

CHAPTER 3

Alternatives to the Federal Deposit Insurance Corporation

THOMAS L. HOGAN*

Johnson Center for Political Economy, Troy University

KRISTINE JOHNSON*

Mercatus Center MA Fellow at George Mason University (Alumna)

The financial crisis of 2008 has caused economists to reexamine the forces that stabilize (or destabilize) the financial system in the United States and around the world. Despite much debate, there remains serious disagreement as to the root causes of the crisis and hence the best solutions for preventing future crises. Some studies claim the crisis was caused by deregulation in the financial sector,¹ but the quantity and complexity of financial regulations had in fact increased significantly in the decades leading up to the crisis. Other studies, by contrast, argue that poor or misguided financial regulations were themselves a major cause of the crisis.² The form of potentially misguided financial regulation that we focus on here is government-administered deposit insurance, managed in the United States by the Federal Deposit Insurance Corporation (FDIC). This chapter discusses the evidence from US history and around the world that government deposit insurance

*The authors are currently committee staff members in the US Senate. The views presented here are those of the authors alone and do not necessarily represent the views of any senator or committee.

leads to more bank failures and financial crises. We consider changes that might be made to the FDIC and the US deposit insurance system to help stabilize the banking system and prevent future financial crises.

Many people are unaware that deposit insurance can reduce stability in the banking system. The literature in support of deposit insurance is largely based on theoretical models.³ This line of research assumes banking is inherently unstable and that the government has special powers or privileges that enable it to prevent bank runs when private actors cannot. Deposit insurance is often modeled as an idealized and actuarially fair system that prevents crises without creating any harm to the economy.⁴ More realistic models, however, include the disadvantages of deposit insurance, such as the problems of moral hazard and increased risk taking that occur when depositors' funds are guaranteed since the depositors no longer have strong incentives to monitor banks' risk-taking activities. From theory alone, it is unclear whether government deposit insurance should be expected to reduce the number of bank failures by preventing runs or to increase the number of bank failures because of moral hazard. We must therefore turn to the empirical studies that analyze the effects of deposit insurance in the real world.

Despite the common perception among both laymen and economists that deposit insurance helps stabilize the banking system, most empirical studies find that introducing deposit insurance decreases stability. After briefly discussing the history of the FDIC, we analyze two strands of the empirical literature. First, international studies of deposit insurance systems around the world indicate that countries with higher levels of deposit insurance coverage and countries with more government involvement in the administration of deposit insurance tend to have higher numbers of bank failures and more frequent financial crises. Second, studies of the banking system in the United States prior to the establishment of the FDIC show similar results. Many US states established their own deposit insurance systems through public or private means, especially prior to the nationalization of the US banking system during the Civil War. Other states evolved competing private systems of insurance or functioned efficiently with no deposit insurance system at all. These private, pre-FDIC systems were effective at regulating the financial system, bailing out troubled banks, and preventing contagious bank runs that can lead to financial crises. Overall, the evidence indicates that reducing the FDIC's role in deposit insurance is likely to increase stability in the US banking system.

Given this evidence, we next consider three potential changes to the FDIC system. First, the administrative side of deposit insurance can be improved by replacing the FDIC with a privately managed organization, as is the case in most developed nations. Second, the mandated level of FDIC coverage could be reduced, allowing private suppliers to make up the difference. Third, the system could be privatized entirely by eliminating mandated coverage and allowing insurance to be provided privately rather than through the FDIC. Absent the FDIC, private institutions similar to those that existed before the FDIC would likely evolve to provide deposit insurance, consumer protection, and banking stability, although the political reaction to such a transition remains unclear.

Reducing or eliminating FDIC deposit insurance would be an important step toward restoring financial stability in the United States, but would not put an end to banks' lobbying for bailouts and subsidies. Banks always have and always will attempt to gain special privileges. However, reducing the level of FDIC insurance and reducing the government's involvement in the deposit insurance system would reduce the risk of bank failures and financial crises, making the need for future bailouts less likely. Similar deregulations have proven greatly successful in banking and other industries. The suggested changes would reduce the problems with government deposit insurance, especially moral hazard, and would help stabilize the US banking system.⁵

STUDIES OF DEPOSIT INSURANCE

Deposit insurance creates two conflicting forces that influence bank failures. On one hand, it removes the incentive for depositors to run on the bank, so banks are less likely to fail from nonfundamental causes. On the other hand, it creates moral hazard by decreasing the relative cost of taking risk, so banks are more likely to fail from fundamental causes. It is impossible to know in theory which of these effects will be greater, so we must look to the empirical literature—including literature on the history of the FDIC and international studies comparing deposit insurance systems around the world and deposit insurance in the United States prior to the FDIC—to find out whether deposit insurance makes banks more or less likely to fail in the real world. The evidence strongly indicates systems with higher levels of deposit insurance and

more government involvement are subject to higher instances of bank failures and financial crises.

The FDIC

The FDIC was established to stabilize the banking system and protect individual depositors in response to the banking panics of the early 1930s that largely contributed to the Great Depression in the United States.⁶ Although the FDIC is commonly credited with stemming bank runs,⁷ deposit insurance has also increased the number of bank failures due to moral hazard. Many studies find that deposit insurance played an important role in contributing to the 2008 financial crisis, and the Federal Savings and Loan Insurance Corporation (FSLIC) that is now a part of the FDIC did the same in the savings and loan (S&L) crisis of the 1980s.

A series of bank failures during the early years of the Great Depression paved the way for the adoption of federal deposit insurance.⁸ In 1931, the rate of bank failures and losses to depositors skyrocketed as the Federal Reserve failed to abate the shortage of liquidity in the banking system.⁹ In January 1932, a federal lending agency called the Reconstruction Finance Corporation was created, and by the end of the year it had “authorized almost \$900 million in loans to assist over 4,000 banks striving to remain open.”¹⁰ Nevertheless, deteriorating conditions led to a nationwide bank holiday and, after much deliberation and debate, the FDIC was established in the Banking Act of 1933.¹¹ The act provided the Temporary Deposit Insurance Fund, which began coverage on January 1, 1934, and a permanent plan that was to take effect on July 1, 1934, but was later delayed to July 1, 1935.¹² There was strong opposition to federal deposit insurance, even by President Franklin Roosevelt and others in the administration,¹³ but sentiments began to shift in 1934 as the rate of bank failures declined.¹⁴ The Temporary Deposit Insurance Fund was, at the time, seen as a major contributing factor in stopping bank failures, so the opposition to it mostly faded. Thus, the perception that FDIC insurance stabilizes the banking system has been perpetuated to the present day, despite much evidence to the contrary.

The FDIC’s scope, coverage, and costs have greatly expanded over time and no longer resemble its original purpose. The initial coverage level of \$2,500

per depositor was increased to \$5,000 within just six months of adoption.¹⁵ Since permanent FDIC insurance took effect in 1935, the maximum coverage amount has been increased six times, most recently in 2008 when it was increased to \$250,000, where it stands today. “Since its inception, the real scope of federal deposit insurance . . . has increased by roughly 514 percent,” outpacing growth in total deposits and income per capita.¹⁶

Despite the early perception that the FDIC reduced the frequency of bank failures, most evidence suggests it actually did the opposite. As Calomiris and Haber point out, “Although the civics textbooks used by just about every American high school portray deposit insurance as a necessary step to save the banking system, all the evidence indicates otherwise: it was a product of lobbying by unit bankers who wanted to stifle the growth of branch banking.”¹⁷ Many studies find that political support for the FDIC was driven by special interests, mostly to benefit small country banks and unit banking states at the expense of big city banks and branch banking states.¹⁸ Calomiris and White explain that “the branch-banking movement of the early twentieth century created profound differences across states in the propensity for failure, which encouraged high-risk unit-banking states to attempt to free ride on the stability of branch-banking states through the establishment of national deposit insurance.”¹⁹ As a result, the states hit by the agricultural banking crisis of the 1920s became the staunchest advocates of deposit insurance legislation.

