica 141, 144–45 (2016) (providing a literature review of work on stabilizers); *see also* Zachary Liscow & William Woolston, *Who's In, Who's Out? Policy to Address Job Rationing During Recessions*, 70 Tax L. Rev. 627, 652–54 (2017 (2016); Yair Listokin, *Equity, Efficiency, and Stability: The Importance of Macroeconomics for Evaluating Income Tax Policy*, 29 Yale J. on Reg. 45, 86–88 (2012) (describing ways to reform tax expenditures to fluctuate less with the business cycle).

124. *See, e.g.*, Andrew Hayashi & Daniel P. Murphy, *Savings Policy and the Paradox of Thrift*, 34 Yale J. on Reg. 743 (2017); Zachary Liscow, *Counter-Cyclical Bankruptcy Law: An Efficiency Argument for Employment-Preserving Bankruptcy Rules*, 116 Colum. L. Rev. 1461 (2016); Yair Listokin, *Law and Macroeconomics: The Law and Economics of Recessions*, 34 Yale J. on Reg. 791 (2017); Jonathan S. Masur & Eric A. Posner, *Should Regulation Be Countercyclical?*, 34 Yale J. on Reg. 857 (2017).

125. For example, increases in depositor insurance during the financial crisis are generally associated with a decrease in depositor discipline

navigate the trade-off between short-run policies that increase economic performance now but reduce economic performance during normal times? One might be inclined to think that we should design legal rules solely for their effects on potential output. Of course, the more time that the economy spends below its potential, the less compelling this intuition is. Thus, there are two reasons why we should take business cycle management into account if we are concerned about the efficiency of legal rules.

The first reason is the simple trade-off between the short and the long run. If the short term is painful enough, and lasts long enough, then the social welfare advantages of mitigating the downturn may outweigh the social welfare disadvantages of adopting rules that reduce potential output. After all, social welfare over the long run is simply the sum of social welfare over a number of short-run time intervals. The second reason to choose rules with the business cycle in mind is that adverse economic shocks may have lasting effects on potential output itself. This is the phenomenon known as hysteresis.[126] For a variety of reasons, a negative economic shock may flatten the growth path of the economy going forward.[127] Thus, even maximizing potential output over a long period of time may require adopting rules that mitigate the lasting effects of a financial crisis or deep recession.

There are two ways that we might try to resolve the tension between mitigating business cycle fluctuations and maximizing potential output. The first way is to change legal rules when the circumstances

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of lending institutions. *See generally* Allen N. Berger & Rima Turk-Ariss, *Do Depositors Discipline Banks and Did Government Actions During the Recent Crisis Reduce This Discipline? An International Perspective*, 48 J. FIN. SERVS. RES. 103 (2015). On crisis management, see generally Uriel Rosenthal & Alexander Kouzmin, *Crises and Crisis Management: Toward Comprehensive Government Decision Making*, 7 J. PUB. ADMIN. RES. & THEORY 277 (1997). Prominent economist John Taylor argues that it was government interventions themselves that caused, prolonged, and deepened the financial crisis. JOHN B. TAYLOR, GETTING OFF TRACK: HOW GOVERNMENT ACTIONS AND INTERVENTIONS CAUSED, PROLONGED, AND WORSENED THE FINANCIAL CRISIS (2009).

126. *Hysteresis*, OXFORD DICTIONARY OF ECONOMICS (John Black et al. eds., 4th. ed. 2013).

127. *See* Olivier J. Blanchard & Lawrence H. Summers, *Hysteresis and the European Unemployment Problem*, NBER MACROECON. ANN. 1986, at 15 (describing impact of shocks on European unemployment in the 1970s and 1980s).

warrant and change them back when those circumstances no longer exist. For example, suppose that a progressive consumption tax maximizes potential output given the amount of redistribution society prefers, but that an income tax reduces output volatility and curbs economic downturns much more effectively than a consumption tax. One way to proceed would be to adopt a consumption tax in the ordinary course but incorporate more income-tax-like elements during recessions, undoing those elements after the economy has rebounded. This could happen through new legislation or if legal rules were designed to change automatically with economic indicators, such as unemployment or the inflation rate.[128] The second approach is to choose neither the legal rule that maximizes potential output nor the legal rule that best mitigates recessions, but instead choose the legal rule that strikes the appropriate balance. Whether an either/or approach or a compromise approach is preferable depends on feasibility as well as the costs and benefits of changing legal rules with the times.

David Kamin has done a thorough analysis of the different mechanisms by which policy can adjust with economic circumstances.[129] As Kamin observes, many scholars have focused on the delegation of authority by Congress to administrative agencies and the courts to respond during a crisis, because these branches may be capable of more rapid responses to swiftly changing conditions than Congress.[130] Moreover, there is evidence that courts themselves rule differently depending on the state of the economy.[131] Below, we use Notice 2008–83 and

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128. *See, e.g.*, John B. Taylor, *The Lack of an Empirical Rationale for a Revival of Discretionary Fiscal Policy*, 99 Am. Econ. Rev. 550 (2009); John B. Taylor, *Reassessing Discretionary Fiscal Policy*, 14 J. Econ. Persp., Summer 2000, at 21 (advocating for monetary policy that adjusts automatically with macro variables).

129. David Kamin, *Legislating for Good Times and Bad*, 54 Harv. J. on Legis. 149 (2017).

130. *Id.* at 152 n.13 (citing Steven Callander & Keith Krehbiel, *Gridlock and Delegation in a Changing World*, 58 Am. J. Pol. Sci. 819 (2014); David Epstein & Sharyn O'Halloran, *The Nondelegation Doctrine and the Separation of Powers: A Political Science Approach*, 20 Cardozo L. Rev. 947 (1999); Jeffrey E. Shuren, Essay, *The Modern Regulatory Administrative State: A Response to Changing Circumstances*, 38 Harv. J. on Legis. 291 (2001)).

131. Thomas Brennan et al., *Economic Trends and Judicial Outcomes: A Macrotheory of the Court*, 58 Duke L.J. 1191 (2009).

Cottage Savings to draw out some important considerations in weighing the costs and benefits of making crisis-driven tax law.

C. Who Should Do the Balancing?

The Notice and *Cottage Savings* both involved dramatic legal change achieved outside of the legislative process. The process of lawmaking differs, of course, between Congress, the agencies, and the courts. In this Section we discuss the importance of these differences during financial or economic crises, which are characterized by fear and uncertainty about the future, political and psychological pressure on lawmakers to be seen as doing *something*, and skepticism regarding whether the normal mechanisms that automatically stabilize the economy following modest shocks are adequate for the circumstances. The most important of these differences are the visibility of the lawmaking process to the public, the speed of the possible lawmaking response, and the accountability that those lawmakers have for averting the worst outcomes of the crisis.

