

Increased Concentration in Banking: Megabanks and Their Implications for Deposit Insurance

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During the past two decades, the U.S. banking industry has experienced an unprecedented wave of consolidation, marked by a substantial decline in the number of insured depository institutions and the emergence of banking behemoths with assets totaling in the hundreds of billions of dollars. This unparalleled concentration of assets and deposits among a handful of “megabanks” has important implications for deposit insurance. Most importantly, the Federal Deposit Insurance Corporation (FDIC) now faces a situation in which the failure of even a single megabank could overwhelm the resources immediately available to the deposit insurance system and expose both the banking industry and the government (i.e., taxpayers) to huge potential liabilities. This article highlights the current structure of the banking industry, examines the threat that this structure poses to the deposit insurance funds, and suggests possible approaches for dealing with megabanks and the increasing concentration of insured deposits.

I. INTRODUCTION

During the past two decades, the U.S. banking industry has experienced an unprecedented wave of consolidation. The number of insured institutions, for example, has declined by almost 50% since the mid-1980s, largely because of intra- and interstate mergers. From 1990 through 2003, about 5,200 bank mergers occurred, involving more than \$4.9 trillion in assets. Some of the more recent of these mergers have been among the largest ones in U.S. banking history. Indeed, the decade of the 1990s saw not only a continuation of the consolidation trend but also the emergence of true banking behemoths. From 1990 to 2003, there were 69 mergers involving institutions with \$10 billion or more in assets. These “megabanks,” now with assets totaling in the hundreds of billions of dollars, have come to dominate the U.S. banking structure. In 1985, for example, the 41 largest banking companies held a quarter of all domestic deposits, but by the end of the century, the same proportion of the nation’s bank deposits was concentrated in only 4 banking organizations.¹ At year-end 2003,

¹ Pro-forma data includes two pending mergers: Bank of America/Fleet Boston and JP Morgan Chase & Co./Bank One.

Bank of America Corporation (with assets totaling \$870 billion) alone held \$512 billion dollars of domestic deposits—approximately 9.8% of the total.²

Such a concentration of deposits has important implications for deposit insurance because it violates some basic principles of a viable insurance plan—that individual loss exposures be independent and spread over a large number of homogeneous units so that no single loss is catastrophic to the insurer. In other words, the concentration of deposits in a handful of megabanks has created a situation in which the federal deposit insurer now faces what appears to be an “uninsurable risk”—a situation in which the failure of even a single megabank could overwhelm the resources of the Federal Deposit Insurance Corporation, result in extraordinarily high assessments on the banking industry for a prolonged period of time, and re-expose the government (i.e., taxpayers) to huge potential liabilities. The U.S. deposit insurance system—undeniably one of the most successful in the world—was not designed for such a highly concentrated banking industry. Moreover, reforms to the deposit insurance system currently under consideration in the U.S. Congress do not address this concentration risk.

This article examines the implications that the new banking industry structure has for the provision of federal deposit insurance. It raises questions about the “insurability” of megabanks and, more importantly, explores various options for reforming the current deposit insurance system in light of the concentration that has occurred. Specifically, Section II describes the changes that have taken place in the industry over the last 20 years, outlines the current structure of the banking industry, and discusses concerns about the safety of megabanks. Section III examines the threat that megabanks pose to the deposit insurance funds, and section IV discusses some options for dealing with the increased risk to the bank insurance fund (BIF). The final section summarizes our findings and presents our conclusions.

II. INDUSTRY CONCENTRATION AND THE EMERGENCE OF MEGABANKS

Consolidation in the U.S. banking industry since the mid-1980s has resulted in the disappearance of about 50% of all banks and thrifts that were in existence in 1985. The number of banking organizations, defined as top tier commercial banks and thrifts and bank and thrift holding companies, fell from 14,773 in 1985 to 12,121 in 1990 and 7,842 in 2003 (Figure 1). While the number of institutions was declining, however, industry assets were on the rise. Total banking assets rose from \$4 trillion in 1985 to \$4.7 trillion in 1990, and \$9.1 trillion in 2003.

Most of the reduction in the number of banks and thrifts in the 1990s was due to mergers and acquisitions. From 1990–2003 there were approximately 5,200

² Includes pending merger with Fleet Boston.

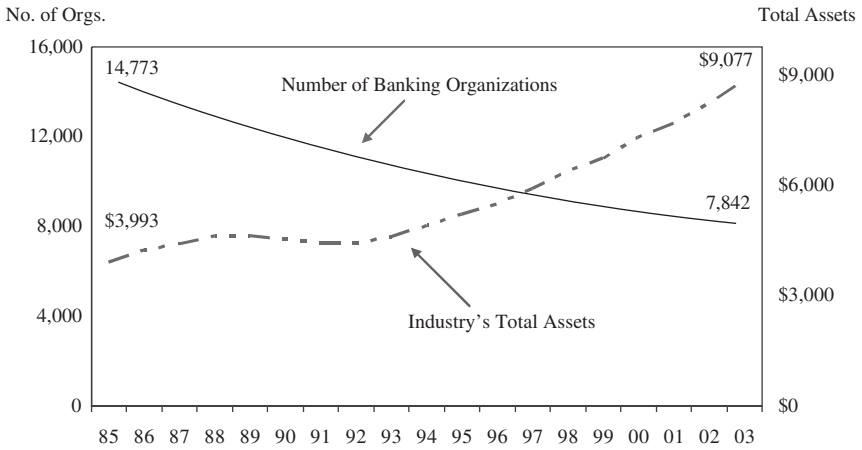


Figure 1: Number of Banking Organizations and Their Assets 1985–2003 (\$ millions)

Source: FDIC, Call Reports

unassisted mergers involving more than \$4.9 trillion in assets. Of particular importance is that much of this activity (in terms of assets) occurred among the nation's largest banking institutions. During this period, the top 10 banking organizations acquired 256 banking organizations with approximately \$2.1 trillion in assets (Table 1). In 64 of the mergers, both the purchasing and the acquiring organizations had more than \$10 billion in assets (Table 2). This virtual frenzy of merger activity among the larger banks culminated at the end of the decade with the 8 largest bank mergers in U.S. history. One of the largest mergers took place in the year 2000, when the Chase Manhattan Corporation bought J. P. Morgan & Company. The combined firm (J. P. Morgan Chase & Co.) had assets totaling more than \$662 billion (before divestitures), representing at the time 9.6% of banking assets in the United States and 4.2% of domestic deposits.³

³ Several factors contributed to the frenzied pace of consolidation among the largest banking institutions. One was passage of the Riegle-Neal Interstate Bank Branching Act in 1994, which removed most of the geographic restrictions to bank expansion. Indeed, interstate mergers dominate the list of very large mergers. Other important contributing factors were the globalization of financial and economic activity, technological advancements in information processing and telecommunications, and a renewed drive by banks to achieve cost savings and diversify their core revenue sources. Many banks are motivated by a desire to gain market share in increasingly competitive domestic and global financial markets—both as a means of increasing market power and profits and as a deterrent to unwanted suitors.

Table 1: Top Ten Banking Organizations, Number of Mergers and Acquired Assets 1990–2003

	Name	Mergers	Acquired Assets \$ in Billion
1	Bank of America Corporation*	15	\$381
2	J.P. Morgan Chase & Co.**	6	465
3	First Union Corporation	41	222
4	Fleetboston Financial Corporation	7	198
5	Bank One Corporation	37	173
6	Wells Fargo & Company	108	178
7	Washington Mutual	19	171
8	U.S. Bancorp	8	147
9	Suntrust Banks, Inc.	13	51
10	Citigroup Inc.	2	69
	Total	256	\$2,055

* Excluding pending acquisition of FleetBoston with \$196 billion in assets in 2004.

