MERCATUS ON POLICY

Deposit Insurance Is Not Free

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Economists are apt to point out that there is no such thing as a free lunch: Someone has to pick up the tab. Surprisingly, one common justification for government-provided deposit insurance maintains that it is a free lunch: No one has to pay for it.

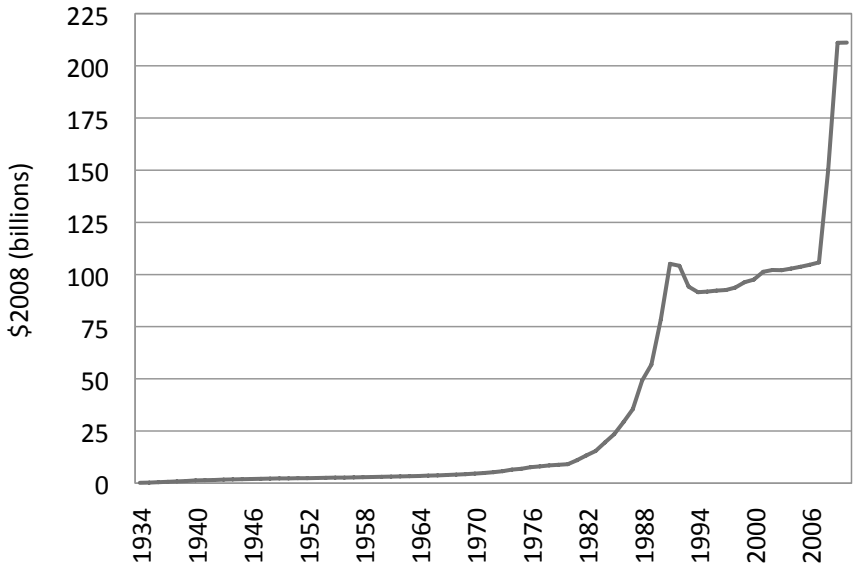
In this policy brief we review the theoretical argument for government-provided deposit insurance and compare it to the actual costs observed under the Federal Deposit Insurance Corporation (FDIC) in the United States. Contrary to theoretical arguments, deposit insurance is not free in practice. Moreover, we offer explanations for the increasing cost of government-provided deposit insurance observed over time.[1] We propose that economists and policymakers must consider the real costs when evaluating government-provided deposit insurance.

THE THEORETICAL ARGUMENT FOR GOVERNMENT-PROVIDED DEPOSIT INSURANCE

In their influential article "Bank Runs, Deposit Insurance, and Liquidity," Douglas W. Diamond and Philip H. Dybvig defend government-provided deposit insurance as a costless solution to the problem of bank runs.[2] The Diamond–Dybvig model provides a simple mathematical framework for analyzing the phenomenon of bank runs. Individuals deposit funds at a bank, which channels these funds to productive ventures. The bank agrees upfront to pay depositors a positive rate of return for each period their funds are left with the bank.[3] However, some fraction of depositors will find it necessary to withdraw their funds from the bank before the bank's investments have generated returns.

The bank pays a positive return on any early withdrawals, but its managers expect to maintain some capital investments to distribute to their patient depositors in the future. As long as the fraction of depositors showing up to withdraw their funds early is smaller than anticipated, the bank is able cover all commitments to depositors. If the fraction of early withdrawals exceeds some crucial level, however, the bank becomes insolvent since its commitments to depositors exceed the limited capital available to the bank before its productive

FIGURE 1. CUMULATIVE TOTAL EXPENSES FOR DEPOSIT INSURANCE FUND, 1934-2011 (BILLION $2008)



Source: FDIC 2011 Annual Report

ventures have been completed. If the bank is in danger of failing, even depositors who would prefer to leave their deposits in the bank until a future date will show up early to redeem their deposits, which causes a run on the bank. This is especially dangerous since only the expectation that the bank may fail can lead to a bank run. Thus, even safe, solvent banks are subject to bank runs.

Diamond and Dybvig proffer government-provided deposit insurance as a solution to the problem of bank runs. Unlike a private bank, a government can raise revenue at any time through the levy of taxes. If a bank run occurs, the government can tax those impatient depositors who withdrew their deposits early and use the money to ensure that patient depositors are paid. The fact that patient depositors will be paid even in the case of a run removes their incentive to run in the first place.[4] As a result, bank runs do not occur and the government need not pay any depositors. In the model, the mere commitment to pay depositors in the case of a bank run is sufficient to prevent bank runs. Hence, Diamond and Dybvig conclude that government-provided deposit insurance can be provided at no cost.

Thanks to Diamond and Dybvig, many economists have come to see government-provided deposit insurance as a free lunch. Their original article has garnered more than 1,000 citations in academic journals, is listed among the 25 most influential articles in economics, and forms the basis of discussion on deposit insurance at the undergraduate and graduate level.[5] There is only one problem with the narrative of costless government-provided deposit insurance: Government-provided deposit insurance in practice differs significantly from that proposed in theory.