Empirical studies of FDIC insurance suggest the effects of moral hazard are present and possibly strong. Cebula and Belton find that federal deposit insurance coverage increased the rate of commercial bank failures,²⁰ and Shiers indicates that “higher levels of deposit insurance are positively and significantly associated with increased riskiness of commercial banks.”²¹ Saltz examines the link between the level of FDIC coverage and the frequency rate of bank failures and finds “strong evidence of a cointegrating relationship between the bank failure rate and the extent of central government-provided deposit insurance,”²² indicating that “federal deposit insurance very likely induced bank failures.”²³

Evidence also indicates federal deposit insurance was a major cause of the S&L crisis of the 1980s. At the time of the crisis, deposit insurance for these institutions was provided through the FSLIC. Like the FDIC, the FSLIC served the same function and suffered from the same destabilizing moral hazard effects. Both the FSLIC and FDIC guaranteed deposits up to \$100,000 per

account, after being increased from \$40,000 in 1980.²⁴ In the 1980s, the S&L industry experienced widespread failures, resulting in the largest collapse of financial institutions since the Great Depression.²⁵ Over the course of the crisis, 525 insolvent institutions were liquidated or sold, and another 517 institutions were insolvent but still operating at the end of the decade.²⁶ The FSLIC was insolvent by 1986, and taxpayers were forced to cover the excess losses. In 1989, it was abolished and its functions moved under the FDIC, where they reside today.²⁷ A study by the FDIC estimates the total cost of the crisis at \$153 billion, of which \$124 billion was contributed by taxpayers and only \$29 billion by the S&L industry.²⁸ Many studies find the high levels of risk taken by the S&Ls were primarily the result of moral hazard created by deposit insurance.²⁹ A study by Dotsey and Kuprianov attributes the magnitude and costs of the crisis to “the blanket guarantees provided by deposit insurance, which permitted insolvent institutions to continue attracting deposits and to engage in high-risk activities that ultimately resulted in heavy losses.”³⁰

Following the crisis, proposals called for terminating government deposit insurance, rolling back deregulation, and implementing “narrow” banking, among other things.³¹ Not wanting to enact radical change, Congress opted for a more “politically feasible, quickly implementable” solution, which took form in the Federal Deposit Insurance Corporation Improvement Act (FDICIA) of 1991.³² The main pillars of FDICIA were prompt corrective action (PCA) and least-cost resolution (LCR). Prompt corrective action established fixed capital adequacy categories, such as well capitalized, adequately capitalized, and undercapitalized, based on a bank’s capital ratio and a set of resolution procedures that were to take effect once a bank fell below a certain level. However, the thresholds determining when corrective action was necessary were set so low as to not be effective.³³ Balla, Prescott, and Walter examine banks from the crisis in the late 1980s and the financial crisis of 2008, finding that “despite the implementation of PCA, the FDIC’s losses on failed banks over the period 2007–13 were significantly higher.”³⁴ They claim that “one purpose of PCA was to shut down a failing bank before its losses got too big, and on this dimension it failed.”³⁵ They argue that “PCA was doomed to fail because . . . 1) When a bank fails, the market value of its assets is significantly less than its book value; 2) PCA triggers were set at levels such that capital levels of a bank on the path to failure were only a few hundred basis points higher than pre-PCA.”³⁶ Kaufman also finds that FDIC losses have increased in the post-FDICIA era.³⁷

FDIC insurance also appears to have contributed to the financial crisis of 2008. Admati and Hellwig argue that by removing depositors' incentives to monitor banks' risk-taking activities, deposit insurance reduces the cost of debt for the largest US banks and encourages them to use much higher leverage. "In effect, taxpayers subsidize the use of borrowing by banks."³⁸ Higher leverage magnified banks' losses during the crisis, putting the largest banks at risk and increasing financial contagion. Admati and Hellwig also explain how flaws in the "self-financing" of FDIC can exacerbate the crisis. "For close to a decade, until 2006, the FDIC did not charge any deposit insurance premium at all . . . as a result . . . the FDIC is short of funds when default rates are unexpectedly high."³⁹ The successive events, which culminated in the bailouts of a number of US banks and other financial firms by the Federal Reserve and the US Treasury, were, according to Admati and Hellwig, driven by misguided regulations, including FDIC deposit insurance.⁴⁰

This discussion by Admati and Hellwig is analogous to Hogan and Luther's description of the FDIC's Deposit Insurance Fund (DIF) as a rainy-day fund rather than a true insurance program. Once the DIF is fully funded, banks are charged only a minimal fee to maintain the fund rather than an actuarially fair assessment rate that would reflect their risk-taking activities. "For example, an actuarially fair rate would have been high in 2006 with risk building up in the banking system, but the actual assessment rate was only \$0.0005 [per \$100 in deposits], the lowest rate in FDIC history!"⁴¹ The poor incentives in the current system could be largely avoided if, rather than being managed as a rainy-day fund, US deposit insurance providers bore some risk of losses on the assets they insured, such as in the private insurance providers and privately administered national deposit insurance systems (discussed later in "Alternatives to the FDIC System").

International Studies

Unlike the FDIC in the United States, most developed nations have systems of deposit insurance that are either partly or fully privatized. Many studies compare across countries the different types of deposit insurance systems and levels of deposit insurance coverage. They consistently find that higher levels of deposit insurance and more government involvement in the deposit insurance system lead to more bank failures and financial crises.

In a sixty-one-country study over the period from 1980 to 1997, Demirgüç-Kunt and Detragiache examine various coverage aspects, such as level of insured deposits, presence of a coverage limit, and share of deposits covered; and the “results uniformly suggest that explicit deposit insurance tends to increase bank fragility, and the more so the more extensive is the coverage.”²⁴² Using a similar database of surveys from 107 countries, Barth, Caprio, and Levine show that “[t]he relationship between deposit insurance and bank fragility is economically large.”²⁴³ A bank-level dataset of thirty countries from 1990 to 1997 also indicates that “explicit deposit insurance is found to reduce market discipline” and that “a higher coverage limit significantly reduces interest rates [paid on deposits] and weakens market discipline.”²⁴⁴

International studies also reveal that the adverse effects of deposit insurance are stronger where government has greater involvement in the deposit insurance system. Demirgüç-Kunt and Detragiache find “the adverse impact of deposit insurance on bank stability tends to be stronger . . . where it is run by the government rather than the private sector.”²⁴⁵ Demirgüç-Kunt and Kane show that “deposit insurance schemes that involve the private sector in their day-to-day management control moral hazard and financial fragility more effectively.”²⁴⁶ Demirgüç-Kunt and Huizinga conclude that publicly managed systems “tend to reduce market discipline (and increase moral hazard).”²⁴⁷ Specifically, schemes funded only by the government have the most significant decline in interest rates and the largest reductions in market discipline, whereas private and joint management tend to improve market discipline.

Deposit insurance also appears to increase the probability of financial crises. Demirgüç-Kunt and Detragiache analyze the causes of banking crises in developed and developing countries from 1980 through 1994 and find that “[c]ountries with an explicit deposit insurance scheme were particularly at risk.”²⁴⁸ Based on research in another study, they argue that “explicit deposit insurance tends to increase the likelihood of banking crises.”²⁴⁹ Demirgüç-Kunt and Kane demonstrate that “explicit insurance makes banking crises more likely” and that “the countries with highest coverage limits in the sample . . . are five times more fragile than the countries that impose the lowest coverage limits.”²⁵⁰ Barth, Caprio, and Levine find “deposit insurance generosity is positively associated with the likelihood of a crisis.”²⁵¹ In an analysis of the costs of crises under different institutional regimes, Hohohan and Klingebiel assert that unlimited deposit insurance guarantees “add greatly to the fiscal cost of

banking crises.”⁵² Demirgüç-Kunt and Kane conclude that “[p]olicymakers should view the positive correlation between poorly designed deposit insurance and banking crises as a wakeup call.”⁵³