1. Legislators

The primary responsibility for legal changes during a financial or economic crisis generally falls on the legislature. Although agency rulemaking and judicial decisions can also respond in a crisis, there are limitations on the ability of the executive and judicial branches to make significant changes when circumstances are changing quickly. There is evidence that judges respond to swings in the business cycle,[132] but there are institutional limitations on courts' ability to be important actors in changing law to respond to a financial crisis. Courts must wait until a controversy presents a legal issue that bears on the crisis, and the nature of the dispute may not lend itself to courts' preferred intervention in the economy. Agencies can move more nimbly and respond by addressing exactly the law where they think there may be the biggest stabilizing effects from a change, but their authority is more limited than that of Congress.

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132. Thomas Brennan et al., *The Political Economy of Judging*, 93 MINN. L. REV. 1503 (2009); Ioana Marinescu, *Are Judges Sensitive to Economic Conditions? Evidence from UK Employment Tribunals,* 64 INDUS. & LAB. REL. REV. 673 (2011).

And so, it is typically the legislature that responds with both short-term measures designed to stabilize the financial sector and stimulate the economy, such as the Economic Stimulus Act passed in February 2008[133] and the American Recovery and Reinvestment Act passed early in 2009,[134] and comprehensive structural reforms, such as the Dodd-Frank Wall Street Reform and Consumer Protection Act.[135] Because we look to Congress to intervene in a financial or economic crisis, its activities draw heightened scrutiny and pressure.

The expectation that Congress will change the law in a crisis has the benefit that Congress is a focal point for a flow of information from the financial sector and the country more generally about economic conditions. This flow of information can support better policymaking. On the other hand, pressure on elected legislators to manage a crisis creates an incentive for them to intervene even when doing nothing may be the best option. Because the actual effectiveness of policymaking in a crisis can be difficult to discern and because even legal rules that do have positive short-term effects may have costs beyond the career horizon of legislators, members of Congress have incentives to make legal and policy changes regardless of their effect.

For example, ten years after the financial crisis, there remains a lively debate about the underlying causes of the crisis, with the debate often being played out along familiar fault lines between those who argue that the unfettered market resulted in excessive risk-taking and those who argue that government policy created the conditions for excessive lending through monetary policy and through the federal government's reputation for bailing out reckless lenders, a reputation that was only enhanced during the 2008 crisis. Because circumstances during the crisis were changing rapidly and because governments at all levels were making policy changes, it is very difficult to isolate the effect of any one legal change or policy intervention. This uncertainty gives legislators plausible deniability about any adverse consequences of legal changes they make. Moreover, the adverse consequences of crisis-driven law often do not appear until long after the crisis has passed. The moral hazard created by bailouts results in excessive risk-taking that may not result in mass defaults or bankruptcy for years. Elected legislators cannot be held accountable for consequences that arise after they have left

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133. Pub. L. No. 110-185, 122 Stat. 613 (2008).

134. *See supra* Part II.B.

135. *See supra* note 52 and accompanying text.

office, and so the feedback needed to create the right incentives for legislators may not exist.

Given the uncertainty about the causes of the 2008 financial crisis, it is perhaps predictable that not only do legislators have a bias in favor of making legal changes, they also have a bias in favor of more stringent regulation. In the wake of a financial crisis, as Paul Mahoney has argued at length, political actors often seek to attribute responsibility for the crisis to market failures that can be remedied with better or more regulation.[136] Attributing failures to the market deflects blame from policymakers themselves, and in fact there is evidence that regulatory activities are cyclical and increase following a crisis.[137]

Thus, the increased salience of congressional action during a financial crisis, and the heightened pressure to act in general, create high-powered incentives for legislators to make legal changes that both respond to the moment and purport to address the underlying structural causes of the crisis. At the same time, there are reasons to worry that political actors do not have the right incentives to make (or not to make) crisis-driven law that achieves the right balance of short-term stabilization and long-run objectives.[138]

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136. Paul G. Mahoney, WASTING A CRISIS: WHY SECURITIES REGULATION FAILS (2015).

137. Anita Anand & Andrew Green, *Securities Settlements as Examples of Crisis-Driven Regulation*, 55 INT'L REV. L. & ECON. 41 (2018); Anita Anand & Andrew Green, *Cross-Country Securities Enforcement as an Example of Pro-Cyclical Regulation* (June 29, 2018), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3205750.2018). It is an open question whether financial legislation does not happen without a crisis. For an in-progress study of this point, see Peter Conti-Brown & Michael Ohlrogge, *Testing the Crisis-Legislation Hypothesis Citation Indexing and the Measurement of Legislative Importance* (Sept. 26, 2019) (unpublished manuscript) (on file with author) ("Legal scholars and others frequently assert that financial legislation in the US is invariably crisis-driven. This 'crisis legislation' hypothesis is often cited as an explanation for various supposed shortcomings of US financial legislation, such as that it is ill-conceived, inadequate to the problems it aims to address, and subject to various forms of popular pressures. Despite the prevalence of the crisis legislation hypothesis, however, it has never been tested empirically.").

138. Although we do not discuss it here, decisions by Congress to amend substantive tax will generally have consequences on states as well, because state income tax laws generally hew closely to the Code. *See* Ruth

2. Agency Rulemakers

Notice 2008–83 was issued quietly, without fanfare, in a manner that belied its significance. IRS Notices, like other forms of administrative guidance such as Revenue Rules and Revenue Procedures, are not given the same judicial deference as Treasury Regulations, which are subject to the notice and comment process.[139] On the one hand, this means that guidance of this sort can be delivered much more quickly than the promulgation of regulations or, certainly, new legislation. Speed is often perceived to be crucial during a financial crisis, when circumstances may be changing hourly.

On the other hand, the notice and comment process often produces important observations and concerns about proposed rules. State and national tax bar associations have considerable expertise and a generally good track record of working with Treasury officials. Without this consultation, it is more likely that there will be unintended consequences flowing from important changes in the IRS's interpretations of the law, which may either burden taxpayers in ways that are unnecessary given the objectives of the law or may create loopholes that will subsequently need to be fixed.

The stakes are higher when crisis-driven law doesn't have an expiration date. The Notice was effectively overruled in only four months by legislation, but it is unclear how long its interpretation would have survived even if it hadn't been overruled. The IRS claimed to be "studying" the question of how to treat built-in losses on banks' loan

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Mason, *Delegating Up: State Conformity with the Federal Tax Base*, 62 Duke L.J. 1267 (2013).