THE COST OF GOVERNMENT-PROVIDED DEPOSIT INSURANCE

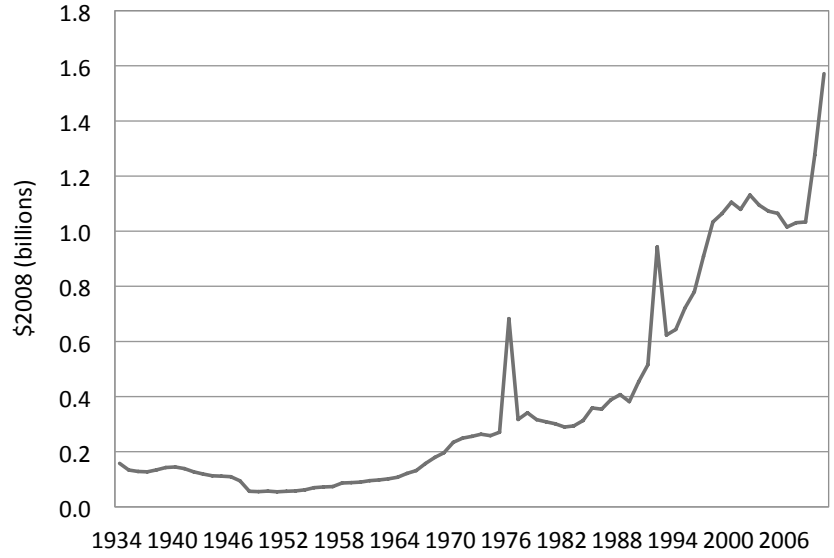
In practice, government-provided deposit insurance is not a costless solution. The government must expend real resources to provide deposit insurance. Total expenses for the FDIC's Deposit Insurance Fund have averaged $2.67 billion each year since its inception.[6] A total of $208.33 billion has been spent to date—with more than half (51.37 percent) of all expenses incurred in the last 10 years.[7] Figure 1 presents cumulative total expenses for the Deposit Insurance Fund, 1934–2011 (billion $2008).

Over 90 percent of the total cost of deposit insurance can be explained by two factors: (1) administrative and operating expenses and (2) net disbursements to depositors of failed or assisted banks.[8] Administrative and operating expenses total $32.15 billion (15.43 percent of total expenses). Net disbursements total $156.86 billion (75.29 percent of total expenses).

Administrative and operating expenses have been growing rapidly in recent years. From 1934 to 1974, administrative and operating expenses grew at an average annual rate of 1.24 percent, averaging just $0.12 billion per year over the period. Administrative and operating expenses grew at an average annual rate of 4.85 percent from 1974 to 2011. In 2011, annual administrative and operating expenses totaled $1.56 billion. Figure 2 shows annual administrative and operating expenses for the Deposit Insurance Fund, 1934–2011 (billion $2008).

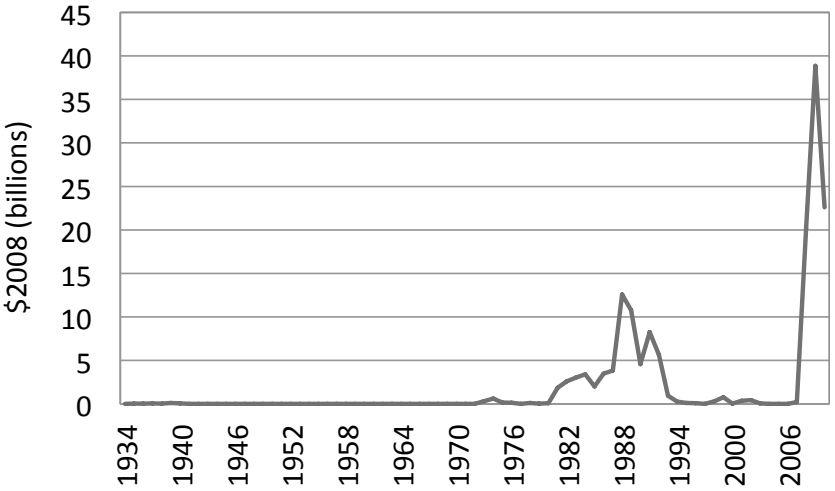
Why are administrative and operating expenses on the rise? Part of the growth in administrative and operating expenses can be explained by increases in population and real per-capita wealth. Total domestic deposits held in FDIC-insured

FIGURE 2. ANNUAL ADMINISTRATIVE AND OPERATING EXPENSES FOR DEPOSIT INSURANCE FUND, 1934-2011 (BILLION $2008)



Source: FDIC 2011 Annual Report

FIGURE 3. NET DISBURSEMENTS UNDER FDIC, 1934–2011 (BILLION $2008)



Source: FDIC 2011 Annual Report

institutions increased from $643.66 billion in 1934 to $8,401.23 billion in 2011. Additionally, the maximum amount covered under the FDIC has increased over the period. Congress has raised the nominal maximum amount covered by FDIC insurance seven times since its inception. In 1934, the inflation-adjusted maximum amount covered under the FDIC was just $40,168; FDIC-insured deposits totaled $290.42 billion and roughly 45 percent of all domestic deposits held in insured banks were covered. In 2011, the maximum amount covered under the FDIC was $239,234; FDIC-insured deposits totaled $6,678.59 billion and around 79 percent of domestic deposits held in insured banks were covered. These figures suggest that, as the size of the fund increases, the costs of administering the fund similarly rise.