** Excluding pending acquisition of Bank One with \$290 billion in assets in 2004.

A consequence of this extensive merger activity is that the majority of industry assets and deposits are now concentrated in a few very large banking organizations. At year-end 2003, the top-100 commercial bank holding companies held 81% of the industry's assets, compared with 68% in 1985 (Figure 2a). Even more striking is the degree of concentration among the very largest banking companies. At year-end 2003, the largest 25 commercial bank holding companies held 66% of the industry's assets and 56% of all domestic deposits, and the top-10 accounted for 54% and 43%, respectively (Figure 2b). In 1985, the top-10 banking organizations had accounted for only 29% of the industry's assets and 18% of the industry's domestic deposits. In 2003 a full 25% of the nation's bank deposits were concentrated in only 4 banking organizations⁴; and Bank of America Corporation, the largest holder of domestic bank deposits, held approximately \$512 billion in domestic deposits (9% of the industry) and had \$870 billion in assets (9% of the industry).

In sharp contrast to the market share of Bank of America and the other large banks, whose assets total in the hundreds of billions of dollars, 4,390 banking

⁴ This will be reduced to 3 banking organizations following the completion of the Bank of America/Fleet Boston and the JP Morgan Chase & Co./Bank One mergers in 2004.

Table 2: List of Bank Mergers with Sellers' Assets > \$10 Billion 1990–2003

	Announce Date	Completion Date	Buyer Name	Seller Name	Buyers: Assets Announce Date (\$ in Billion)	Sellers: Assets Announce Date (\$ in Billion)
1	10/27/2003	04/01/2004	Bank of America Corporation	FleetBoston Financial Corporation	737	196
2	06/27/2003	10/31/2003	New York Community Bancorp, Inc.	Roslyn Bancorp, Inc.	12	11
3	01/21/2003	07/01/2003	BB&T Corporation	First Virginia Banks, Inc.	80	11
4	09/26/2002	04/01/2003	M&T Bank Corporation	Allfirst Financial, Inc.	32	17
5	05/21/2002	11/07/2002	Citigroup, Inc.	Golden State Bancorp Inc.	1,058	54
6	12/08/2001	03/15/2002	BNP Paribas Group	United California Bank	654	11
7	06/25/2001	01/04/2002	Washington Mutual, Inc.	Dime Bancorp, Incorporated	220	27
8	05/07/2001	12/20/2001	BNP Paribas Group	BancWest Corporation	654	19
9	04/15/2001	09/04/2001	First Union Corporation	Wachovia Corporation	254	74
10	02/12/2001	07/17/2001	Citigroup, Inc.	European American Bank	804	15
11	01/26/2001	06/05/2001	Royal Bank of Canada	Centura Banks, Inc.	193	11
12	11/22/2000	04/02/2001	ABN AMRO Holding NV	Michigan National Corporation	67	11
13	11/20/2000	04/02/2001	Fifth Third Bancorp	Old Kent Financial Corporation	44	23
14	10/04/2000	02/27/2001	Firststar Corporation	U.S. Bancorp	74	86

Table 2: *Continued*

	Announce Date	Completion Date	Buyer Name	Seller Name	Buyers: Assets Announce Date (\$ in Billion)	Sellers: Assets Announce Date (\$ in Billion)
15	10/02/2000	03/01/2001	FleetBoston Financial Corporation	Summit Bancorp	181	39
16	09/13/2000	12/31/2000	Chase Manhattan Corporation (The)	J.P. Morgan & Company, Incorporated	396	266
17	08/21/2000	02/09/2001	Washington Mutual, Inc.	Bank United Corporation	186	18
18	04/10/2000	10/25/2000	Wells Fargo & Company	First Security Corporation	218	23
19	06/01/1999	01/01/1999	AmSouth Bancorporation	First American Corporation	20	20
20	05/10/1999	12/31/1999	HSBC Holdings plc	Republic New York Corporation	34	50
21	04/30/1999	09/20/1999	Firststar Corporation	Mercantile Bancorporation, Inc.	38	36
22	03/14/1999	09/30/1999	Fleet Financial Group Inc.	BankBoston Corporation	104	74
23	11/30/1998	06/04/1999	Deutsche Bank AG	Bankers Trust Corporation	563	156
24	07/20/1998	12/31/1998	Sun Trust Banks Inc.	Crestar Financial Corporation	61	26
25	07/01/1998	11/20/1998	Star Banc Corporation	Firststar Holdings Corporation	14	20
26	06/08/1998	11/02/1998	Norwest Corporation	Wells Fargo & Company	96	95
27	04/13/1998	10/02/1998	Bank One Corporation	First Chicago NBD Corporation	116	114
28	04/13/1998	09/30/1998	NationsBank Corp.	BankAmerica Corporation	265	260
29	04/06/1998	10/08/1998	Travelers Group Inc.	Citicorp	387	311

30	03/17/1998	10/01/1998	Washington Mutual, Inc.	Ahmanson & Company (H.F.)	97	47
31	02/05/1998	09/11/1998	Golden State Bancorp Inc.	First Nationwide Holdings, Inc.	16	31
32	12/01/1997	03/31/1998	National City Corporation	First of America Bank Corporation	53	22
33	11/18/1997	04/28/1998	First Union Corporation	CoreStates Financial Corp.	144	48
34	08/29/1997	01/09/1998	NationsBank Corp.	Barnett Banks, Inc.	240	44
35	07/21/1997	11/28/1997	First Union Corporation	Signet Banking Corporation	143	12
36	06/24/1997	12/15/1997	Wachovia Corporation	Central Fidelity Banks, Inc.	47	11
37	03/20/1997	08/01/1997	First Bank System Inc.	U.S. Bancorp	36	33
38	03/06/1997	07/01/1997	Washington Mutual, Inc.	Great Western Financial Corporation	45	43
39	11/22/1996	05/01/1997	ABN AMRO Holding NV	Standard Federal Bancorporation, Inc.	27	15
40	08/30/1996	01/07/1997	NationsBank Corp.	Boatmen's Bancshares, Inc.	192	41
41	07/29/1996	01/03/1997	MacAndrews and Forbes Holdings, Inc.	Cal Fed Bancorp, Inc.	18	14
42	07/22/1996	12/20/1996	Washington Mutual, Inc.	Keystone Holdings, Inc.	22	20
43	01/24/1996	04/01/1996	Wells Fargo & Company	First Interstate Bancorp	50	58
44	01/02/1996	01/02/1996	Fleet Financial Group Inc.	Fleet Banking Group, Inc.	51	18
45	12/19/1995	05/01/1996	Fleet Financial Group Inc.	National Westminster Bancorp Inc.	51	32
46	12/12/1995	07/29/1996	BankBoston Corporation	BayBanks, Inc.	46	12
47	10/10/1995	04/09/1996	CoreStates Financial Corp	Meridian Bancorp, Inc.	29	15
48	08/28/1995	05/03/1996	National City Corporation	Integra Financial Corporation	35	15