139. The standard of review applicable to IRS Revenue Rulings has long been unclear. *See* John F. Coverdale, Chevron*'s Reduced Domain: Judicial Review of Treasury Regulations and Revenue Rulings After* Mead, 55 Admin. L. Rev. 39 (2003) (arguing at the time that Revenue Rulings where entitled to more deference than mere litigating positions of the IRS under *Mead* and *Skidmore*); John F. Coverdale, *Court Review of Tax Regulations and Revenue Rulings in the* Chevron *Era*, 64 Geo. Wash. L. Rev. 35 (1995) (arguing that *Chevron* deference is an inappropriate standard for reviewing Treasury Regulations and Revenue Rulings); Linda Galler, *Judicial Deference to Revenue Rulings: Reconciling Divergent Standards*, 56 Ohio St. L.J. 1037 (1995) (documenting increasing deference to Revenue Rulings, albeit under different standards). *But see* Paul L. Caron, *Tax Myopia Meets Tax Hyperopia: The Unproven Case of Increased Judicial Deference to Revenue Rulings*, 57 Ohio St. L.J. 637 (1996).

portfolios, and it is perfectly conceivable that after the financial crisis had passed that the IRS would have, upon revisiting the issue, concluded that banks' loan losses were in fact subject to the Code section 382 limitation once the urgency of recapitalizing the banks had passed. On the other hand, there may be reason to worry that it would be difficult for the IRS to take back the favorable treatment of banks' loans under Code section 382 after the financial industry had become accustomed to that favorable treatment.

The fact that IRS guidance is not subject to public review and comment before it is promulgated perhaps increases the risk that agency capture or even outright corruption could lead to biased rulemaking.[140] It is exactly these sorts of concerns about the Notice, specifically that the IRS was inappropriately influenced by the parties to the Wells Fargo-Wachovia acquisition, that led to the investigation discussed in Part II. Financial crises are also typified by selective federal intervention on behalf of market participants, of those adjudged to be systemically important or "too big to fail." These judgments naturally create the perception, and the real risk, that lawmakers will use public resources not only to aid economic actors that have an important stabilizing role in the financial or economic system but also those with which they have a personal relationship and from which they stand to benefit.

As discussed above, however, public review is no panacea for rational rulemaking even in the best of times. Jon Elster has argued that emotions such as fear and anger are often triggered by financial crises, and these emotions play an underappreciated role in lawmaking, including even at the time of constitution drafting. Because these emotions tend to undermine rational thinking, their influence forces us to rethink the view that constitutions act as a rational check on ordinary lawmaking, which is fickle and subject to the whims of the moment.[141] Of course, agency employees are not immune to these same passions and emotions. Whether the opaque nature of agency lawmaking is beneficial because it insulates more rational lawmakers from the unreasonable demands

140. Agencies also operate in close relationship with the president and political parties. *See* Michael A. Livermore, *Political Parties and Presidential Oversight*, 67 ALA. L. REV. 45 (2015).

141. Jon Elster, *The Political Psychology of Constitution Making*, *in* CONSTITUENT ASSEMBLIES, COMPARATIVE CONSTITUTIONAL LAW AND POLICY 207, 216–35 (Jon Elster et at. eds., 2018).

of the public is an open, and important, empirical question worthy of further study.[142]

Agency regulators and judges also face different incentives and expectations than legislators during a financial crisis. The role of government agencies and the courts is not generally thought to encompass business cycle management or making important legal changes to mitigate the effects of a financial crisis. Courts and agencies do make law of course, but the primary responsibility for responding to rapidly deteriorating economic or financial circumstances typically falls on the legislature. Although courts and regulators may act as accomplices, or at least not obstacles, to congressional changes in law, they do not generally lead the way.

This difference in expectations around crisis-driven lawmaking means that judges and regulators are less accountable, at least to the public, for failures to change the law during a crisis. This means that they may not respond with sufficient urgency to a nascent crisis, but it also means that they do not face the same public pressure to be seen as acting. Without this pressure, courts and regulators who are inclined to make law in a crisis can focus on making legal changes that will best achieve a trade-off between rule of law stability and long-run objectives with the urgency of the moment rather than on making highly salient and visible interventions designed to satisfy the public's demand that government do *something*.

3. Courts

The third source of crisis-driven law is the courts. The decision in *Cottage Savings* is one of the most consequential examples of this, and it serves as a helpful counterpoint to the Notice. We cannot know what would have become of the Notice's interpretation of Code section 382 as it applied to banks' loan portfolios, since that interpretation was

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142. As one scholar notes, "[t]he benefits derived from the general rule of public participation are sometimes nonexistent or outweighed by other circumstances." Lavilla, *supra* note 14, at 319 (footnote omitted); *see also* Guardian Fed. Sav. & Loan Ass'n v. Fed. Sav. & Loan Ins. Corp., 589 F.2d 658, 663 (D.C. Cir. 1978) (noting that there are instances in which benefits of public participation are outweighed by other considerations); Bonfield, *supra* note 14, pt. 6, § 6.81 (discussing how public participation may be unnecessary, impracticable, or contrary to public interest).

overruled by statute only three months later. In any event, the effects of the Notice over the long haul would probably be rather modest, since it is an infrequent enough occurrence that banks have very large built-in losses on their loan portfolios. Thus, the "overhang" from a legal change tailor-made to help banks in financial distress would be relatively small, because the distortive effects on the bank M&A market during ordinary times would be small.

By contrast, the Court's decision in *Cottage Savings*, which resulted in a "hair-trigger" rule for the realization of gains and losses on the disposition of property has consequences for anyone who disposes of property. The effects are far-reaching and frequent, both during financial crises and during ordinary times. It is not only distressed banks that can selectively recognize tax losses without changing their economic position, but all taxpayers at all times.

There is nothing inherent in the nature of agency rulemaking and guidance that limits it to legal questions with less economic consequence than tax law made by the courts, but there is a crucial difference in the ability and speed with which the IRS can change its interpretations of existing law. The IRS can, at any time, change its position whereas lower courts are bound by the decisions of appellate courts, and it is rare for appellate courts, including the Supreme Court, to overrule their precedents. Thus, agencies are less likely than courts to make crisis-driven law that persists well beyond the crisis for which that law is suitable.

The other obstacle to courts playing a role in adapting law to a crisis, and then adapting it back once the crisis has passed, is that courts must wait until a controversy presents the legal issue to them. There is no obvious relationship between the timing of when a crisis requires a change in law and when a controversy will appear before a court, other than that there will be a lag. The fact that courts must wait for litigation before acting also ensures that the overhang from any change in law made during a crisis into non-crisis periods will almost certainly be longer than that from agency rulemaking.

Conclusion

It is almost inherent in the notion of a crisis that the normal pace and processes by which legal rules should change do not apply, and the substantive trade-offs between short-term and long-term objectives are recalibrated to place greater weight on the present. This does not mean that crisis-driven lawmaking should treat process as irrelevant or disregard the future entirely, but in the fearful and chaotic climate of a

financial crisis, the ideal processes and agent of legal change may be different than during periods of normal politics.