Because deposit insurance decreases financial stability, it has been found to have negative effects on economic development and long-run economic growth. Using a cross-sectional dataset of forty-nine countries, Cecchetti and Krause show “that countries with explicit deposit insurance and a high degree of state-owned bank assets have smaller equity markets, a lower number of publicly traded firms, and a smaller amount of bank credit to the private sector.”⁵⁴ Similarly, Cull, Senbet, and Sorge find that in countries with less-developed legal and regulatory regimes, “[g]enerous government-funded deposit insurance tends to have a negative effect on financial development and growth. . . .”⁵⁵ Demirgüç-Kunt and Kane review the literature on deposit insurance and conclude that although government backing might be helpful in specific instances, “[o]ver longer periods, it is more likely to undermine market discipline in ways that reduce bank solvency, destroy real economic capital, increase financial fragility and deter financial development.”⁵⁶

Studies of individual countries also show the adverse effects of expansive government deposit insurance. Carr, Mathewson, and Quigley examine the stability of the Canadian banking system prior to and since the adoption of federal deposit insurance in 1967. They find that insolvencies have increased since the establishment of the Canadian Deposit Insurance Corporation (CDIC) in 1967 and argue that the absence of deposit insurance “provided incentives for both prudence on the part of bank management and monitoring by depositors and bank regulators.”⁵⁷ Similarly, Mondschean and Opiela find evidence of decreased market discipline in Poland following an increase in coverage as “bank specific variables became less important in explaining differences in deposit interest rates.”⁵⁸ Chernykh and Cole indicate that “financial risk and, to a lesser degree, operating risk increase[d] following implementation” of Russian federal deposit insurance in 2004.⁵⁹ From 1975 to 1998, the deposit insurance scheme set up by German banks was completely private in funding and management. Examining this period, Beck finds that “German banks take very low risks compared to other countries and do not seem able to extract a net subsidy from the financial safety net.”⁶⁰

It is clear that substantial empirical evidence supports the claim that deposit insurance increases bank failure rates, and a further look at the varying schemes

in other countries provides policy implications for the United States. The findings suggest the negative effects of deposit insurance are stronger where coverage is higher and when deposit insurance is administered by the government. Although most examples are of increased government involvement in deposit insurance, with only a few cases of deregulation (such as the case of New Zealand, discussed later in greater detail), the evidence clearly indicates that private deposit insurance systems or systems with private involvement empirically tend to do a better job at combating the harmful effects of moral hazard. These alternatives may provide guidance for improving the deposit insurance system in the United States.

Pre-FDIC Insurance

Prior to the establishment of the FDIC, deposit insurance in the United States was administered at the state level through public or private mechanisms. Many states had either legally mandated or government-run deposit insurance systems. Other states had fully privatized systems of coinsurance administered by a clearinghouse or banking organization. Studies of pre-FDIC deposit insurance find that higher state involvement leads to a higher number of bank failures.

Comparisons of state-level deposit insurance systems demonstrate that government involvement in deposit insurance tends to decrease stability. Calomiris shows that “in both the antebellum period and in the 1920s, insurance systems that relied on self-regulation, made credible by mutual liability, were successful, while compulsory state systems were not.”⁶¹ Thies and Gerlowski also examine the state-sponsored systems in the nineteenth and twentieth centuries, finding that “other things equal, state banks in states with guaranty funds failed at a higher rate than state banks in states without guaranty funds.”⁶² Weber compares state-run funds of the pre-Civil War era to mutual guarantee systems and concludes that “the schemes that provided the most control of moral hazard were those that had a high degree of mutuality of losses borne by all banks participating in the scheme.”⁶³

Among the pre-Civil War deposit insurance systems, Indiana, Iowa, and Ohio were mutual guarantee systems with small numbers of banks that had strong incentives to police one another, and these programs appear to have been successful at preventing bank failures. By contrast, systems in Michigan,

New York, and Vermont “were much more like later deposit insurance systems, including the federal system,” and were not successful because they “produced very large bank failures, sufficiently large to bankrupt the insurance fund.”⁶⁴ For example, New York’s fund, established in 1829, continued to suffer losses until 1842, when “it ceased to be able to repay losses of failed banks and thus ceased to provide protection to the payments system.”⁶⁵ The Indiana, Iowa, and Ohio systems experienced few to no failures, mostly avoided suspension of convertibility, and enabled banks to maintain operations. While Indiana’s scheme was in place from 1834 to 1865, no insured bank failed. Both Iowa’s (1858–1866) and Ohio’s (1845–1866) schemes had similar results.⁶⁶ These systems “were brought to an end not by insolvency, but by federal taxation of bank notes designed to promote the National Banking System.”⁶⁷

Studies using individual bank data find similar results. Dehejia and Lleras-Muney examine state-chartered banks from 1900 to 1940 and conclude that “the overall effect of deposit insurance was negative. And these negative effects, when significant, are sizable.”⁶⁸ Hooks and Robinson use data from Texas state-chartered banks over the period from 1919 to 1926 and find “the existence of deposit insurance for state-chartered banks increased their likelihood of failure.”⁶⁹ Several studies examine the voluntary state insurance program in Kansas in the 1920s⁷⁰ and assert that “insured banks were more likely to fail than non-insured banks.”⁷¹ According to one study, “The uninsured banks, in fact, were generally stronger institutions that exhibited higher capital ratios, fewer real estate lending problems, and far less need for public assistance.”⁷²

In the absence of deposit insurance, other mechanisms served to maintain stability and limit bank failures. Banks often formed clearinghouses to coordinate the exchange of banknotes, but “during banking panics the clearinghouse united banks into an organization resembling a single firm which produced deposit insurance.”⁷³ Prior to the establishment of the FDIC, bank shareholders faced double or even triple liability for their equity investments and were therefore responsible for a portion of the bank’s losses after insolvency. Macey and Miller indicate that “double liability was an effective regulatory system” and that, “unlike deposit insurance, the threat of double liability appears to have induced caution on the part of bank managers in their use of depositors’ funds.”⁷⁴ As Dowd⁷⁵ notes, a bank can also maintain depositor confidence and thus stability in other ways, such as hiring an independent auditor to evaluate

its soundness, developing reliable accounting standards, publishing its financial data, and maintaining adequate capital.

Overall, studies of pre-FDIC deposit insurance in the United States find state-run systems were largely unsuccessful and increased bank failures and that self-regulating systems privately managed by banks that bore a portion of liability were the most successful. Based on these studies, it seems reasonable to conclude that moving in the direction of decentralized administration and privatization of losses would improve the current US deposit insurance system.

ALTERNATIVES TO THE FDIC SYSTEM

This section proposes three potential changes that might be made to the current system of deposit insurance managed by the FDIC. First, international studies find that private or semi-privately managed deposit insurance systems tend to outperform public systems. The FDIC might therefore be partly or fully privatized in a manner similar to most European deposit insurance systems. Second, the evidence shows that lower levels of mandated deposit insurance coverage tend to increase stability in the banking system. The current maximum level of \$250,000 in mandated FDIC deposit insurance coverage can be greatly reduced without endangering the vast majority of depositors, a change that is likely to benefit smaller depositors by increasing stability and reducing costs. Finally, we propose that mandated insurance could be eliminated and the FDIC be privatized or abolished altogether. Historical evidence of deposit insurance prior to the FDIC indicates that private mechanisms such as clearinghouses, coinsurance programs, and systems of self-regulation are likely to emerge to stem bank risk. The empirical evidence indicates that these proposals are likely to increase efficiency and stability in the US banking system.