Table 2: *Continued*

Announce Date		Completion Date	Buyer Name	Seller Name	Buyers: Assets Announce Date (\$ in Billion)	Sellers: Assets Announce Date (\$ in Billion)
49	08/28/1995	04/01/1996	Chemical Banking Corporation	Chase Manhattan Corporation (The)	179	119
50	07/12/1995	12/01/1995	First Chicago Corporation	NBD Bancorp, Inc.	72	48
51	07/10/1995	12/31/1995	PNC Financial Services Group, Inc.	Midlantic Corporation	62	14
52	06/19/1995	01/02/1996	First Union Corporation	First Fidelity Bancorporation	78	35
53	02/21/1995	11/30/1995	Fleet Financial Group Inc.	Shawmut National Corporation	49	32
54	04/14/1994	10/03/1994	MacAndrews and Forbes Holdings, Inc.	First Nationwide Bank, A Federal Savings Bank	1	15
55	01/28/1994	09/01/1994	BankAmerica Corporation	Continental Bank Corporation	187	23
56	10/04/1993	03/01/1994	KeyCorp	Society Corporation	32	26
57	02/18/1993	10/01/1993	NationsBank Corp.	MNC Financial, Inc.	118	17
58	04/14/1992	03/31/1993	Bank One Corporation	Valley National Corporation	46	11
59	10/28/1991	06/18/1992	Comerica Incorporated	Manufacturers National Corporation	14	13
60	09/13/1991	03/16/1992	Society Corporation	Ameritrust Corporation	15	11
61	08/12/1991	04/22/1992	BankAmerica Corporation	Security Pacific Corporation	113	80
62	07/22/1991	12/31/1991	NCNB Corporation	C&S/Sovran Corporation	69	49
63	07/15/1991	12/31/1991	Chemical Banking Corporation	Manufacturers Hanover Corporation	74	61
64	09/26/1989	08/01/1990	Sovran Financial Corporation	Citizens & Southern Corp.	24	23
			Total			3,184

Source: SNL Securities LC, Charlottesville, VA

A

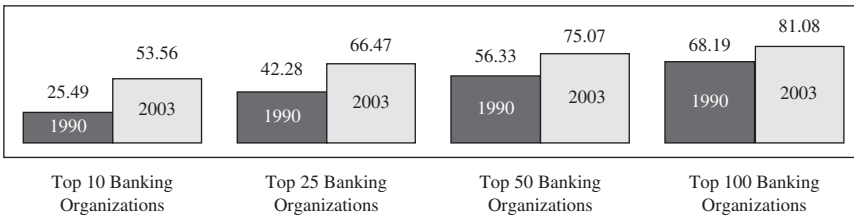
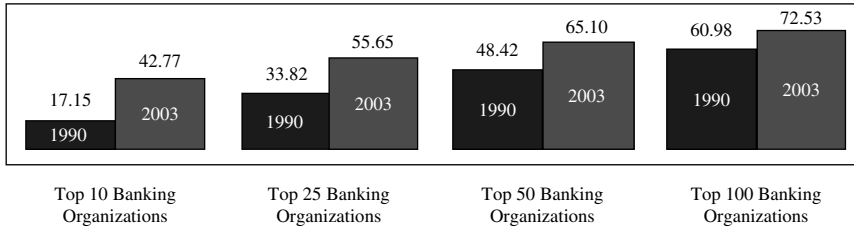


Figure 2a: Top Banking Organizations' Percentage of Industry' Assets*

Source: FDIC, Call Reports

B



* Pro-forma data includes 2 pending mergers: Bank of America/FleetBoston and J.P. Morgan Chase & Co/Bank One

Figure 2b: Top Banking Organizations' Percentage of Industry' Domestic Deposits*

Source: FDIC, Call Reports

institutions hold less than \$100 million in assets each. At year-end 2003, as a group these institutions accounted for only \$226 billion (2%) of industry assets and \$189 billion (3%) of domestic deposits.

The emergence of giant, or mega, financial conglomerates caused the Federal Reserve Board (FRB) to define a new category of financial institution called *large, complex banking organizations*, or LCBOs. In addition to being of substantial size, LCBOs generally (1) have significant on- and off-balance-sheet risk exposures, (2) offer a broad range of products and services at the domestic and international levels, (3) participate extensively in large-value payment and settlement systems, and (4) are subject to multiple supervisors in the United States and abroad (DeFerrari and Palmer (2001)). Though, by definition, all the LCBOs are large, the group is not homogeneous. Some of the LCBOs are much more complex than others: some are more international in scope, for

example, and/or more heavily engaged in securities trading and derivatives activity. Although the FRB has not made public a list of the LCBOs, the number of banks monitored under the FRB's large-bank supervision program has ranged from about 25 to about 30 institutions.⁵

For the most part, our concept of a megabank closely parallels the FRB's definition of an LCBO. And for the purpose of general discussion, we can assume that the group of megabanks includes the top 25 banking companies. Our discussion below, however, increasingly focuses on the top 10 banking organizations (See Figures 3a and 3b), whose size relative to the BIF becomes especially important.⁶ At year-end 2003, this top 10 group ranged in size from \$98 billion to \$1 trillion in assets, with an average (median) asset size of about \$407 billion (\$277 billion). As we state above, the 10 largest banking companies as a group held approximately 54% of all commercial banking assets in the United States and about 43% of all domestic bank deposits.

III. MEGABANKS, RISK, AND DEPOSIT INSURANCE

The emergence of megabanks has naturally raised concerns about safety. Have these increasingly large and complex banking organizations benefited from economies of scale and scope? Or have their increased size and complexity resulted in a more risky institutional profile and raised their risk of failure? Has the emergence of megabanks increased the degree of systemic risk in the broader financial system? And finally, how have megabanks changed the nature of the risks faced by the deposit insurance system? These are extremely important questions.

RELATIVE RISKINESS OF MEGABANKS

Historically, very few failures have occurred among the nation's largest banks. Since 1934, only 2 failures occurred among the nation's top 25 banking organizations, and only 12 among the top 26–100.⁷ Only 6 bank failures ever involved institutions with more than \$10 billion in assets.⁸ The lower failure rates of large

⁵ The FRB established an LCBO Supervision Program in 1999. Criteria for inclusion in the LCBO program and a description of the program itself can be found in DeFarrari and Palmer (2001). They note that no single factor qualifies or disqualifies an organization as an LCBO. In addition, they note that a number of banking organizations do not meet enough of the criteria to be considered LCBOs but have sufficient size and complexity in some of their activities to be covered by the program to a certain extent.

⁶ All numbers in the text refer to commercial banks only. However, Washington Mutual, Inc. — a thrift holding company — is included in Figure 3a and 3b because of its size. If Washington Mutual were to be excluded, then HSBC Holdings, PLC (with \$98 billion in assets and \$45 billion in domestic deposits) would round out the top ten commercial bank organizations.

⁷ Oshinsky (1999a).

⁸ FDIC (1998).