Notice 2008–83 suspended a longstanding tax rule that, while controversial, served worthy tax policy objectives: discouraging loss trafficking and helping to ensure that business assets remained in the hands of the managers who could make them most profitable rather than in the hands of those who could simply make greater use of tax losses that had accrued in prior years. Moreover, this change in law was unexpected and was made without input from the tax community. The Notice has been panned as unlawful, and perhaps it was. In this Article, however, we test whether it mattered for substantive policy outcomes. Although we cannot measure the costs the Notice may have had for the legitimacy of the IRS or the rule of law, or the benefits in terms of making cash infusions to the financial sector, we can report evidence on whether the Notice undermined the purposes of Code section 382.

We find that the Notice had no discernible effect on merger activity and consolidation in the banking sector, although it did have a modest effect on the kinds of mergers that took place. Our evidence suggests that Code section 382 does result in more efficient bank mergers than would otherwise take place, and, as a result, the Notice had economic costs that lasted beyond the financial crisis.

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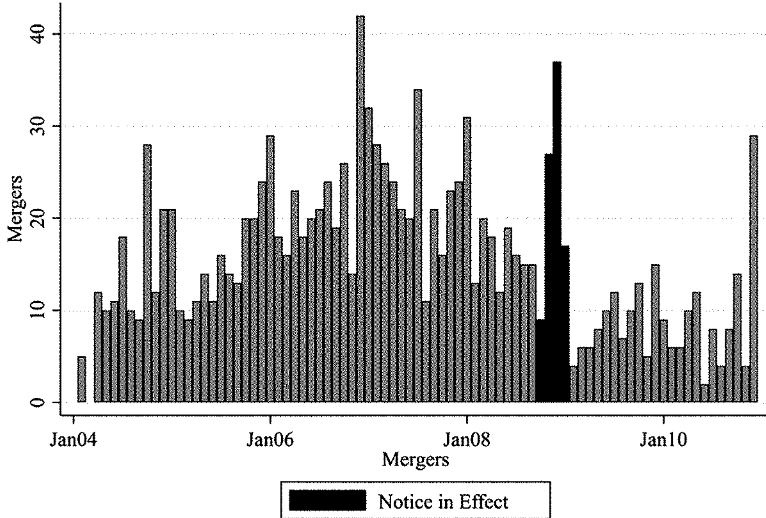
APPENDIX