The biggest cost of government-provided deposit insurance is disbursements to the deposit holders of failed or assisted banks. When a bank fails, the FDIC pays its insured depositors out of the Deposit Insurance Fund and recovers any remaining assets. Net disbursements equal total disbursements less the value of assets recovered. Figure 3 shows net disbursements under the FDIC, 1934–2011 (billion $2008).

Net disbursements vary significantly from year to year.[9] Whereas annual net disbursements average $2.01 billion, the median is only $0.04 billion. Indeed, the bulk of disbursements (96 percent) are clustered in just two periods: the savings and loan crisis (1981–1994) and the financial crisis (2007–2011).[10] During the savings and loan crisis, 1,464 banks closed at an

average rate of 9.38 banks per month. Net disbursements averaged $4.72 billion per year over the period—ranging from a high of $12.59 billion in 1988 to a low of $0.26 billion in 1994. Each bank failure resulted in an average net disbursement of $0.04 billion. In the most recent financial crisis, 414 banks failed at an average rate of 8.63 per month. Net disbursements were significantly higher from 2007 to 2011. Roughly $22.31 billion was disbursed each year on net—more than $0.21 billion for each failed bank.[11]

CONCLUSION

Contrary to the view put forward by Diamond and Dybvig, government-provided deposit insurance is not free. The reason is straightforward: Government-provided deposit insurance in practice differs significantly from that proposed in theory. First, the FDIC must expend real resources administering and operating the Deposit Insurance Fund. Second, the FDIC is committed to bailing out depositors whenever a bank goes bust regardless of whether the failure was the result of a bank run. Economists and policymakers would do well to keep these factors in mind when considering the costs and benefits of government-provided deposit insurance.

ENDNOTES

1. For a more extensive treatment of the topic, see Thomas L. Hogan and William J. Luther, "Implicit and Explicit Costs of Government-Provided Deposit Insurance" (working paper, Kenyon College, Gambier, OH, June 13, 2012), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2083662.

2. Douglas W. Diamond and Philip H. Dybvig, "Bank Runs, Deposit Insurance, and Liquidity," *Journal of Political Economy* 91 (1983): 401–19.

3. Technically, the bank as modeled by Diamond and Dybvig agrees to a prespecified rate to be paid to all depositors holding funds in the bank during the first period and divides the output from productive ventures (which takes exactly two periods to produce) among those still holding funds in the bank at the end of the second period, when the bank is dissolved.

4. As stated above, some fraction of depositors will experience circumstances precluding them from leaving their funds with the bank until all productive ventures are completed. Government-provided deposit insurance benefits these depositors as well. Since insurance prevents bank runs, they are sure to receive the full value of their deposits, which might not be true in the case of a run.

5. In a recent interview, Nobel laureate Thomas Sargent calls attention to the costless nature of government-provided deposit insurance in the Diamond-Dybvig model. See Arthur Rolnick, "Interview with Thomas Sargent," Federal Reserve Bank of Minneapolis, *The Region* (September 2010): 31.

6. The data presented throughout is available from Federal Deposit Insurance Corporation, *FDIC 2011 Annual Report* (Washington, DC: FDIC, 2011). All values are adjusted for inflation (100 = 2008).

7. We limit our analysis to the direct costs incurred by the FDIC. As a result, we omit indirect costs (for example, those stemming from moral hazard or the implicit subsidy on bank deposits relative to other investments).

8. The remaining costs are listed by the FDIC as "interest and other expenses." Some expenses were also transferred from the Federal Savings and Loan Insurance Corporation Resolution Fund in the years 1989–1992.

9. Some research suggests that while deposit insurance is capable of preventing bank runs, it may increase systemic risk in the banking sector, leading to less frequent but more severe financial crises. See, for example, Asli Demirgüc-Kunt and Enrica Detragiache, "Does Deposit Insurance Increase Banking System Stability? An Empirical Investigation," *Journal of Monetary Economics* 49 (2002): 1373–406. If this is the case, FDIC does not merely incur the cost of disbursements to the deposit holders of failed banks but is also the cause of some of those failures.

10. Roughly 39 percent of all net disbursements occurred during the savings and loan crisis, compared with 57 percent in the financial crisis.

11. Although net disbursements were larger in the recent financial crisis than in the savings and loan crisis, the percentage of disbursements recovered was also higher.

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