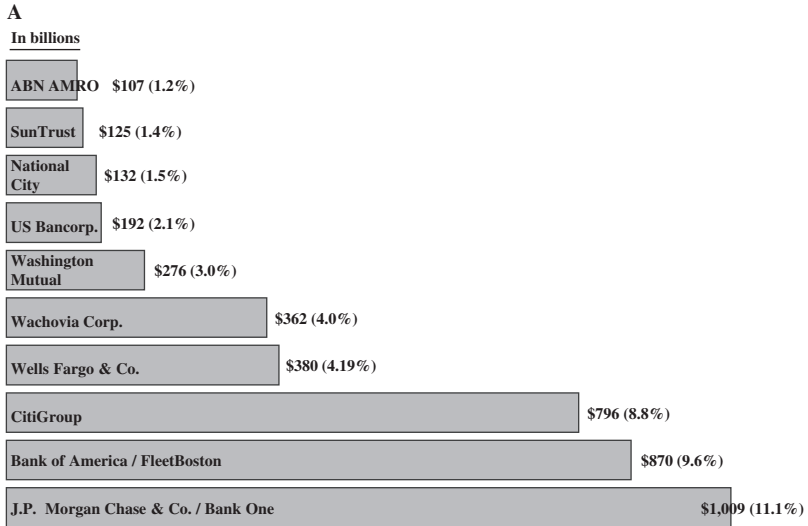


Figure 3a: Asset Ranking: Top 10 Banking Organizations, December 31, 2003

Source: FDIC, Call Reports

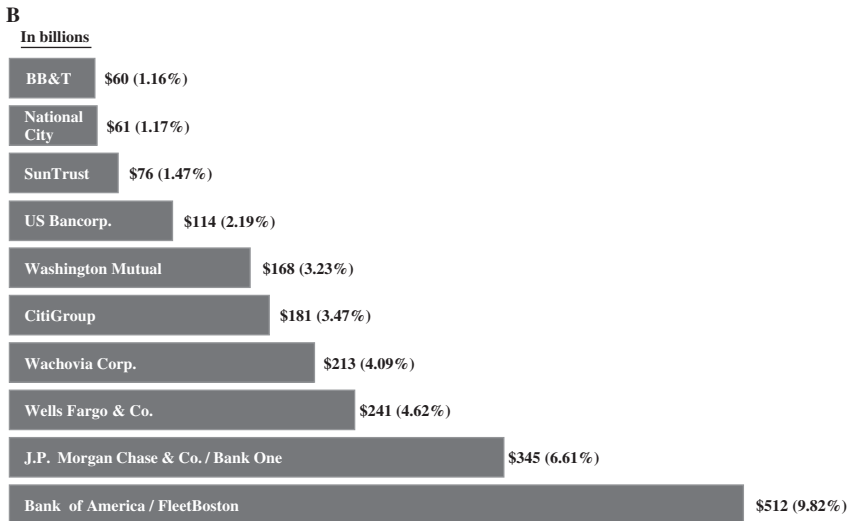


Figure 3b: Domestic Deposits Ranking: Top Ten Banking Organizations, December 31, 2003

Source: FDIC, Call Reports

banking institutions (as opposed to their smaller brethren) are most likely due to the effects of scale: large banks have greater access to funding sources and more diversified portfolios and are more adept at sophisticated risk-management techniques, for example. But the relative scale of things has changed in the past decade. Today's megabanks dwarf the largest banks of ten years ago. The question before us, then, is whether the riskiness of today's megabanks has increased or decreased relative to the risk profiles of the largest banks of ten years ago. In other words, have the increases in scale and scope benefited megabanks and allowed them to reduce their risk profiles? Or have their increased size and complexity made them more susceptible to failure?

Unfortunately, research to date has not provided clear indications of the effects of consolidation on the relative riskiness of larger and more complex banking organizations. A recent report by the Group of Ten (G10) examines the effects of consolidation on institution risk and finds that consolidation has the potential to cause both reductions and increases in the risks of individual LCBOs in the United States.⁹ The net effect, the report concluded, is ambiguous. The greatest potential for risk reduction appears to be from geographic diversification, especially when the diversification is cross-regional or international. Product diversification also offers potential benefits in terms of risk reduction, but its effect has so far proven to be limited and more apt to be significant if the diversification occurs across industries. The G10 report also notes that greater managerial efficiencies can also serve to reduce risk at a consolidated banking institution but that, in general, there is little empirical evidence to support the idea that mergers of large banks have resulted in measurable efficiency gains through economies of scale and/or scope.¹⁰

Counterbalancing the potential reductions in risk, according to the G10 report, were a number of factors that acted to increase an LCBO's risk profile. The risk of failure could increase, for example, because of operating risks associated with increased complexity and the difficulty of monitoring and controlling the actions of physically and operationally distant managers and individual employees. Banking organizations with a broad geographic presence (especially those with international operations) may have difficulties monitoring credit risks, risk concentrations, and market risks in varied and distant locations. The 1994 collapse of Barings Bank, which succumbed because of the actions of a single rogue trader located half a world away from headquarters,

⁹ Group of Ten. (2001).

¹⁰ See, for example, Berger *et al.* (1999) and Rhoades (1998). Evidence reviewed by the former suggests that, on average, consolidation appears to increase the profit efficiency and help diversify the portfolio risks of the participants, but little or no cost efficiency appears to result from mergers and acquisitions. And although some of the more recent studies suggest that even among fairly large institutions some scale, scope, and product-mix efficiency gains may be available from consolidation, the paucity of data on large institutions suggests that more research is needed to verify the existence of such gains.

starkly illustrates what can occur when a complex and geographically dispersed institution has poor internal controls.

Other factors also have the potential to expose megabanks to increased risks. Seelig and Elmer (2000), for example, observe that megabanks tend to rely increasingly on volatile and nondeposit sources of funding, and they suggest that these shorter-term and more volatile funding sources expose megabanks to greater liquidity risk—that is, the risk that these funds could be withdrawn or become unavailable at relatively short notice. This problem is exacerbated by the increased speed at which financial transactions can be consummated in today's capital markets. The largest bank failure in U.S. history—that of Continental Illinois in 1984—was largely the result of the bank's inability to meet its liquidity needs after a week of massive withdrawals of wholesale funds in what was the first large-scale electronic bank run.

In sum, it is not clear whether the increased size of today's megabanks make them less likely to fail than the largest banks of ten years ago. Increased size and complexity have the potential to cause both reductions and increases in the risks of individual megabanks and, to-date, there is no empirical evidence that indicates what the net effect might be.

MEGABANKS AND SYSTEMIC RISK

From a systemic perspective, the critical question is whether the creation of larger and more complex banking organizations has increased the risk that the nation's broader financial system would be adversely affected by a single event or exogenous shock—for example, the failure of an LCBO. Although the answer to this question is complex and may depend on the nature of the event, there are a number of reasons to believe that the emergence of megabanks, with their inherent complexities, has increased systemic risk in the U.S. banking and financial systems.

First, the sheer size of at least some megabanks would in and of itself raise the probability that a megabank failure would disrupt the broader financial system within which it operated. For example, the nation's two largest banking companies—Bank of America/Fleet Boston and J. P. Morgan Chase/Bank One—held about 11% and 13%, respectively, of the industry's total assets at year-end 2003. Even after adjusting for inflation, these two banks are more than ten times as large as Continental Illinois was when it failed and was rescued by the government because of concerns about systemic risk. When the size effect is compounded by the increased complexity and international nature of an LCBO's activities and when consideration is given to the particularly important roles that several LCBOs play in individual financial markets or in the nation's payment system, the probability that a megabank failure would cause significant adverse effects in the financial system and the real economy becomes even greater. Indeed, the size, complexity, and international operations of megabanks increase the difficulty that federal banking regulators would have in achieving an orderly closure and

resolution of a failing LCBO. An LCBO's participation in derivatives, foreign exchange and securities trading, and securities' underwriting, as well as the presence of tens of billions of dollars in foreign deposits, would all serve to complicate the closure and resolution process. Some observers have even argued that the complexities and difficulties of resolution, even without systemic effects, make federal intervention to prevent a megabank failure more probable.

Second, there is some empirical evidence suggesting that consolidation, especially since 1995, has probably increased the degree of total interdependency among LCBOs. De Nicolo and Kwast (2002), for example, present evidence that is highly consistent with the view that among LCBOs during the 1990s, there was a significant upward trend in the degree of interdependency, as measured by stock return correlations. With greater interdependency, economic shocks in the financial sector are more likely to become systemic events. According to the G10 Report mentioned above, the most likely areas of concern regarding bank interdependencies are short-term interbank lending and derivatives activity. Increases in both types of exposures at LCBOs in the United States are positively correlated with the consolidation trend, and these correlations were found by De Nicola and Kwast to be particularly strong at LCBOs with high and medium degrees of complexity.

Thus, all things considered, it seems reasonable to conclude that industry consolidation has probably increased systemic risk—the likelihood that a megabank failure will disrupt the rest of the financial sector and the real economy. However, the effect of increased size on the riskiness of individual banking companies is uncertain (all else being equal), and the failure of an LCBO is likely to remain a low-probability event.

IMPLICATIONS FOR DEPOSIT INSURANCE

Are Megabanks Insurable?