Figures and Tables

Figure 1: Bank and BHC Mergers by Month: 2007–2011



Source: Federal Reserve Bank of Chicago

Figure 2a: Commercial Loan Chargeoffs/Loans in Default by Notice Window Merger

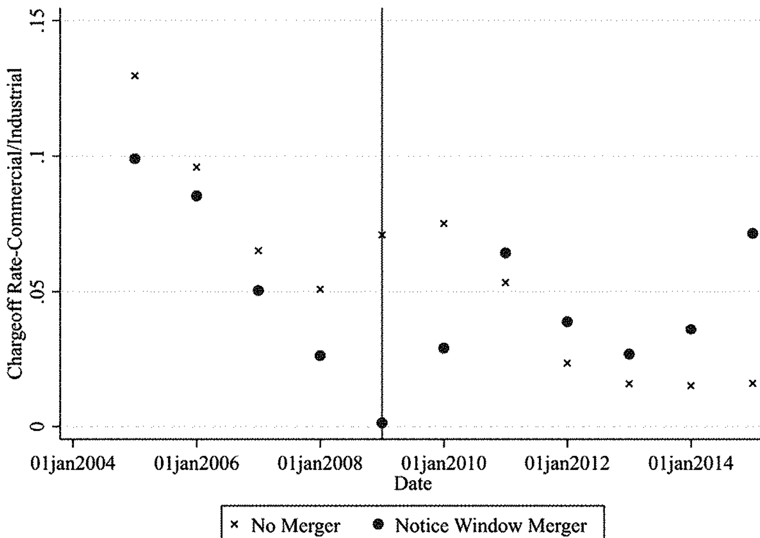


Figure 2b: Revolver Loan Chargeoffs/Loans in Default by Notice Window Merger

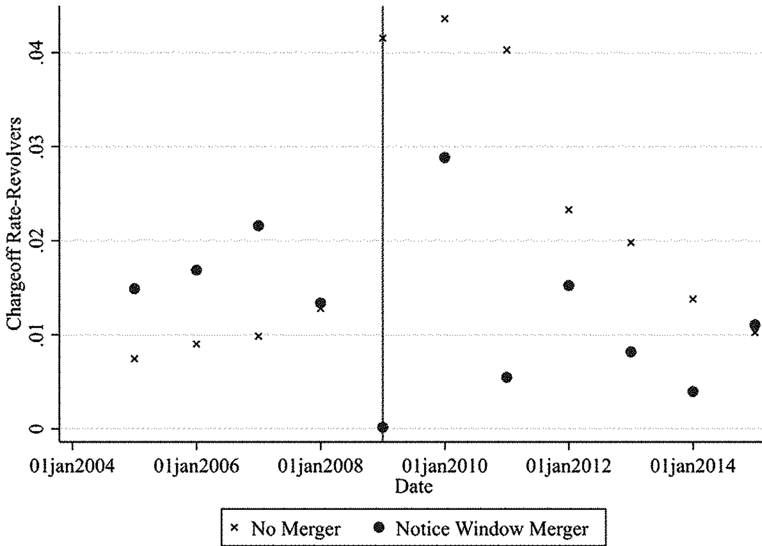


Figure 2c: Credit Card Loan Chargeoffs/Loans in Default by Notice Window Merger

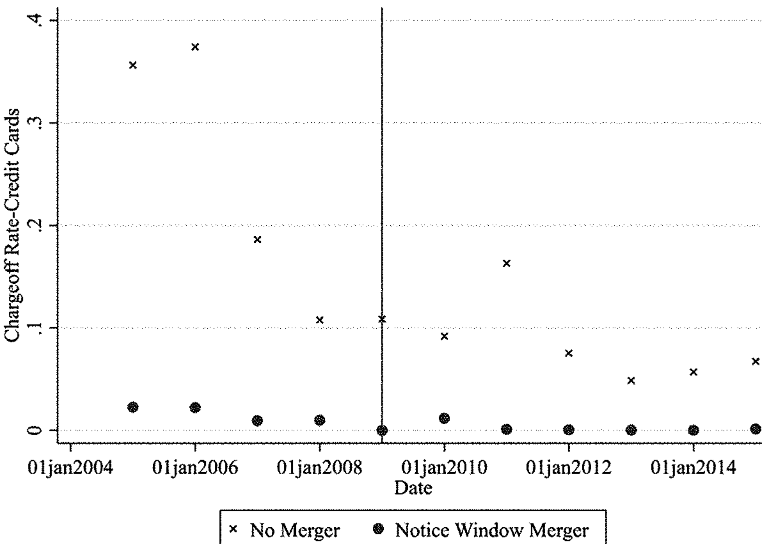


Figure 2d: All Loan Chargeoffs/Loans in Default by Notice Window Merger

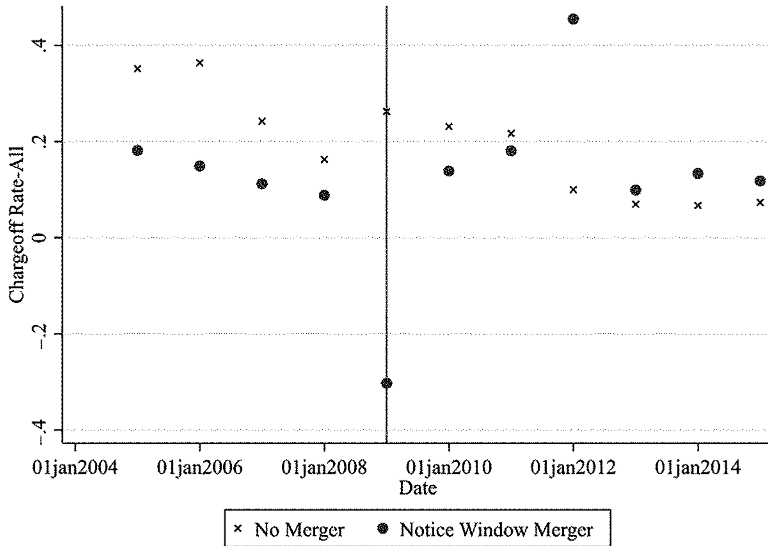


Table 2: Variables and Descriptions

This Table presents descriptions of our bank variables.[143]

Variable	Description
A1-loans/assets	*Asset Quality: Total Loans/Total Assets. Source: Call Report.*
A2-realestateloans/loans	*Asset Quality: Real Estate Loans/Total Assets. Source: Call Report.*
A3-comindloans/loans	*Asset Quality: Commercial and Industrial Loans/Total Assets. Source: Call Report.*
A4-realestate/assets	*Asset Quality: Other Real Estate Owned/Total Assets. Source: Call Report.*

143. Many of these variables are drawn from David C. Wheelock & Paul W. Wilson, *Why Do Banks Disappear? The Determinants of U.S. Bank Failures and Acquisitions*, 82 REV. ECON. & STAT. 127 (2000).

Table 2: Variables and Descriptions (*continued*)

Variable	Description
A5-interest/assets	*Asset Quality: Interest Owed, but Not Collected/ Total Assets. Source: Call Report.*
A6-badloans/assets	*Asset Quality: Non-performing Loans/Total Assets. Source: Call Report.*
Assets	*Total Assets. Source: Call Report.*
CAPAD	*Capital Adequacy. Total Equity/Total Assets. Source: Call Report.*
Chargeoffs	*Chargeoffs on Loans and Leases. Source: Call Reports.*
Net Income	*Net Income After Taxes/Total Assets. Source: Call Reports.*
ETR Difference	*Taxes/Pretax Income of Acquirer – Taxes/Pretax Income of Target. Source: Call Reports.*
Liquidity	*(Federal Funds Purchased – Federal Funds Sold)/Total Assets. Source Call Reports.*
Pretax Income	*Taxes/Pretax Income of Acquirer – Taxes/Pretax Income of Target. Source: Call Reports.*
Nonperforming Loans	*Loans That Are 90 Days Past Due and Accruing Interest or No Longer Accruing Interest. Source: Call Reports.*
Reserves	*Balance of allowance for loan and lease losses. Source: Call Reports.*
Size	*Log of Total Assets. Source: Call Report.*
Taxes	*Applicable Income Taxes. Source: Call Reports.*
TEDRATE	*TED Spread from the St. Louis Fed*

Table 3: Summary Statistics for All Banks and Merger Target Banks as of June 30, 2008

	All Banks		Pre-Window Merger Target Banks (6/2008 to 9/2008)	Notice Window Merger Target Banks (10/2008 to 1/2009)		
	(A) Mean	Stand. Dev.	(B) Mean	(C) Mean	(B)−(C) Diff.	t-Stat. on Diff.
	3005	57545	10549	69	10479	0.7
Reserves	3969	30988	2325	811	1514	1.42
Nonperforming Loans	18312	351305	95772	734	95039	0.73
Assets	1319958	21100000	6592534	115991	6476543	0.62
Net Income/Assets	0.004	0.024	0.006	0.003	0.003	0.33
Size [ln(assets)]	11.914	1.370	11.877	11.160	0.717	2.28
CAPAD	0.125	0.109	0.121	0.148	−0.027	−1.09
A1-loans/assets	0.647	0.197	0.568	0.586	−0.018	−0.42
A2-realestateloans/loans	0.758	4.150	2.231	0.816	1.414	0.44
A3-comindloans/loans	0.351	17.482	0.179	0.161	0.018	0.86
A4-realestate/assets	0.003	0.007	0.002	0.002	0.000	0.19
A5-interest/assets	0.029	0.006	0.015	0.014	0.000	0.55
A6-badloans/assets	0.010	0.017	0.007	0.005	0.002	0.77
Observations	7698		125	31		

Table 4: Likelihood of Becoming a Target for non-BHCs (Pooled Panel Logit Regressions)

This Table presents pooled panel logit regressions with the dependent variable an indicator that takes the value 1 if the bank was a merger target during the period following each quarterly call report and 0 otherwise. The Notice Window indicator corresponds to the call report period beginning 9/31/2008. All variables are as described in Table 2.

	(1)	(2)	(3)	(4)
CAPAD	−0.00891	−0.00693	−0.00757	0.0455
	(−0.02)	(−0.02)	(−0.02)	(0.10)
Liquidity	−2.177***	−2.171***	−2.171***	−2.156***
	(−7.17)	(−7.15)	(−7.15)	(−6.91)
Net Income/Assets	−24.12***	−23.89***	−23.92***	−25.66***
	(−5.11)	(−5.06)	(−5.07)	(−5.07)
Nonperforming Loans	7.86^{-8}	9.38^{-8}	0.000000184	-5.90^{-8}
	(0.07)	(0.08)	(0.16)	(−0.05)
Size (ln(Assets))	0.138***	0.138***	0.138***	0.147***
	(5.42)	(5.41)	(5.41)	(5.65)
TEDRATE	0.163**	0.0122	0.0122	0.0142
	(2.19)	(0.10)	(0.10)	(0.11)
Notice Window		0.409	0.423	2.564*
		(1.46)	(1.50)	(1.76)
Notice Window × Nonperforming Loans			−0.00000151	0.00000296
			(−0.34)	(0.67)
Notice Window × Liquidity				−0.0981
				(−0.08)
Notice Window × CAPAD				−1.334
				(−0.58)
Notice Window × Net Income/Assets				18.03
				(1.31)
Notice Window × Size-ln(assets)				−0.172
				(−1.44)
Constant	−6.677***	−6.639***	−6.639***	−6.745***
	(−21.34)	(−21.22)	(−21.23)	(−21.16)
N	216111	216111	216111	216111

Table 5: Propensity to Acquire

This Table presents pooled panel logit regressions with the dependent variable an indicator that takes the value 1 if the bank was a merger target during the period following each quarterly call report and 0 otherwise. The Notice Window indicator corresponds to the call report period beginning 9/31/2008. All variables are as described in Table 2.