Private Administration of Deposit Insurance

The United States could maintain a government mandate on deposit insurance but allow the system to be privately administered. As mentioned earlier, private management tends to reduce bank risk and the rate of bank failures. Many developed countries around the world currently use such models. Thirteen

countries have privately administered schemes and many others have joint public-private administration, as defined by the World Bank.⁷⁶ New Zealand has no deposit insurance but instead employs a system for resolving insolvent banks. This section discusses the examples of privately administered systems in Switzerland and Italy, the special case of a private system in Germany, and the bank resolution system used in New Zealand. Belgium, Brazil, Denmark, Finland, France, Japan, Luxembourg, Norway, Spain, and many other countries have privately administered systems similar to the ones discussed here.⁷⁷

Switzerland and Italy are examples of countries with deposit insurance systems that are mandated by law but privately administered by organizations of member banks. The scheme in Switzerland, *esisuisse*, is identified as “self-regulation.”⁷⁸ The Swiss Federal Law on Banks and Savings Banks requires that depositors be insured up to 100,000 Swiss francs but calls for a self-regulating organization approved by the Swiss Financial Market Supervisory Authority (FINMA) to insure deposits.⁷⁹ All deposit banks in Switzerland are required to be members of *esisuisse* and are subject to its regulations. Administrative functions, such as setting annual member contributions, are carried out internally by *esisuisse*.⁸⁰ When a bank becomes insolvent, FINMA holds the authority to trigger deposit protection, at which time all other banks in *esisuisse* must supply the necessary funding within twenty days.⁸¹ Dirk Cupei, Managing Director of Financial Market Stability and Deposit Protection for the Association of German Banks, notes of the Swiss scheme, “[T]he central principles are set down in legislation, but most things are left for the financial services industry to regulate itself.” He claims that this lean model “works very well” and that “[i]t is right that the funds of an insolvent institution should first be used to cover client credit balances. This rule not only makes deposit protection more efficient, it also means that in many cases banks can be wound up without having to use money from the deposit protection scheme.”⁸² According to an *esisuisse* annual report, “The *esisuisse* depositor protection scheme in Switzerland is unique: a self-regulated model with joint and several liabilities that has proven its ability to work on more than one occasion since 2007.”⁸³

In Italy, the Interbank Deposit Protection Fund was established in 1987 as a voluntary consortium, “but has since become a mandatory fund.”⁸⁴ All Italian banks except mutual banks are members of the fund.⁸⁵ Although the Protection Fund is private, with statutes and bylaws adopted by a general meeting of members, the Italian central bank, the Bank of Italy, has full

powers in supervising and coordinating the Fund's activities.⁸⁶ Italian law dictates maximum coverage of 100,000 euro.⁸⁷ Once the Bank of Italy initiates compulsory administrative liquidation of the bank, the Deposit Protection Fund has twenty days to provide funds for reimbursement. The Fund's board determines the procedures and schedule for the reimbursement of depositors. Major administrative decisions are made at the general meeting, such as determining member contributions, electing officials, and approving the balance sheet.⁸⁸

In Germany, the Association of German Banks established its private deposit insurance scheme, the Deposit Protection Fund, in 1975. Beck describes Germany's model as "a club that provides a nonrival, but excludable good for its members" and notes that the scheme's structure resembles the successful historical schemes in the United States.⁸⁹ The Deposit Protection Committee, whose members are elected from the Association of German Banks, manages the fund.⁹⁰ While the Deposit Protection Fund is voluntary and emerged absent a statutory mandate, a new statutory scheme, the Compensation Scheme of German Banks (EdB), was introduced in 1998 in response to a European Union (EU) mandate for compulsory deposit insurance schemes. As required by the EU mandate, the EdB set a minimum coverage level of 20,000 euro per depositor, but the level has since increased to 100,000 euro per depositor.⁹¹ The EdB is also privately managed and shares features of the voluntary scheme, but is under regulation and supervision of the Federal Banking and Supervisory Office. The Ministry of Finance sets the premiums for the statutory system.⁹²

These privately managed deposit insurance systems might serve as a guide for a privately administered program in the United States. As discussed, many developed nations have systems in which banks work together to administer and manage deposit insurance. One potential option for administering deposit insurance through private banking organizations might be to give responsibility to the regional Federal Reserve Banks. The structure of the US Federal Reserve System closely resembles some of the privately administered deposit insurance schemes in place around the world. Each of the twelve regional Reserve Banks has a board of directors intended to reflect the diverse interests of the districts and convey a private-sector perspective. All member banks hold stock in their Reserve Bank and may receive dividends. Administering deposit insurance through the regional Reserve Banks might combine the

federal oversight desired by regulators with the private incentives needed to create stability. We leave it to further studies to explore whether such a change would indeed be possible in practice.

New Zealand does not currently have a government deposit insurance program at all. The government introduced a system of deposit insurance during the financial crisis of 2008 but has since allowed its temporary program to expire. “Following the closure of the Retail Deposit Guarantee Scheme on 31 December 2011, there was not a case to introduce a deposit insurance scheme on its own.”⁹³ As a substitute, its Open Bank Resolution (OBR) tool is aimed at maintaining operations in the event of a bank failure rather than providing a deposit insurance safety net. If a bank fails, a portion of its liabilities are frozen to allow the bank to continue operations until it is acquired by another bank or resolved completely. If the bank is resolved, the priority of creditors is maintained such that shareholders bear the first losses, followed by subordinated debt holders, and then by depositors last. However, only a portion of depositors’ funds are frozen for use against the bank’s losses, and the rest of the unfrozen funds become available the next day, allowing depositors to conduct transactions. “While the initial portion of the creditors’ claims that are frozen puts a ceiling on their final losses, their actual losses may be less than this if it turns out that the estimate of the losses was too conservative . . . creditors could well regain access to much of their frozen funds once the bank’s losses are determined.”⁹⁴ Unfrozen liabilities are ultimately funded through liquidation of assets, takeover, or restructuring. As Toby Fiennes of the Reserve Bank of New Zealand says, “[OBR] does not change the fact that depositors’ and other creditors’ funds are at risk.”⁹⁵ The OBR scheme reduces moral hazard while enabling the financial system to continue to function during a crisis.

Reducing the Level of FDIC Coverage

The provision of deposit insurance can be improved by privatizing administration, but it might also be beneficial to improve the consumer side by lowering the mandated level of coverage. This change would have benefits that are attractive to both supporters and opponents of the current FDIC system. Supporters argue that deposit insurance requires government support to backstop the banking system in the event of a financial crisis. Opponents would

prefer that individuals be allowed to choose how much of their deposits, if any, they would like to insure rather than be required to purchase deposit insurance for up to \$250,000 in deposits. Reducing the mandated level of deposit insurance coverage would maintain a backstop for the banking system while creating benefits to any consumer who might prefer to opt out of the currently mandated system of deposit insurance, especially low-income consumers who might have trouble affording a bank account under the current system.

Two arguments are often given in favor of government deposit insurance: it stabilizes the banking system, and it protects small, less-sophisticated depositors. The first justification, however, is based on a false premise. As shown already, government insurance programs tend to increase rather than reduce risk in the banking system. But what about the protection of small depositors? As Bradley points out, one justification given for federal deposit insurance during the congressional debates over the Banking Act of 1933 was simply “to protect the small depositor.”⁹⁶ The argument goes that less-sophisticated depositors do not have the ability to monitor the soundness of large, complex banks and will be exposed to losses if the bank fails. However, only a minimal amount of deposit insurance is needed to protect these depositors, and the cost of deposit insurance, however small, is particularly harmful to lower-income consumers in several ways. First, low earners may only marginally be able to afford a bank account at all, and their financial alternatives such as check-cashing services and credit cards may be more costly. Second, deposit insurance fees have a proportionally larger impact on incomes that are lower and less disposable. Third, small depositors benefit less than large depositors from the implicit taxpayer subsidy created by deposit insurance. The current coverage limit of \$250,000 is far beyond the amount needed by the typical depositor. Why should consumers be penalized by being forced to purchase a service they neither desire nor can afford?

Cutting the level of deposit insurance would also please economists who worry about moral hazard since more sophisticated depositors will have a greater incentive to monitor banks’ risk-taking activities. FDIC Chairman William Isaac, for example, worried in the early 1980s that “[w]ith a perception of minimal risk, there is little incentive for larger depositors to exert the degree of market discipline present in other industries.”⁹⁷ If the level of deposit insurance is reduced, more sophisticated investors will withdraw their deposits from banks that take excessive risk, thereby imposing a higher degree of

market discipline, and less-sophisticated investors will still have some minimal level of protection.