Anyone browsing through an elementary textbook on insurance is likely to find, very near the beginning, a discussion of “insurable risks.”¹¹ For a risk to be considered insurable, it must substantially meet six criteria: (1) there must be a large number of homogeneous exposures (or exposure units); (2) the loss produced by the peril must be definite and measurable; (3) the occurrence of loss in individual cases must be accidental and fortuitous; (4) the chance of loss must be calculable; (5) the loss should not be catastrophic; and (6) the cost of insurance must be economically feasible. Two of these criteria, numbers 1 and 5, are considered to be nearly essential for an insurer to successfully operate an insurance scheme in the private sector.

It should be obvious even to those not knowledgeable about insurance principles that the risk associated with insuring bank deposits, in general, and

¹¹ See, for example, Vaughan and Vaughan (1996).

deposits in megabanks in particular, fails to meet several of these criteria. Most importantly, it fails to meet the two criteria considered essential in the private sector: that there be a large number of homogeneous exposure units and that the loss from any single exposure unit not be catastrophic to the insurer. Megabanks are so large relative to the rest of the banking industry that the risk of their failure violates both these principles. In the case of the principle that the exposure units be homogeneous, that is, that they present similar loss-producing characteristics, megabanks with their great size and market share skew the FDIC's risk exposure. Indeed, as a practical matter, the risk to the BIF comes almost entirely from the largest 25 banking organizations. The risk presented by the remaining 7,800 or so institutions can be, and is, minimized by the law of large numbers. In other words, the large pool of mostly uniform banks allows the FDIC to substitute the pool's average frequency and severity of loss for the loss exposure associated with individual banks and to calculate and charge economically feasible premiums to pay for expected losses.¹² Megabanks, however, corrupt this scheme. Their low probability of failure and high concentration of deposits makes their losses from year to year to be highly variable. Under these circumstances, it becomes extremely difficult to accurately compute a fair premium. And even if it were possible, the premiums necessary to pay for the extremely high losses associated with a megabank's failure are likely to be so high that the cost will make them unaffordable.

More importantly, however, is the violation of the second principle. Megabanks have become so large that losses associated with a single megabank failure have the potential to be catastrophic to the BIF—a situation that raises fundamental questions about the insurability of megabanks under the current federal deposit insurance system. The failure of a megabank is presented here as a potentially catastrophic event in the sense that it could overwhelm the resources of the BIF and require recourse to the U.S. Treasury. It would not, however, be catastrophic in the sense of precipitating the collapse of the deposit insurance system. The FDIC has access to far greater amounts of capital than a private insurer does; hence the problem of a megabank failure is really one of liquidity. If, for example, losses from a megabank failure exceeded the funds of the BIF, the FDIC could immediately draw on a \$30 billion line-of-credit facility it has with the U.S. Treasury. In the longer term, current statute provides for the recapitalization of the BIF (including repayment of U.S. Treasury borrowings

¹² The law of large numbers minimizes but does not eliminate the risk associated with bank failures. For example, from an insurance perspective it is desirable for losses to occur independently of one another. Losses from bank failures, however, tend to come in waves that often peak during downswings in the business cycle. Although deposit insurers can incorporate the cyclical nature of bank failures into their failure- and loss-prediction models, forecasting the occurrence, severity, and nature of a recession and any associated rise in bank failures is an inexact science. Consequently, even with a large population, additional risk and uncertainty are introduced into the actuarial calculations used to determine the premium and capital levels required to cover expected losses.

plus interest) by a call on the capital of the banking industry.¹³ In practice, then, the failure of a megabank would not technically be a catastrophic event—one that the deposit insurance system could not currently address. Nevertheless, we argue that the failure of any single institution that resulted in losses in the tens of billions of dollars is considered “catastrophic” in the real sense. Funding losses of this magnitude would undoubtedly affect the banking industry’s profitability and the allocation of credit and would have an overall dampening effect on many other economic and financial activities. They could also have serious implications for U.S. taxpayers because all deposit insurance losses appear as current expenditures in the combined federal budget. Finally, losses of this magnitude would probably have political consequences as well.

Implications for the Bank Insurance Fund

Any well-designed deposit insurance system must ensure that adequate funds are readily available to respond to bank failures as they occur. One way to achieve this is to establish and maintain an explicit reserve fund.¹⁴ The federal deposit insurance system in the United States has always relied on premium income and a reserve fund to settle claims against its deposit insurance guarantee. The combination of an *ex ante* funding mechanism and a standing reserve fund protects taxpayers from deposit insurance losses (except when an extreme event or series of events overwhelms current income and the insurance fund) and reduces the likelihood that regulators will have to delay closing insolvent institutions for lack of readily available funds.¹⁵ In practice, the fund should be large enough to cover expected future losses caused by bank failures and to reimburse insured depositors in a timely fashion.

Current U.S. law governing the size or adequacy of the deposit insurance fund provides that the FDIC must maintain the fund reserve ratio—the ratio of the fund balance to estimated insured deposits—at 1.25%.¹⁶ To maintain the target, or “designated,” reserve ratio, the FDIC is authorized to charge each insured depository institution a risk-based premium. The current premium schedule consists of nine risk categories based primarily on capital ratios and examination ratings. As long as the reserve ratio is expected to remain at or above its

¹³ The FDIC’s borrowing authority is described under 12 U.S.C. § 1824(a),(b),(c), and the FDIC’s authority to call on the capital of the banking industry to recapitalize the bank insurance fund or to repay amounts borrowed from the U.S. Treasury is granted and described under 12 U.S.C. § 1817(b)(3),(6).

¹⁴ It is by no means the only way. Many countries have opted to finance their deposit insurance systems *ex post*—that is, depository institutions are assessed a premium only after a failure or failures occur. Some countries also use a combination of *ex ante* and *ex post* funding mechanisms.

¹⁵ Recall that during the S&L crisis of the 1980s, the Federal Savings and Loan Insurance Corporation—the failed insurer of savings and loans—allowed insolvent thrifts to remain open when it had insufficient funds to close troubled banks. And despite the government guarantee, Congress was slow in approving monies to pay for S&L failures.

¹⁶ 12 U.S.C. § 1817(b)(2)(A)(iv).

target level, institutions in the lowest risk category are exempted from paying premiums. Should the reserve ratio fall below its designated level, the FDIC would have to either raise premiums enough to achieve the target within one year or establish a recapitalization schedule, not to exceed 15 years, under which the average annual premium charged on assessable deposits must be at least 23 basis points.¹⁷ On paper, then, the deposit insurance system is totally funded by the banking industry, which is even required to recapitalize the fund whenever it falls below its required reserve ratio. There is a real question, though, whether the industry would be able to fund the cost of a megabank failure or recapitalize the fund after such a failure, especially over a relatively short period and at a time when industry-wide profits might be depressed and many individual banks might be losing money. In any case, the banking industry could expect to bear a heavy financial burden. And if the situation required some form of taxpayer funding, the banking industry could also expect to pay a heavy political cost.

Although the selection of 1.25% as the statutory reserve ratio was based mainly on precedent, this size fund proved large enough to maintain the BIF's solvency during the banking crisis of the 1980s.¹⁸ Many policymakers and scholars point to this accomplishment as proof that the BIF's size is adequate. If the fund could withstand the severe banking problems of the 1980s, they reason, when statutory restrictions on premium assessments limited its ability to generate revenue, then the designated reserve ratio of 1.25% should be sufficient to handle any future crises. Moreover, the passage of the Federal Deposit Insurance Corporation Improvement Act (FDICIA) and other reform measures in the 1990s significantly strengthened the deposit insurance system with requirements for prompt corrective action, least-cost resolution, risk-based premiums, and depositor preference, among other actions. Consequently, many believe that a repeat of the banking and S&L crises of the 1980s and early 1990s is unlikely. Indeed, in April 1998 the Acting Chairman of the FDIC, Andrew Hove, testified before Congress that

Our staff has analyzed the sufficiency of the deposit insurance funds and has concluded that the resources available to the federal deposit insurance system are sufficient to withstand several years of failures at the highest *historical levels* [emphasis added] experienced by banks.¹⁹

¹⁷ Using the assessment base for year-end 2003 and a premium rate of 23 basis points, we estimate that the FDIC could raise approximately \$9.5 billion annually from BIF-insured commercial banks and \$2.4 billion annually from institutions insured by the Savings Association Insurance Fund (SAIF), or approximately \$11.9 billion total.