	(1)	(2)	(3)	(4)
CAPAD	0.0208***	0.0208***	0.0208***	0.0210***
	(9.27)	(9.27)	(9.27)	(9.19)
Liquidity	0.00600***	0.00601***	0.00601***	0.00576***
	(2.99)	(2.99)	(2.99)	(2.88)
Net Income/Assets	−0.0489*	−0.0487*	−0.0488*	−0.0559*
	(−1.74)	(−1.73)	(−1.73)	(−1.92)
Nonperforming Loans	−0.000000177***	−0.000000177***	−0.000000176***	−0.000000178***
	(−4.36)	(−4.36)	(−4.39)	(−4.42)
Size (ln(Assets))	0.00612***	0.00612***	0.00612***	0.00617***
	(12.79)	(12.79)	(12.79)	(12.64)
TEDRATE	−0.000105	−0.000218	−0.000218	−0.000210
	(−0.31)	(−0.38)	(−0.38)	(−0.37)
Notice Window		0.000344	0.000420	0.0159
		(0.25)	(0.30)	(1.22)

(*continued*)

Table 5: Propensity to Acquire (*continued*)

	(1)	(2)	(3)	(4)
Notice Window × Nonperforming Loans			-1.79^{-8}	4.14^{-8}
			(−0.22)	(0.47)
Notice Window × Liquidity				0.00819
				(0.68)
Notice Window × CAPAD				−0.00415
				(−0.92)
Notice Window × Net Income/Assets				0.0954
				(1.35)
Notice Window × Size−ln(assets)				−0.00129
				(−1.18)
Constant	−0.0703***	−0.0703***	−0.0703***	−0.0709***
	(−12.45)	(−12.46)	(−12.46)	(−12.33)
N	0.00877	0.00877	0.00877	0.00878

Table 6: Post–Acquisition Performance

This Table presents regressions in which the dependent variable is the bank–level difference in the value of Net Income, Income/Assets, and Tax Rate as of June 2008 and the same values measured as of December 2009 (1 year post–notice) and December 2010 (2 years post–notice). The sample consists of banks that merged between June 2008 and December 2008 (the Notice period and the quarter before).

	(1) Net Income/ Assets Change (1 Year Post)	**(2) Net Income/ Assets Change (2 Years Post)**	**(3) Net Income Change (1 Year Post)**	**(4) Net Income Change (2 Years Post)**	**(5) Tax Rate Change (1 Year Post)**	**(6) Tax Rate Change (2 Years Post)**
Notice Window Acquisition	−0.0103*	−0.00643	−0.00857*	−0.00466	−0.534	−0.335
Indicator	(−2.23)	(−1.72)	(−2.02)	(−1.81)	(−1.28)	(−1.12)
Constant	0.00744	0.00484	0.00613	0.00333	0.350	0.260
	(1.76)	(1.51)	(1.58)	(1.72)	(0.94)	(0.88)
N	47	55	47	55	48	56

Table 7: Chargeoffs During Notice Period

Panel A.

	(1) Commercial/ Industrial	(2) Revolvers	(3) Credit Cards	(4) All
12/31/2008 Call Date	311.2	8.798	−476.8	1304.5
	(0.81)	(0.02)	(−0.42)	(0.89)
Notice Window Merger	830.4***	−13.66	−2039.5***	2094.8*
	(2.75)	(−0.08)	(−10.08)	(1.90)
12/31/2008 Call Date × Notice Window Merger	−3834.8***	−3591.4*	−2833.6	−70072.5
	(−3.23)	(−1.66)	(−1.54)	(−1.59)
Nonperforming Loans	0.00849***	0.0168***	0.0124***	0.0448***
	(8.91)	(11.67)	(6.51)	(11.65)
Year FE	Yes	Yes	Yes	Yes
Month FE	Yes	Yes	Yes	Yes
r2	0.270	0.557	0.0317	0.349
N	328600	328598	328599	327168

Panel B.

	(5) Commercial/ Industrial	(6) Revolvers	(7) Credit Cards	(8) All
12/31/2008 Call Date	351.8	41.03	−508.5	1405.0
	(1.30)	(0.13)	(−0.87)	(1.59)
12/31/2008 Call Date × Notice Window Merger	−4722.7*	−3449.8*	−2297.6**	−72224.6
	(−1.73)	(−1.79)	(−2.15)	(−1.52)
Nonperforming Loans	0.00360***	0.0130***	0.00469***	0.0259***
	(4.55)	(8.14)	(4.72)	(7.87)
Year FE	Yes	Yes	Yes	Yes
Month FE	Yes	Yes	Yes	Yes
Bank FE	Yes	Yes	Yes	Yes
r2	0.497	0.595	0.512	0.648
N	328600	328598	328599	327168

t statistics in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix: A Model of the Effects of Code Section 382 on Mergers

This Section presents a more general model of the effect of Code section 382 on the decision to merge. The model predicts that, to the extent tax losses are an important consideration in the merger decision, mergers taking place during the period that the Notice was in effect should be more numerous and exhibit lower merger synergies. The model has ambiguous predictions for how financial distress would affect the likelihood of becoming a target, and the social welfare implications of 382 are ambiguous as well. The model applies equally to the cases of a target corporation with either net operating losses (NOLs) or built-in losses on its assets, so long as the cost of recognizing those losses is sufficiently small.

A. The Model Setup

There are two players ($i \in \{b, s\}$) and four time periods with no discounting ($t \in \{0,1,2,3\}$). An acquiring corporation ($i = b$) and a target corporation ($i = s$) explore a possible business combination. For the sake of simplicity, both corporations are subject to the same corporate income tax rate of $\tau \in (0,1)$. Let's first start with the target corporation. The target has a certain amount of tax losses ($L > 0$) the firm has accumulated over the years that the firm can use to reduce its taxable income in the future. If the target corporation were to stay independent, the firm expects to realize future income with a present value of $Y_s \geq 0$, before deducting any losses. If $Y_s \geq L$, the firm will pay an income tax of $\tau(Y_s - L)$, whereas if $Y_s < L$, the firm will not pay any corporate income tax. The after-tax income for the stand-alone target, therefore, is $Y_s - \tau \cdot \max\{Y_s - L, 0\}$.