Reducing the level of mandated coverage does not mean consumers would have no insurance at all, but rather that they would have the option of acquiring insurance through private means. American consumers are already able to insure their excess deposits through a variety of private insurance providers. As described in a report from the FDIC, “Private excess insurance already exists. . . . A small number of private insurance companies have offered this type of insurance over the past decade.”⁹⁸ Although the insurance of excess deposits is most common at the individual level, it also appears that some institutions take it upon themselves to make sure all customer deposits are insured, even those beyond the FDIC coverage limit. “Among the some 300 institutions represented at FDIC outreach meetings . . . approximately one in ten indicated that they had purchased excess coverage.”⁹⁹

Credit unions use a similar system for insuring excess deposits. Like the FDIC, the National Credit Union Administration (NCUA) operates the National Credit Union Share Insurance Fund (NCUSIF) to protect its member institutions’ deposits. This fund, however, is supplemented by private insurers. One of the largest private insurers is American Share Insurance (ASI), which provides primary and excess deposit insurance exclusively to credit unions. Excess deposit insurance from ASI is often used to insure deposits of up to \$250,000 beyond the NCUA coverage limit of \$250,000 for a total coverage of \$500,000.

To protect itself against losses, ASI monitors the soundness and risk taking of its member credit unions. As described in an FDIC report, “American Share Insurance Company, a private primary and excess deposit insurer to credit unions, requires monthly financial reports from its members, examines them regularly, and supervises them closely.”¹⁰⁰ As a private organization, ASI has more resources and expertise than federal agencies such as the NCUA for monitoring its credit union clients. For example, “NCUA conducts on-site examinations at 15% of federally insured credit unions annually, while ASI is on-site at 65% of its credit unions each year.”¹⁰¹ ASI is sometimes able to provide its services at a discount relative to FDIC insurance. According to the *Chicago Tribune*, “Craig Bradley, president of Kane County Teachers Credit Union in Illinois, said his organization switched to American Share in the early 1980s because the federal credit union deposit insurance fund was charging higher premiums.”¹⁰² The firm’s website advertises that “ASI is owned by our

insured credit unions . . . the corporation insures over 1.2 million credit union members, and no member has ever lost money in an ASI-insured account!”¹⁰³

State-level cooperatives provide another example of private insurance. Massachusetts, for example, has a set of state-level deposit insurance funds that operate like the FDIC but are privately administered. “Massachusetts state law requires excess deposit insurance for the customers of state cooperative banks, savings banks, and state-chartered credit unions.”¹⁰⁴ There are three main providers in the state: the Co-operative Central Bank, which insures cooperative banks; the Deposit Insurance Fund, which insures savings banks; and the Massachusetts Share Insurance Corporation, which insures credit unions. Although insurance for excess deposits is not required in most states, reducing the level of FDIC coverage would allow consumers to choose the level of insurance that is best for them through state-level providers, as is done in Massachusetts, or through private firms such as ASI.

Some opponents of private deposit insurance argue that the failure of the Ohio Deposit Guarantee Fund (ODGF) in 1985 proves state-level private deposit insurance is unreliable, but there is much confusion over whether the ODGF was, in practice, a private system. Alexander, for example, notes that although the ODGF was not intended to be an agency of the government, it was established by legislation to promote the public interest, and its structure, functions, and guarantees are specified in statute.¹⁰⁵ Although private in name, the ODGF was operated as a public agency, like the FDIC and FSLIC, that lacked the proper incentive structure of a truly private deposit insurance system. As Gattuso notes, “the ‘private’ Ohio insurance fund, far from being an example of unregulated private enterprise, was severely weakened by state regulation—indeed, it was modeled closely on the federal insurance corporations rather than normal private insurance systems.”¹⁰⁶ Like the FSLIC, the ODGF was bankrupted by the bank failures of the 1980s S&L crisis. The state government chose to guarantee its losses which were ultimately borne by Ohio taxpayers. A similar state-level bailout took place for a state-level deposit insurance fund in Maryland. As the FDIC describes, “Ohio and Maryland S&L failures helped kill state deposit insurance funds.”¹⁰⁷

To some degree, depositors are able to circumvent the limits of deposit insurance coverage through programs like the Certificate of Deposit Account Registry Service (CDARS). CDARS allows each individual depositor to insure millions of dollars in deposits by splitting her total deposits among accounts at

multiple banks, each of which is insured by the FDIC up to its \$250,000 limit.¹⁰⁸ If the coverage limit on FDIC insurance is substantially lowered, some depositors would likely turn to services such as CDARS, while others would move to private insurance or other programs. Large depositors would have the option of earning a higher return on their uninsured accounts or earning a lower return by paying a fee to protect against potential losses.

Private Insurance without Mandated Coverage

A final recommendation for improving the deposit insurance system in the United States would combine the extreme cases of the previous two recommendations by lifting the mandate on deposit insurance completely and privatizing deposit insurance entirely. Although it is impossible to predict the response from private firms in the market or what institutional features would emerge, we can identify at least a few possibilities by looking to examples from the past.

As previously discussed, prior to the FDIC, several US states instituted their own state-level deposit insurance systems. Some states had schemes resembling the FDIC, whereas others relied more heavily on banks to self-regulate with a mutual guarantee system. During the antebellum period, for example, Indiana, Ohio, and Iowa had bank-liability schemes that largely resembled clearinghouses, run by a board of directors, whose members were appointed by individual banks.¹⁰⁹ According to Weber, “[T]he board had the power to close a branch, limit a branch’s dividend payments, and restrict the ratio of its loans and discounts to capital.”¹¹⁰ Each member was mutually responsible for some of the bank’s liabilities. As Calomiris notes, Indiana’s system established strong supervisory authority that placed responsibility on the banks themselves, which gave them an incentive to implement it properly.¹¹¹ Some state-level examples exist today such as the programs in Massachusetts. As discussed previously, public state-level deposit insurance programs were historically less effective than their private counterparts.

In many states, clearinghouses emerged to facilitate transactions among banks and reduce the cost of clearing checks.¹¹² Clearinghouses in the nineteenth century resembled the clublike model of banking associations that provide deposit insurance in private systems, such as Germany’s current system. Members had to satisfy certain rules of the clearinghouse, and failure

to do so resulted in disciplinary actions such as fines or expulsion.¹¹³ When runs occurred, the clearinghouse transformed into a quasi-deposit insurance scheme, “uniting the member banks in a hierarchical structure topped by the Clearinghouse Committee.”¹¹⁴ As Gorton and Mullineaux note, “individual banks had an incentive to lower the probability of other members’ failures because of the information externalities.”¹¹⁵

The most famous example of an effective clearinghouse is the Suffolk Bank of New England. Rather than forming from a banking organization, the Suffolk Bank was a private bank that evolved into a bankers’ bank. It provided note-clearing services but also acted as a lender of last resort. Members were required to keep an interest-free deposit of 2 percent of capital at the Suffolk Bank, and if they ran a negative clearing position, they could borrow in the form of an overdraft. Instead of returning the bank’s notes, the Suffolk Bank would hold on to them and return them as the member bank paid off the loan.¹¹⁶ Rolnick, Smith, and Weber show that New England banks fared better during the banking Panic of 1837 and claim this outcome was due to the note-clearing and lender-of-last-resort services provided by the Suffolk Bank.¹¹⁷ In the years leading up to the Civil War, the Suffolk Bank faced increasing competition from other clearinghouses and bankers’ banks, most notably the Bank of Mutual Redemption. These regional clearing systems ultimately met a political end from “the suspension of specie payments in December 1861 and the passage of the National Banking System Act in 1863 with the resulting elimination of the bank-note issue of state banks.”¹¹⁸

In addition to the benefits created through bank clearinghouses, other institutional mechanisms often developed to protect depositors and deter bank risk. One such mechanism described by White was the requirement that bank managers post performance bonds, often in the amount of multiple years’ salary, which would be forfeited in the case that the bank became insolvent.¹¹⁹ Many banks have recently adopted a similar tool, “clawback” clauses, that, in certain instances, allow the bank to reclaim salaries or bonuses paid to bank executives, but these mechanisms are not generally used to cover creditors’ losses. “Such clauses are generally triggered by ethics violations rather than [by] performance alone.”¹²⁰ Another pre-FDIC institutional feature adopted in several states was double or unlimited liability for bank stockholders.¹²¹ According to Calomiris, “[S]tockholders were liable for bank losses up to twice their capital contribution and officers and directors of failed banks were

presumed guilty of fraud until they proved otherwise. If they failed to prove their innocence, their liability was unlimited.”¹²² Double liability resulted in actual losses to creditors being extremely small.¹²³