¹⁸ From an accounting perspective, the BIF did become insolvent in 1991 because it had to book expected future losses against its reserves. The losses were never realized, however, and the loss provisions were eventually restored to the fund balance.

¹⁹ Hove (1998).

That presumption about the FDIC’s resources may have been valid when Acting Chairman Hove spoke, but the emergence of megabanks has changed the landscape so dramatically in the last few years that a reevaluation of the situation is again warranted. Indeed, the rise of megabanks renews questions not only about fund adequacy but also about the current deposit insurance system’s capacity to handle risk, especially the potentially catastrophic risk of a megabank failure.

At year-end 2003, the BIF had reserves of nearly \$33.8 billion against the commercial banking industry’s \$2.6 trillion of insured deposits and \$7.6 trillion in assets—1.32 and 0.5%, respectively (Figures 4a and 4b). When the reserves are expressed as a percentage of the commercial banking industry’s estimated insured deposits, the BIF is 7 basis points above its target ratio and looks relatively healthy. We argue, however, that the megamergers of the last several years changed the arithmetic. The BIF, though larger in recent years in both absolute and percentage terms, is actually smaller relative to the size of the largest institutions than it has ever been (except during the crisis years of the early 1990s).

For example, as a percentage of insured deposits at the top 25 commercial banks, the BIF balance fell from 6.72% in 1985 to 3.37% in 1995 to 2.42% by the end of the year 2003 (Table 3). When compared with estimated insured deposits of the largest bank in 1985, Bank of America Corporation (BofA), the percentage dropped from 40% in 1985 to just 10% in 2003. Consolidation has obviously resulted in a “smaller” fund relative to the size of the largest institutions.

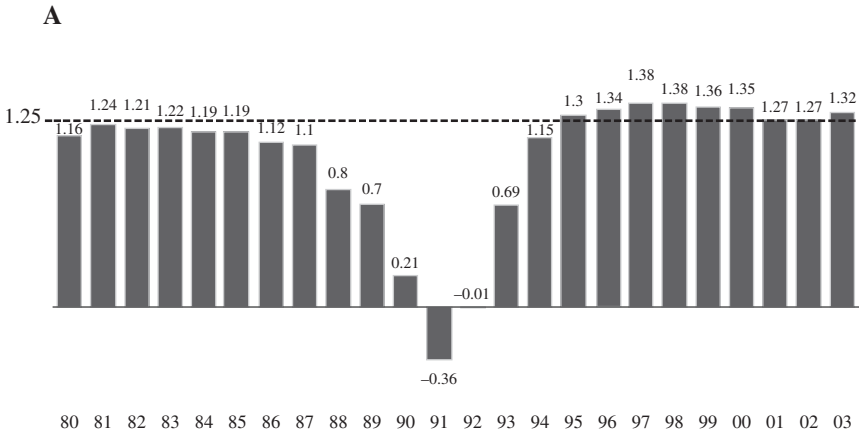


Figure 4a: Bank Insurance Fund as a Percentage of Insured Deposits

Source: FDIC, Call Reports

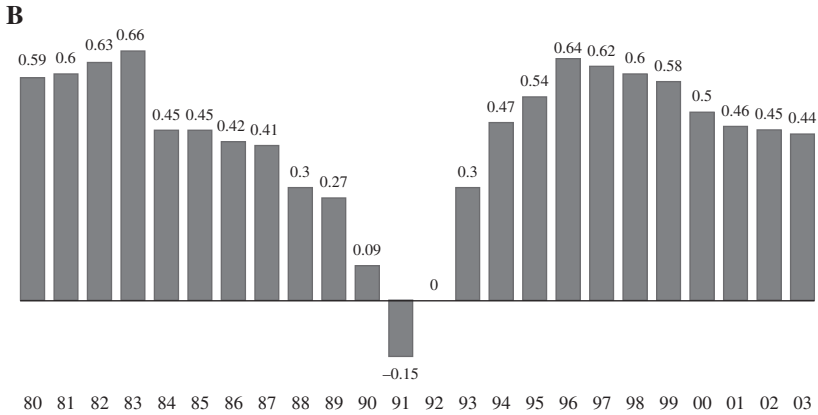


Figure 4b: Bank Insurance Fund as a Percentage of Industry Assets

Source: FDIC, Call Reports

Another way to illustrate the relative “shrinking” of the BIF is to look at the potential loss exposure represented by the nation’s largest bank (in terms of deposits). In 1995, for example, BofA had about \$230 billion in assets. Based on

Table 3: BIF Balance in Terms of Assets and Insured Deposits for All Banks, Top 25 Banking Organizations and Bank of America (\$ Billions)

	1985	1990	1995	2000	2003
BIF Balance	18	4	25	31	34
All Commercial Banks					
Total Assets	\$2,731	\$3,389	\$4,313	\$6,244	\$7,601
Estimated Insured Deposits	\$1,503	\$1,930	\$1,953	\$2,302	\$2,555
BIF Balance/Assets	0.66%	0.12%	0.59%	0.50%	0.44%
BIF Balance/Est. Insured Deposits	1.19%	0.21%	1.30%	1.35%	1.32%
Top 25 Banking Organizations					
Total Assets	\$1,088	\$1,433	\$2,279	\$3,868	\$5,054
Estimated Insured Deposits	\$267	\$513	\$755	\$1,082	\$1,395
BIF Balance/Assets	1.65%	0.28%	1.12%	0.80%	0.67%
BIF Balance/Est. Insured Deposits	6.72%	0.79%	3.37%	2.86%	2.42%
Bank of America					
Total Assets*	\$116	\$115	\$231	\$610	\$870
Estimated Insured Deposits*	\$45	\$51	\$85	\$218	\$327
BIF Balance/Assets	15.47%	3.52%	11.04%	5.08%	3.88%
BIF Balance/Est. Insured Deposits	40.00%	7.86%	29.98%	14.22%	10.33%

* Bank of America’s assets and deposits for 2003 reflected pro-forma data for pending acquisition of FleetBoston with \$196 million in assets.

historic loss rates for large banks (around 4–10% of assets, excluding some outliers),²⁰ BofA represented a loss exposure to the BIF of \$9–23 billion. At the high end, that represented about 97% of the fund's reserves in 1995—a huge amount but still within the means of the BIF.

By year-end 2003, however, the balance in the BIF was no longer sufficient to cover the cost of a single failure of one of the nation's largest banks. The megamergers of the last several years had produced at least five banking institutions larger than BofA was in 1995. Recalculating expected losses using 2003 data reveals that the failure of any one of the top five banking companies would, under high-end loss estimates, single-handedly exhaust the fund—and for the three largest banking companies, would nearly exceed the statutory borrowing authority of the FDIC as well (Table 4/Figure 5). In fact, even if actual losses were to be near the low end of the historic range for large banks, the failure of any of the top three banking companies would either exhaust the BIF or so seriously drain it that the possibility of a BIF insolvency would be drastically increased in the near term should additional banks fail.