Whether the target has sufficient taxable income in the future to take advantage of the tax losses is an important separator. Assume that the target's future income is uncertain ex ante but is distributed with a differentiable probability density function of $f(\cdot)$ over the support of $Y_s \in [0, \overline{Y}_s)$ where $\overline{Y}_s \gg 0$ and $\overline{Y}_s > 0 \; \forall \, Y_s$. Based on L and Y_s, we can divide the target into two groups. If $Y_s \geq L$, the target has sufficient income to be able to utilize all tax losses. The target will expect to realize an after-tax income of $Y_s - \tau(Y_s - L) = (1 - \tau)Y_s + \tau L$. If $Y_s < L$, on the other hand, the target does not generate sufficient income to be able to use the tax losses. In this case, the target will have an after-tax income equal to pretax income: Y_s. We refer to the first type of target corporation (with $Y_s \geq L$) as "financially healthy" and the latter type (with $Y_s < L$) as "financially weak."

Turning to the acquiring corporation ($i=b$), if the buyer were to stay independent and not acquire the target, the buyer expects to realize a future income of $Y_b \geq 0$ and after-tax income of $(1-\tau)Y_b$. If the buyer were to acquire the target corporation, the combined corporation would generate, due to operational synergies, additional income $X \in (\underline{X}, \overline{X})$ where $\underline{X} \ll 0$ and $\overline{X} \gg 0$. Assume that X has a differentiable probability density function of $g(\cdot)$ where $> 0 \cdot \forall X$.[144] The operational synergy will increase the combined company's taxable income by X, such that the combined company's pretax income is $Y_b + Y_s + X$.

In terms of timing of the game, at $t=0$, tax law on losses is fixed. At $t=1$, the target corporation's stand-alone income (Y_s) and the operational synergy (X) are realized and observed by both corporations.[145] Both players also observe all other relevant parameters (such as Y_b and L), so that the business combination negotiation is done in a complete, symmetric information setting. For simplicity, we assume that the buyer's stand-alone taxable income is large enough to utilize the target's tax losses: $Y_b \geq L$. At $t=2$, the buyer and the seller negotiate over a possible business combination. Also for simplicity, we assume that the business combination is executed as a tax-free (or tax-deferred) reorganization. In case a combination is consummated, the buyer captures $\delta \in (0,1)$ share of the benefits (which can come from either operational synergy, tax benefits, or both) and the seller captures $1-\delta$ share of the benefits.[146] At $t=3$, taxable income and, in case there was a business combination at $t=2$, synergies are realized.

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144. We are assuming, for simplicity, that the merger synergies and other attributes are uncorrelated with the accumulated losses of the target. Relaxing this assumption will not change the main results.

145. The assumption that the target's stand-alone income and, more importantly, the potential synergy from the merger are stochastic variables implies that the companies do not know whether they should merge until they observe the realizations.

146. The relative bargaining power (δ) can represent various factors, including the market conditions, that allow either the target or the buyer to capture a bigger deal surplus. For instance, when there is a strong competition among many buyers for a single target, δ will get closer to zero. We can easily reflect such an equilibrium by letting multiple buyers draw realizations on X and compete for a single target. We are also assuming away any costs associated with executing a merger. We can easily incorporate the transaction's cost by letting the buyer and the seller to capture less than the full surplus from the transaction.

B. No Limitation on Use of Tax Losses for the Combined Company

We start with the case where a business combination between the buyer and the target does not lead to a limitation on the use of the target's tax losses, which approximates the case of banks during the Notice window or a world in which Code section 382 did not exist. We can divide the set of possible business combinations depending on the target's type. Suppose first that $Y_s \geq L$, so that the target is financially healthy. If the parties were to stay independent, the buyer and the seller will realize after-tax, stand-alone incomes of $(1-\tau)\,Y_s + \tau L$ and $(1-\tau)\,Y_b$, respectively. These represent the parties' respective reservation values, the minimum value they must capture from the merger. If they were to merge, the combined company will pay an income tax of $\tau(Y_b + Y_s + X - L)$ and realize an after-tax income of $(1-\tau)(Y_b + Y_s + X) + \tau L$. Note that the expression allows the combined entity to fully utilize the tax losses from the target corporation. The gain from the merger, therefore, is given by

$$(1-\tau)X$$

Without any limitation on the use of target's tax losses, there is an after-tax gain from a merger whenever the operational synergy is positive: $X \geq 0$. For financially healthy targets, allowing unlimited use of tax losses is neutral and non-distortionary, encouraging business combinations if and only if there are operational synergies. When the parties execute the transaction, the buyer will obtain an additional return of $\delta(1-\tau)X$ while the seller realizes an additional return of $(1-\delta)(1-\tau)X$.

Now consider a possible business combination with a financially weak target ($Y_s < L$). If the parties were to stay independent, at $t=3$, the buyer and the seller expect to realize after-tax incomes of $(1-\tau)Y_b$ and Y_s, respectively. In case of a business combination, the combined company will realize an after-tax income of $(1-\tau)(Y_b + Y_s + X) + \tau L$. Note that, by assumption, the buyer's taxable income is sufficiently high so that the combined company will be able to fully utilize the target's tax losses. The gain from the merger is given by

$$\tau(L - Y_s) + (1-\tau)X$$

Note that, by assumption, $L > Y_s$, and the gain from this merger is also greater than the gain from a merger with a financially healthy target generating the same synergies. For the financially weak seller,

therefore, without any limitation on the use of tax losses, the parties will have two distinct incentives to merge: a possible operational synergy (X) and the ability to tap into the underutilized tax losses ($L - Y_s$). The presence of the tax benefits in the merger implies that even if the operational synergy is small or negative, the parties will have an incentive to merge. That is, so long as $X \geq -\frac{\tau}{1-\tau}(L - Y_S)$, the benefit of merger is (weakly) positive and the tax benefits grow as the tax rate rises and the amount of underutilized tax losses by the target grows. Note that $-\frac{\tau}{1-\tau}(L - Y_S) < 0$, so that the merger may produce a negative operational synergy but still generate a sufficiently large tax benefit to make it attractive for the parties. Thus, for the financially weak seller, the absence of a limit on the use of tax losses following an acquisition is distortionary in the sense that it encourages the parties to merge even when merger will destroy value.

C. Limitation on the Use of Tax Losses for the Combined Company

Now, suppose that when the target and the buyer merge, there is a limit such as that imposed by Code section 382 on how much of target's tax losses the combined company can utilize. We can let the limitation on the target's tax losses be proportional to the target's future income. Let βY_s, where $\beta \in (0,1)$, represent the maximum amount of the target's tax losses that the combined company can use. The assumption represents the fact that the limitation is determined by multiplying the company's equity value (target's future income) by the long-term tax-exempt rate and that this rate is lower than the return on the target's assets. Given that the ceiling on the target's tax losses is proportionate to the target's future income, the buyer that merges with a financially healthy target company will be able to use more of the target's past tax losses than the company that merges with a financially weak target company.