Although it may be hard to imagine gaining the political will to disband the FDIC in the United States, it is not hard to imagine how a developed economy could operate without a government deposit insurance system. Many countries have evolved sophisticated financial markets without the need for government deposit insurance. In 1970, only five countries had explicit deposit insurance systems, and in 1985 there were still only nineteen countries with deposit insurance systems, compared to the 112 countries that have such systems today.¹²⁴ Australia, Hong Kong, and Singapore all adopted deposit insurance as recently as 2004 and appear to have done so mostly in the face of political pressure rather than for any perceived benefit to the financial system. The Australian government, for example, worried that “[i]f we do not [insure deposits], Australian financial institutions could, over time, find it more difficult to borrow in international financial markets. They would become uncompetitive in attracting funds.”¹²⁵ As discussed earlier, New Zealand adopted but then abolished its system of deposit insurance. Although its financial system is small relative to the US system, New Zealand provides a current example of both a financial system in a developed economy without the need for a deposit insurance program and, perhaps more important, a government that was able to recognize the harms created by deposit insurance and summon the political will to abandon its existing deposit insurance system.

Evidence from other developed nations and historical experiences in the United States suggests ending compulsory federal deposit insurance is both reasonable and practical. In the past, a variety of private mechanisms emerged to protect depositors and maintain stability in the banking system. The fact that financial systems in other developed nations functioned efficiently without deposit insurance in the recent past and even today indicates that eliminating deposit insurance is a realistic possibility for the United States as well.

Political Impact

The prospects of privatizing the administration of deposit insurance, lowering the level of coverage, or ending the FDIC entirely would require tremendous shifts in the political and regulatory environments. There would surely

be serious political ramifications that might advance or impede competition and stability in the banking system. Even in the case that private firms are able to provide insurance for those who demand it, banks will lose the implicit subsidy they currently receive in terms of lower costs of borrowing. They may look to replace this advantage with other forms of rent-seeking and political protections. One could imagine that in the absence of FDIC insurance, Congress might offer even broader protections for banks and financial firms in times of economic turmoil. For example, Dodd-Frank enshrined the Federal Reserve's too big to fail policy by specifying the conditions under which banks can receive last-resort loans and specifying the process by which non-bank financial firms are designated as systemically important. Ending FDIC deposit insurance might create another opportunity for banks to expand their implicit and explicit subsidies.

Even with the threat of adverse political reactions, however, there are reasons that ending the FDIC might still be worthwhile. First, there is always a threat that Congress will grant banks new privileges. Banks will continue to lobby for subsidies and protections regardless of the existence of government deposit insurance, as they did before, during, and after the financial crisis. Second, if private firms are able to provide insurance to depositors, then these insurers might be harmed by additional bank subsidies. In this case, they might provide a counterbalance to the lobbyists of the banking industry and prevent further subsidies. Third, it is possible that future financial crises would be less severe in the absence of government deposit insurance, as demonstrated by the empirical evidence discussed in the previous sections. If so, banks may have less justification to call for government assistance. It is far from clear that any of these forces would, in fact, emerge or what the magnitude of their effects would be, but it is clear that ending the FDIC would provide a marginal step in the direction of greater financial stability and less government interference in the banking industry.

There are several examples of other industries that have been successfully deregulated in the past that provide hope for prospective changes to the deposit insurance system. Many industry deregulations have proven resounding successes, such as the Airline Deregulation Act of 1978, the reforms to the Interstate Commerce Commission and the Motor Carrier Act of 1980 that deregulated the trucking industry, and the breakup of AT&T's long-distance monopoly followed by the Telecommunications Act of 1996. Even the

deregulation of the banking industry from the late 1970s through the 1990s was successful. For example, the Depository Institutions Deregulation and Monetary Control Act (DIDMCA), passed in 1980, was a landmark piece of legislation “to change some of the rules under which U.S. financial institutions [had] operated for nearly half a century.”¹²⁶ This legislation deregulated the interest rate ceilings established by the Federal Reserve in 1933 through Regulation Q.¹²⁷ As the Federal Reserve Bank of Chicago notes, “in many cases these rules had been made obsolete by changes in the economy, the functioning of credit markets, technology, consumer demands for financial services, and the competitive environment.” Similarly, the Garn–St. Germain Depository Institutions Act of 1982 took steps to deregulate S&Ls, such as allowing for new types of interest-paying accounts, allowing for overdraft loans, and expanding S&L investment powers.¹²⁸ The Gramm-Leach-Bliley Act of 1999 “repealed sections 20 and 32 of the Glass-Steagall Act, which had prevented commercial banks from being affiliated with investment banks.”¹²⁹ Despite the flood of rules, restrictions, and regulations created pursuant to Dodd-Frank, the major provisions repealed by those Acts have not been reenacted.¹³⁰

Critics of deregulation might object that although the historical evidence does show that increasing government deposit insurance (in terms of the amount covered or the level of government involvement) has tended to decrease stability in the banking system (in terms of more bank failures and financial crises), there is limited historical evidence that reducing government deposit insurance will increase stability. In some sense, this point is correct. Despite the fact that several countries such as Germany, Australia, Hong Kong, and Singapore adopted deposit insurance for political rather than economic reasons, New Zealand may be the only case in which government deposit insurance was actually repealed. Although the historical evidence strongly indicates that more government deposit insurance decreases stability in the banking system, it may be possible that some other factor could prevent such an increase in stability from occurring. For example, private companies might be slow to expand their offerings of deposit insurance, leaving many savers exposed to bank risk. Legislation or simple market failure might prevent banks from creating the types of mutual insurance systems that successfully minimized systemic risk prior to the creation of the Federal Reserve. It could even be the case that if government deposit insurance were repealed, banks might lobby for even greater subsidies and bailout guarantees than they

have today. However, it is far from obvious that any of these objections will come to pass or that they would hinder the net benefits of reducing government deposit insurance.

There are several reasons based on economic theory and real-world evidence to think that reducing deposit insurance will help stabilize the banking system. First, one can always object that some new legislation or policy will prevent this deregulation from being effective, but how likely are such concerns? It would be no small task for supporters of deregulation to summon the political will to roll back FDIC insurance. If such monumental political change were to occur, then the threat of reactionary policies such as bailouts and bank protections seems much less likely. Similar “What if?” objections were surely made to every deregulation, and in each case, those worries were proven incorrect. It is possible, at least in theory, that breaking up the AT&T monopoly could have led to a consolidated industry with little competition and strong barriers to entry, but instead a vibrant communications industry has emerged today.¹³¹ It is possible that deregulating the trucking industry might have caused transportation prices to increase, but instead they have greatly fallen. It is possible that deregulation might have given airlines the ability to price as oligopolies, especially given the small number of firms at the time, but instead, competition expanded and prices fell to the point that now air travel is affordable to more Americans than ever.¹³² Critics of deregulation always argue that the final outcomes are unknown and that there could be unintended consequences. But these objections are often based on intuitions or gut feelings rather than any evidence that such negative events should be expected in the future. The evidence from previous deregulations does not support such fears.

Second, because we know that increasing government deposit insurance decreases banking stability, it is logical to assume that decreasing government deposit insurance will lead to increased stability. This simple theory of an inverse relationship between government insurance and stability does not account for many outside factors that might interfere with banking stability, but it is consistent with the notion of Occam’s razor that, as Simon describes, a good theory should “make no more assumptions than necessary to account for the phenomena.”¹³³ Unless strong evidence is found that outside factors will, in fact, prevent a decrease in government deposit insurance from creating an increase in stability, then these factors should not be included in our analysis.

The simple theory that higher government insurance reduces stability and lower government insurance increases stability is consistent with the historical evidence. Any theory indicating that reducing deposit insurance will *not* lead to greater stability must be based on special assumptions beyond the evidence discussed in this chapter.