Recent research by Kuritzkes, Schuermann, and Weiner (2002), hereafter KSW, reinforces this point. Examining the question of fund adequacy, KSW use a credit-risk modeling approach to estimate a cumulative loss distribution for the BIF (based on data for year-end 2001).²¹ The authors then compare the expected potential for loss with the level of BIF reserves and find that reserves are sufficient to cover roughly 99.85% of the loss distribution faced by the BIF—a level of coverage that corresponds to a BBB+ rating under Standard & Poor's corporate bond rating system. In other words, during any one-year period there is a 99.85% chance that losses to the fund will not exceed its reserve balance and a 0.15% chance that losses would result in BIF insolvency.

Despite the seemingly small probability of BIF insolvency, KSW argue that this rating is actually quite low—lower in fact than the credit rating of most of the large banks insured by the fund—and a far cry from the AAA rating that others have suggested as a solvency standard for the fund (corresponding to a 0.01% probability of default).²² Yet, because of the huge loss exposures associated with megabanks, KSW estimate that BIF reserves would have to be at

²⁰ FDIC (1998).

²¹ In the KSW study, the BIF's cumulative loss distribution is a function of the probability of failure for individual institutions, the expected loss given the failure of individual exposures, and the correlation of losses across the insured institutions. Because insured deposits are highly concentrated among the largest banks, the author's find that the BIF's cumulative loss distribution for any one-year period is heavily skewed with a high probability of the fund incurring small losses from the failure of a number of small banks but a small probability of incurring large (and potentially catastrophic) losses from the failure of a large bank and/or the failure of a large number of banks.

²² Blinder and Wescott (2001).

Table 4: Top 25 Banking Companies December 31, 2003

Ranking	Bank Holding Companies	Total Assets (\$ in Billion)	Share of Industry Assets (%)	Cum. Percentage of Assets	Domestic Deposits (\$ in Billion)	Share of Industry Domestic Deposits (%)	Cum. Percentage of Deposits	Estimated Losses Relative to Insurance Fund (\$ in Billion)	
								Low (4%)	High (10%)
1	J.P. Morgan Chase & Co./Bank One*	1,009	13.27	13.27	345	8.04	8.04	\$40	\$101
2	Bank of America/Fleetboston**	870	11.44	24.71	512	11.94	19.97	35	87
3	Citigroup Inc.	796	10.47	35.19	181	4.22	24.19	32	80
4	Wells Fargo & Company	380	5.00	40.19	241	5.62	29.81	15	38
5	Wachovia Corporation	362	4.77	44.95	213	4.97	34.78	14	36
6	U.S. Bancorp	192	2.53	47.49	114	2.67	37.45	8	19
7	National City Corporation	132	1.73	49.22	61	1.42	38.87	5	13
8	Suntrust Banks, Inc.	125	1.64	50.86	76	1.78	40.65	5	12
9	ABN AMRO Holding N.V.	107	1.41	52.27	46	1.07	41.72	4	11
10	Hsbc Holdings plc	98	1.29	53.55	45	1.05	42.77	4	10
11	Fifth Third Bancorp	95	1.25	54.80	51	1.18	43.95	4	10
12	BB&T Corporation	95	1.24	56.05	60	1.41	45.36	4	9

Table 4: *Continued*

Ranking	Bank Holding Companies	Total Assets (\$ in Billion)	Share of Industry Assets (%)	Cum. Percentage of Assets	Domestic Deposits (\$ in Billion)	Share of Industry Domestic Deposits (%)	Cum. Percentage of Deposits	Estimated Losses Relative to Insurance Fund (\$ in Billion)	
								Low (4%)	High (10%)
13	The Bank of New York Company, Inc.	90	1.18	57.23	34	0.79	46.15	4	9
14	Keycorp	85	1.11	58.35	48	1.12	47.27	3	8
15	State Street Corporation	80	1.06	59.41	13	0.30	47.57	3	8
16	The Royal Bank of Scotland Group PLC	78	1.03	60.44	58	1.36	48.93	3	8
17	The PNC Financial Services Group, Inc.	64	0.85	61.28	45	1.05	49.99	3	6
18	MBNA Corporation	59	0.77	62.05	31	0.72	50.71	2	6
19	Comerica Incorporated	53	0.69	62.75	40	0.94	51.65	2	5
20	Southtrust Corporation	52	0.68	63.43	33	0.76	52.41	2	5
21	Allied Irish Banks, P.L.C.	50	0.65	64.08	31	0.72	53.13	2	5

22	Mitsubishi Tokyo Financial Group, Inc.	48	0.63	64.71	35	0.82	53.95	2	5
23	Amsouth Bancorporation	46	0.60	65.31	29	0.68	54.63	2	5
24	Regions Financial Corporation	45	0.60	65.91	29	0.68	55.32	2	5
25	Charter One Financial, Inc.	43	0.56	66.47	28	0.64	55.96	2	4
Total Top 25 Banking Companies		\$5,053	66.47%		\$2,399	55.96%		\$202	\$505

Note: Total Insurance Fund as of December 31, 2003: \$33.782 Billion.
 * Excluding pending acquisition of Bank One with \$290 billion in assets in 2004.
 ** Excluding pending acquisition of FleetBoston with \$196 billion in assets in 2004.

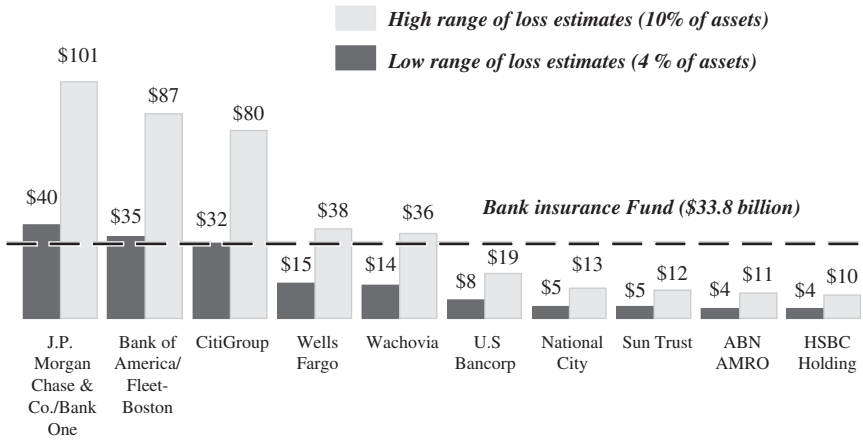


Figure 5: Top 10 banking organizations Estimated losses relative to insurance fund, (\$ in Billion)

Source: FDIC, Call Reports, data as of 12/31/2003

least \$40 billion in order for the fund to earn an A- rating (0.10% default probability) and from \$92 to \$156 billion in order to achieve a AAA rating.

Similar findings were obtained by Bennett (2002) in a study designed specifically to test the robustness of KSW’s results. Reemploying the credit risk modeling technique used by KSW, Bennett finds that the reserve ratio of 1.27% for the BIF (as of December 31, 2001) may not even merit a BBB rating. However, Bennett’s work also shows that results obtained from credit risk models (like those used in the KSW study) are sensitive to assumptions about the model’s principle parameters (the probability of default and loss-severity). For example, depending on the assumptions used in the model, she finds that the BIF may warrant a rating of anywhere from below investment grade (BBB or better) to an A- rating.