Due to the loss limitation, target corporations can be divided into three different groups. The first group includes the financially healthiest targets, those that generate enough income on their own to use all of the tax losses even if the limitation applied: $Y_s > \beta Y_s \geq L$. The second group includes moderately healthy target companies such that the stand-alone target can utilize the entire tax loss but the combined company cannot: $Y_s \geq L > \beta Y_s$. The third group includes only financially weak target companies, with relatively low stand-alone taxable income such

that neither the stand-alone target nor the combined company can utilize all the tax losses: $L > Y_s > \beta Y_s$. Let's examine these three groups in turn.

With respect to the financially healthy seller ($Y_s > \beta Y_s \geq L$), the respective parties' reservation values are $(1 - \tau)Y_s + \tau L$ for the seller, and $(1 - \tau)Y_b$ for the buyer. If they were to merge, the combined company will realize after-tax income of $(1 - \tau)(Y_b + Y_s + X) + \tau L$. Note that, even with the loss limitation, the target's stand-alone taxable income is large enough so that the combined company can still utilize all the tax losses. Hence, the loss limitation rule creates no distortions on mergers. The gains from the merger are given by $(1 - \tau)X$, and the parties will have an incentive to merge whenever the operational synergy is positive.

Turning to the moderately healthy target corporations, the parties' reservation values are the same as in the case with financially healthiest targets, i.e., $(1 - \tau)Y_s + \tau L$ for the seller and $(1 - \tau)Y_b$ for the buyer. If the companies were to merge, the combined company will pay an income tax of $\tau \cdot (Y_b + Y_s + X - \beta Y_s)$ and realize an after-tax income of $(1 - \tau)(Y_b + Y_s + X) + \tau\beta Y_s$. The gains from the merger are, therefore, given by $(1 - \tau)X - \tau(L - \beta Y_s)$. Note that, because of the loss limitations, the combined company is worse off by $\tau(L - \beta Y_s)$ than the target and acquirer would be, in aggregate, by remaining separate. To justify a merger, they will need a strictly positive operational synergy:

$$X \geq \frac{\tau}{1-\tau}(L - \beta Y_s) > 0$$

This threshold level of synergy prevents certain economically efficient mergers from taking place and is the distortion caused by the loss limitation. The threshold grows with the tax rate and the foregone tax benefits due to the limitation

Finally, the acquisition of a financially weak target corporation will produce a combined company that pays income tax of $\tau \cdot (Y_b + Y_s + X - \beta Y_s)$ and realizes after-tax income of $(1 - \tau)(Y_b + Y_s + X) + \tau\beta Y_s$. The gains from the merger are $-\tau(1 - \beta)Y_s + (1 - \tau)X$. Now, in order for the parties to merge, they will need an operational synergy that is sufficiently positive to cover the tax loss that results from the NOL limitation. That is:

$$X \geq \frac{\tau}{1-\tau}(1-\beta)Y_s > 0$$

Thus, the limitation will discourage the acquisition of financially weak targets and prevent mergers that generate positive operational efficiencies. This effect grows with the tax rate and the target's income, and as β falls.

Minimum Operational Synergy (X) Necessary for Business Combination	No Limitation on the Use of Target's Tax Losses	Limitation on the Use of Target's Tax Losses (βY_s)
Financially Strong Target ($Y_s > \beta Y_s \geq L$)	$X \geq 0$	$X \geq 0$
Moderately Healthy Target ($Y_s \geq L > \beta Y_s$)	$X \geq 0$	$X \geq \frac{\tau}{1-\tau}(L - \beta Y_s) > 0$
Financially Weak Target ($L > Y_s > \beta Y_s$)	$X \geq -\frac{\tau}{1-\tau}(L - Y_s)$	$X \geq -\frac{\tau}{1-\tau}(1-\beta) Y_s > 0$

The Table above summarizes the main findings by tabulating the minimum operational synergy necessary for a business combination. With respect to financially healthy target corporations, for whom the limitation on tax losses does not create a binding constraint, we get the optimal merger incentive regardless of whether a limitation applies (second row). For moderately healthy target corporations ($Y_s \geq L > \beta Y_s$), limiting the use of tax loss carryforwards for merged corporations causes distortions on merger incentives. In that case, the combined company's operational synergy must be large enough to cover the loss of tax assets (third row). For financially weak target corporations ($L > Y_s > \beta Y_s$), we get different types of distortions depending on the rule (fourth row). Without any limitations on the use of losses, the tax losses create an incentive for inefficient acquisitions. With limitations on use of losses, on the other hand, we get the opposite distortion. Similar to the case of moderately healthy target corporations, the weak targets are less inclined to execute a merger due to the loss of tax benefits ($\tau(1-\beta)Y_s$). Now, operational synergies must be strictly positive for a merger to make sense and, as a result, too few mergers will take place.

D. Comparative Statics and Predictions

While the model is simple, it leads to a number of predictions. First, when we lift the restriction on the use of target's tax losses, the incidence

of business combinations (on average) should rise. While the rule has no effect on the financially healthy target corporations, for both moderately healthy and financially weak target corporations, they need smaller operational synergies to be able to consummate a merger. Second, in addition to the general rise in the incidence of business combinations, when the restriction on the use of tax losses is eliminated, mergers will exhibit (on average) smaller operational synergies. Again, for financially healthy target corporations, the rule change has no effect. For moderately healthy target corporations, now mergers with smaller operational synergies become feasible. For financially weak target corporations, the operational synergy can even be negative.

Third, in terms of whether lifting the loss restriction will induce more financially strong (or financially weak) targets to be acquired, the model is agnostic. First note that, conditional on the target's stand-alone income, the increase in the range of operational synergies that become subject to a possible business combination is the same for both moderately healthy and financially weak targets: for both types, the range of X for a possible merger increases by $\frac{\tau}{1-\tau}(1-\beta Y_s)$. However, because the distribution (or the density) of X can be large or small within the relevant range, eliminating the restriction on the use of tax losses could lead to a higher incidence of acquisition of either the moderately healthy or financially weak target. The change in the rule, of course, has no effect on the financially healthy target. Fourth, changing the tax loss rule will have an ambiguous welfare effect. With respect to the moderately healthy target, lifting a limitation on the use of tax losses will unambiguously increase welfare by making all mergers with positive operational synergies feasible. For the financially weak targets, on the other hand, lifting the restriction leads to too many mergers. Depending on the magnitude of the inefficiency, loss limitations like Code section 382 could either increase or decrease welfare.