It is also important to remember that ending *government* deposit insurance does not mean ending *all* deposit insurance. Private deposit insurance is widely available today and would surely become more common in the absence of government alternatives. As previously discussed, firms such as ASI already insure billions of dollars in deposits, often at rates that are comparable to or even lower than government insurance. An FDIC study found that roughly 10 percent of banks surveyed already provide private insurance on any deposits in excess of the FDIC limit.¹³⁴ In addition, the widespread availability of private deposit insurance is likely to quiet any cries for government intervention from the depositor side. Thus, calls from the big banks for bailouts or subsidies will hopefully be recognized as corporate welfare rather than a public benefit. Banks always have and always will seek special protections from the government, but ending FDIC insurance would be an important step in reducing cronyism in the United States.

CONCLUSION

Partly or fully privatizing the FDIC system of deposit insurance would increase efficiency and stability in the US banking system. Most laymen and economists alike believe FDIC deposit insurance increases stability by preventing bank runs. However, the widespread consensus in empirical studies is that the benefit of fewer bank runs is far outweighed by the cost of moral hazard, which increases individual bank failures and financial crises. Considering this evidence, the United States should attempt to improve banking stability by moving to a partly or fully privatized deposit insurance system.

This chapter offers three potential paths for improving the current system of FDIC deposit insurance. First, because international evidence indicates privately administered deposit insurance systems are more stable than government-administered systems, deposit insurance could be run by a private entity or an organization of private banks rather than by the FDIC. Second, empirical studies find that stability can be improved by reducing the level of

mandatory deposit insurance coverage, allowing supplemental insurance to be provided through private means. Third, combining these recommendations, the United States could move to a fully privatized deposit insurance system with no required coverage. History suggests that alternative mechanisms would emerge to insure depositors and minimize bank risk. These changes could be instituted partly or in full, alone or in conjunction. Prior successful deregulations in banking and other industries indicate that such changes are possible and practical. Any changes that encourage banks to bear a greater burden of their own risk exposures will discourage excessive risk-taking activities and lessen the need for future bailouts. We hope future studies will explore these options in further detail to judge which will be the most efficient and politically feasible to be implemented in the United States.

NOTES

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1. Crotty, "Structural Causes of the Global Financial Crisis"; Bhidé, "Accident Waiting to Happen."
2. Calomiris, "Financial Innovation, Regulation, and Reform"; Friedman, "Capitalism and the Crisis."
3. Diamond and Dybvig, "Bank Runs, Deposit Insurance, and Liquidity," has more than 1,000 citations and is among the top 25 most influential papers in economics, according to the Social Sciences Citation Index.
4. As Thomas Sargent describes the model, "People don't initiate bank runs because they trust that their deposits are safely insured. And a great thing is that it ends up not costing the government anything to offer the deposit insurance!" (Rolnick, "Interview with Thomas Sargent," 31). Hogan and Luther argue the Diamond and Dybvig ("Bank Runs, Deposit Insurance, and Liquidity") and other actuarially fair models of insurance are not appropriate for analyzing the FDIC. See Hogan and Luther, "Implicit Costs of Government Deposit Insurance."
5. We do not discuss the extended impact that changes to the deposit insurance system would have on other types of financial regulation. Historically, bank capital regulation was created to counteract the negative effects of deposit insurance by limiting the risk of moral hazard. Improving deposit insurance would therefore eliminate one of the primary justifications for most banking regulation, making such regulations superfluous. In the present day, however, regulators have expanded the scope and goals of financial regulation. Privatizing deposit insurance would surely involve additional regulations for this new section of the financial industry. It is therefore unclear whether reforming the deposit insurance system would lead to a net gain or reduction in the overall level and costs of financial regulation.

6. See FDIC, *Brief History of Deposit Insurance*, 20–27; Bradley, “Historical Perspective on Deposit Insurance,” 1–4.
7. See Calomiris and Haber, *Fragile by Design*. They argue that, contrary to this common perception, the introduction of FDIC insurance did not play a causal role in ending bank runs in the Great Depression since “the banking crisis of 1932–33 ended months before the establishment of FDIC insurance” (190).
8. Although the bank failures of this period are often blamed on the supposedly unstable nature of banking, instability in the banking system was actually caused by ill-conceived banking regulations such as restrictions on branch banking. See Champ, Smith, and Williamson, “Currency Elasticity and Banking Panics”; Calomiris and White, “Origins of Federal Deposit Insurance.”
9. See Friedman and Schwartz, *Monetary History of the United States*, 676; FDIC, *Brief History of Deposit Insurance*, 21; Bernanke, “Money, Gold, and the Great Depression.”
10. FDIC, *Brief History of Deposit Insurance*, 22.
11. *Ibid.*, 27.
12. *Ibid.*, 30.
13. Even before government deposit insurance was introduced at the federal level, economists and politicians alike predicted its negative consequences. As Christine Bradley describes the Banking Act of 1933, “President Roosevelt was against a government guarantee of bank deposits. He was not alone: bankers, including the American Bankers Association, opposed an insurance program, maintaining that such a program rewarded inept banking operations” (Bradley, “Historical Perspective on Deposit Insurance,” 5).
14. FDIC, *Brief History of Deposit Insurance*, 31.
15. Bradley, “Historical Perspective on Deposit Insurance,” 9.
16. Hogan and Luther, “Explicit Costs of Government Deposit Insurance,” 153–54.
17. Calomiris and Haber, *Fragile by Design*, 190.
18. Golembe, “Deposit Insurance Legislation of 1933”; Calomiris and White, “Origins of Federal Deposit Insurance”; White, “Legacy of Deposit Insurance”; Bradley, “Historical Perspective on Deposit Insurance”; Dehejia and Lleras-Muney, “Financial Development and Pathways of Growth,” 239–72; Kroszner and Melick, “Lessons from the U.S. Experience.”
19. Calomiris and White, “Origins of Federal Deposit Insurance,” 158.
20. Cebula and Belton, “Empirical Note on the Impact of Federal Deposit Insurance,” 281.
21. Shiers, “Deposit Insurance and Banking System Risk,” 359.
22. Saltz, “FDIC Coverage on Bank Failures,” 71.
23. Saltz, “Federal Deposit Insurance Coverage and Bank Failures,” 3.
24. Kane, *S&L Insurance Mess*, 36.
25. Curry and Shibut, “Cost of the Savings and Loan Crisis,” 33.
26. Barth, *Great Savings and Loan Debacle*, 1.
27. Curry and Shibut, “Cost of the Savings and Loan Crisis,” 28.
28. *Ibid.*, 33.
29. Kane, *S&L Insurance Mess*; Barth, *Great Savings and Loan Debacle*; Cebula, “Impact of Federal Deposit Insurance.”

30. Dotsey and Kuprianov, "Reforming Deposit Insurance," 3.
31. Benston and Kaufman, "FDICIA after Five Years."
32. *Ibid.*, 144.
33. *Ibid.*, 147–48.
34. Balla, Prescott, and Walter, "Did the Financial Reforms of the Early 1990s Fail?," 2.
35. *Ibid.*, 4.
36. *Ibid.*
37. Kaufman, "FDIC Losses in Bank Failures."
38. Admati and Hellwig, *Bankers' New Clothes*, 129, 136–39, 176–88.
39. *Ibid.*, 136.
40. *Ibid.* Admati and Hellwig primarily focus on capital rules. Their argument is that because deposit insurance creates an incentive for moral hazard, capital regulations must be used to prevent banks from taking excessive risks, and these capital requirements should be much higher than the current levels. Our proposals to reform deposit insurance to reduce moral hazard would presumably have similar effects.
41. Hogan and Luther, "Implicit Costs of Government Deposit Insurance," 9.
42. Demirgüç-Kunt and Detragiache, "Does Deposit Insurance Increase?," 1386.
43. Barth, Caprio, and Levine, "Bank Regulation and Supervision," 237.
44. Demirgüç-Kunt and Huizinga, "Market Discipline and Deposit Insurance," 397, 393.
45. Demirgüç-Kunt and Detragiache, "Does Deposit Insurance Increase?," 1373.
46. Demirgüç-Kunt and Kane, "Deposit Insurance around the Globe," 193.
47. Demirgüç-Kunt and Huizinga, "Market Discipline and Deposit Insurance," 399.
48. Demirgüç-Kunt and Detragiache, "Determinants of Banking Crises," 81.
49. Demirgüç-Kunt and Detragiache, "Does Deposit Insurance Increase?," 1373.
50. Demirgüç-Kunt and Kane, "Deposit Insurance around the Globe," 184–85.
51. Barth, Caprio, and Levine "Bank Regulation and Supervision," 237.
52. Hohohan and Klingebiel, "Controlling the Fiscal Costs of Banking Crises," 1.
53. Demirgüç-Kunt and Kane, "Deposit Insurance around the Globe," 187.
54. Cecchetti and Krause, "Deposit Insurance and External Finance," 531.
55. Cull, Senbet, and Sorge, "Deposit Insurance and Financial Development," 73.
56. Demirgüç-Kunt and Kane, "Deposit Insurance around the Globe," 192.
57. Carr, Mathewson, and Quigley, "Stability in the Absence of Deposit Insurance," 1156.
58. Mondschean and Opiela, "Bank Time Deposit Rates," 179.
59. Chernykh and Cole, "Does Deposit Insurance Improve?," 388.
60. Beck, "Deposit Insurance as Private Club," 711.
61. Calomiris, "Is Deposit Insurance Necessary?," 283.
62. Thies and Gerlowski, "Deposit Insurance," 677.

63. Weber, "Bank Liability Insurance Schemes before 1865," 1.
64. White, "Deposit Insurance," 5.
65. Calomiris, "Is Deposit Insurance Necessary?," 286.
66. Calomiris, "Deposit Insurance."
67. Calomiris, "Is Deposit Insurance Necessary?," 288.
68. Dehejia and Lleras-Muney, "Financial Development and Pathways of Growth," 265.
69. Hooks and Robinson, "Deposit Insurance and Moral Hazard," 833.
70. Wheelock, "Deposit Insurance and Bank Failures"; Wheelock and Kumbhakar, "Which Banks Choose Deposit Insurance?"; Wheelock and Wilson, "Explaining Bank Failures."
71. Wheelock, "Deposit Insurance and Bank Failures," 530.
72. Spong and Regher, "Kansas Banking in the 1930s," 108.
73. Gorton, "Clearinghouses and the Origin of Central Banking," 277.
74. Macey and Miller, "Double Liability of Bank Shareholders," 34.
75. Dowd, "Deposit Insurance."
76. Demirgüç-Kunt, Kane, and Laeven, "Deposit Insurance Database," 37–38.
77. Demirgüç-Kunt, Karacaovali, and Laeven, "Deposit Insurance around the World," 60–64.
78. Esisuisse, *Articles of Association*, 1.
79. See Federal Assembly of the Swiss Confederation, "Federal Act on Banks and Savings Banks," art. 37a and art. 37h.
80. *Ibid.*
81. See *ibid.*, and art. 37i.
82. Esisuisse, "2013 Annual Report," 78.
83. *Ibid.*, 91.
84. Fondo Interbancario di Tutela dei Depositi (Interbank Deposit Protection Fund) Institution. Retrieved August 2016. https://www.fitd.it/Chi_Siamo/Istituzione.
85. Banca D'Italia, "Banking Act, Legislative Decree n.385" (translated from Italian), September 1, 1993, art. 96.
86. Fondo Interbancario.
87. Il Presidente Della Repubblica Italiana, "Legislative Decree n49 of 24th March 2011" (translated from Italian), March 24, 2011.
88. Fondo Interbancario, art. 11, art. 14.
89. Beck, "Deposit Insurance as Private Club," 712–13.
90. Bankenverband, "By-laws of the Deposit Protection Fund."
91. Demirgüç-Kunt, Kane, and Laeven, "Deposit Insurance Database," 34.
92. Beck, "Deposit Insurance as Private Club," 714.
93. Reserve Bank of New Zealand, "Release of the Reserve Bank."
94. Hoskin and Woolford, "Primer on Open Bank Resolution," 10.

95. Fiennes, "Handling Bank Failures."
96. Bradley, "Historical Perspective on Deposit Insurance," 5n47.
97. Isaac, "Prologue to Federal Deposit Insurance Corporation"; FDIC, *Brief History of Deposit Insurance*, iv.
98. FDIC, "Options Paper," 48.
99. Ibid.
100. Bradley and Valentine, "Privatizing Deposit Insurance," 26.
101. Cooke, "ASI Firing Back."
102. Allison, "Private Deposit Insurance Lives On."
103. ASI, Program Details.
104. NCUA, "Report to the Congress," 9.
105. Alexander, "Ohio Deposit Guarantee Fund," 431–32.
106. Gattuso, "Ohio Banking Crisis."
107. FDIC, "S&L Crisis."
108. CDARS, "How CDARS Works."
109. Calomiris, "Deposit Insurance," 10–30.
110. Weber, "Bank Liability Insurance Schemes before 1865," 5.
111. Calomiris, "Deposit Insurance," 16.
112. Gorton and Mullineaux, "Joint Production of Confidence," 460.
113. Ibid., 461.
114. Gorton, "Clearinghouses and the Origin of Central Banking," 280.
115. Gorton and Mullineaux, "Joint Production of Confidence," 464.
116. Weber, "Bank Liability Insurance Schemes before 1865."
117. Rolnick, Smith, and Weber, "Suffolk Bank and the Panic of 1837." In addition to the regulatory function of monitoring member banks, the Suffolk Bank also promoted economic stability by acting as a check on overexpansive monetary policy. Young and Dove examined state-level data on circulations and reserves from the Suffolk Banking System (1825–1858) and find a cointegrating relationship between state-level circulation and reserves, indicating that the Suffolk system was able to prevent in-concert overexpansions of banknotes. See Young and Dove, "Policing the Chain Gang."
118. Lake, "End of the Suffolk System," 205.
119. White, "Rethinking the Regulation of Banking," 6.
120. Hogan and Luther, "Explicit Costs of Government Deposit Insurance," 166.
121. Weber, "Bank Liability Insurance Schemes before 1865," 5.
122. Calomiris, "Deposit Insurance," 16.
123. Macey and Miller, "Double Liability of Bank Shareholders," 58.
124. Demirgüç-Kunt, Kane, and Laeven, "Deposit Insurance Database," table A.1.2.
125. Prime Minister of Australia, "Global Financial Crisis."

126. Federal Reserve Bank of Chicago, *Leveling the Playing Field*, 7.
127. *Ibid.*
128. *Ibid.*
129. White, "The Gramm-Leach-Bliley Act of 1999," 942.
130. Some economists, including a group of free-market economists known as the Shadow Financial Regulatory Committee, argue that section 619 of Dodd-Frank, known as the "Volcker Rule," has effectively reinstated the separation of commercial and investment banking, a primary component of the Glass-Steagall Act; see Acharya and Richardson, "Implications of the Dodd-Frank Act"; SFRC, "Glass-Steagall and the Volcker Rule." Others, however, argue that a stronger, modernized version of Glass-Steagall should be reenacted today; see Merkley and Levin, "Dodd-Frank Act Restrictions."
131. Jerry Hausman, for example, estimates that regulations delayed the introduction of new telecommunications services, which reduced consumer welfare by billions of dollars per year; see Hausman, "Valuing the Effect of Regulation." Hausman and Gregory Sidak argue that further welfare gains will be possible by moving toward "the end of regulation" in telecommunications; see Hausman and Sidak, "Telecommunications Regulation."
132. See Winston, "Economic Deregulation"; Crandall and Ellig, *Economic Deregulation and Customer Choice*; Winston, "U.S. Industry Adjustment to Economic Deregulation"; and Crandall, *Extending Deregulation*.
133. Herbert A. Simon, "Rational Decision Making in Business Organizations," *American Economic Review* 69, no. 4 (1979): 495.
134. FDIC, "2000 Options Paper," 48.

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