Other recent studies also strongly support the view that industry consolidation and the emergence of megabanks has increased the overall risks to the deposit insurance fund and heightened the vulnerability of the BIF to catastrophic failure. Taking a more dynamic approach, Sheehan (1998) conducted a Monte Carlo simulation to estimate the time series behavior of disbursements from the BIF and the likelihood of insolvency across a number of fund reserve ratios and assessment rates.²³ Using Call Report data for 1996, his simulation results indicate that the likelihood of the BIF’s becoming insolvent is very small (0.1% chance) under

²³ The KSW credit risk model and simulations differ significantly from the dynamic studies that are now being discussed in that KSW employ a static model that evaluates fund adequacy for only one period rather than the 50-year periods simulated by Sheehan (1998) and Oshinsky (1999a, 1999b).

low-loss assumptions (failure and loss rates based on averages during the 1934–1996 period), and slightly higher (3.2%) under high-loss assumptions (failure and loss rates during the more recent 1972–1996 period).²⁴ Although Sheehan found the likelihood of BIF insolvency to be relatively low, he also found a very high probability that BIF reserves would fall below 50 basis points in both the low- and high-loss scenarios (a 38.6 and 48.9% chance, respectively). At the time, Sheehan's findings were consistent with the official belief that the current funding arrangement—a required reserve ratio of 1.25% and an assessment rate of 23 basis points—was sufficient to maintain BIF solvency. Sheehan acknowledged, however, that his analysis did not capture the effect of consolidation after 1996—a critical point, since the latter part of the decade was precisely when many megabank mergers occurred.

Fortunately, a follow-up study by Oshinsky (1999a) looked specifically at the effects of bank consolidation on the BIF. Like Sheehan (1998), Oshinsky used Monte Carlo simulations to test for BIF insolvency under a variety of economic conditions and failure assumptions.²⁵ Oshinsky's objective, however, was to look specifically at the effects that industry consolidation had on the BIF. Two additional years of data allowed him to model changes in the industry's structure as late as 1998. His results strongly suggest that the risk of severe insolvency of the BIF has increased dramatically with the emergence of megabanks. More specifically, Oshinsky's simulations indicate that the merger activity of the 1990s appears to have increased the risk of BIF insolvency by more than 50%.

Oshinsky's results are summarized in Table 5. The table allows one to compare the model's results based on the banking structure as it appeared in 1990, 1997, and 1998 (pro forma). According to the simulations, the probability of the BIF's becoming insolvent increased from 3.9% in 1990 to 6.0% in 1997 and to 6.5% in 1998.²⁶ The growth of the largest banking companies increased the likelihood that the failure of one very large organization would exhaust the BIF and, in addition, significantly deepened the degree of insolvency. For the 1998 simulation, 25 of the 1,000 simulations produced BIF insolvencies of more than 100 basis points, compared to 13 in 1990.²⁷

²⁴ Sheehan's simulation assumed that premiums up to 23 basis points would be charged whenever the BIF balanced slipped below its required reserve ratio of 1.25%. The FDIC has the authority, however, to charge more than 23 basis points should it believe conditions warrant a higher premium assessment.

²⁵ Oshinsky's model projected the financial condition of the BIF for a period of 50 years. The simulation was performed 1,000 times for each input year (1990, 1997, 1998). For each year, bank failures (and losses from failures) were projected on the basis of the condition or state of the banking industry and random variations within each state. To capture the effects of industry consolidation that are most likely to influence the solvency of the BIF, the top 100 banking organizations were simulated individually. The rest of the industry was simulated on an aggregate basis. Premium assessments were allowed to range as high as 23 basis points and were based on the BIF's financial condition and the minimum assessment schedule mandated under Financial Institutions Reform, Recovery, and Enforcement Act of 1989.

²⁶ The 50-year simulation was repeated 1,000 times, and the number of runs resulting in BIF insolvency determined the probability of insolvency.

²⁷ Based on the amount of estimated insured deposits at year-end 1998, a 100 basis point deficit would be approximately –\$21.4 billion.

Table 5: Simulation Results—*Pro forma* Scenario

Model	Probability of Fund <0 bp	Probability of Fund <50 bp	Probability of Fund <75 bp
1990 structure	3.9%	17.8%	43.7%
1997 structure	6.0	17.1	34.0
1998 <i>pro forma</i>	6.5	16.6	32.1

Source: Oshinsky (1999a), pp 14 and 16.

Oshinsky's results also suggest that the emergence of megabanks has changed the nature of the risks to the BIF. When he examined more closely the years that triggered insolvency, he found that although the simulation based on the 1990 industry structure had the fewest number of insolvent years, it had the largest percentage of the BIF insolvencies that occurred with no top 25 failures (30.8%). In contrast, in the 1997 and 1998 simulations the number of BIF insolvencies increased but, more noticeably, the percentage of insolvencies that occurred with no top 25 failure *decreased* to 8.3% and 1.5%, respectively. This result starkly illustrates the fact that the risk to the BIF has become inseparable from the health of the top 25 banking organizations. Even more striking is the relationship between the health of the BIF and the top 10 banking organizations. In Oshinsky's simulations based on the 1998 industry structure, there was almost no chance (0.5%) of the BIF becoming insolvent without the failure of a top 10 organization. To put it bluntly, industry consolidation and the emergence of megabanks have inextricably linked the health of the BIF to the health of the top 10 banking organizations; the health of the rest of the industry is just not as critical to the viability of the deposit insurance fund.

The failure of a top 10 banking company is, however, an extremely rare event. In fact, in the history of the deposit insurance system in the United States, only one top 10 banking company has ever failed: Continental Illinois, which in 1984 was the nation's eighth-largest commercial banking company. In Oshinsky's simulations, which were run 1,000 times for a hypothetical 50-year period, the probability that a top-10 bank would fail in any given year was about 1.04%—roughly equivalent to the mean annual default rate on a Ba-rated corporate bond.²⁸ Nevertheless, the probability of a megabank failure is still real enough and large enough so that it must be considered when the risks to the deposit insurance system are being assessed.²⁹

²⁸ The mean is calculated for the period 1970–2001. See Moody's Investor Service (2002).

²⁹ Low-probability events do happen. To put this in perspective, the probability of the U.S. Space Shuttle Program's experiencing a catastrophic failure was estimated to be about 1 in 250, or about 0.4%. Yet the 25-year-old shuttle program has already experienced two such catastrophic events.

Since current law holds the banking industry ultimately responsible for covering deposit insurance losses, the failure of a megabank would exact an enormous toll on the industry. Given the magnitude of the sums that would be involved if a megabank failed, there is a good chance that the U.S. Treasury would be called on to provide liquidity assistance, especially over the short term. Following that, the industry could be called on to pay almost \$60 billion to cover losses and to recapitalize the BIF. Of course, even before the BIF were exhausted, the FDIC, Congress, and the banking industry would have substantial concerns about the health of the deposit insurance system. Indeed, as indicated below, even if the insurance fund balance fell only moderately below the designated reserve ratio, the banking industry would still face sizable costs. Moreover, the fund balance is often viewed as a measure of regulatory success. Hence, maintaining a healthy fund balance would be in the best interest of all parties.

IV. OPTIONS FOR RECONCILING MEGABANKS AND DEPOSIT INSURANCE

The realization that the failure of one top 10 or top 25 banking company could be catastrophic to the deposit insurance fund, either totally exhausting the BIF or so decimating its reserve balance as to threaten its solvency, should be a call for action. Indeed, industry consolidation and the emergence of megabanks—the concentration of banking assets and deposits among the nation’s largest institutions—have created a situation in which deposit insurance for megabanks would not be possible without the FDIC’s ability to call on the U.S. Treasury for immediate funding needs. And even though the failure of a megabank remains a low-probability event, the probability is not so low that it can simply be dismissed. What, then, if anything, should be done?

As mentioned previously, in the past the U.S. deposit insurance system has generally relied on current premium income and a reserve fund to settle claims against its deposit guarantee. In the event of a large bank failure, however, those resources may not be sufficient. In the case of megabanks, the deposit insurance system must now rely directly on the banking industry and, in the extreme, the U.S. Treasury for primary coverage. If the banking industry and government policymakers are comfortable with this increased role for the industry and the U.S. Treasury in the deposit insurance system, substantive changes to the system to accommodate megabanks may not be necessary. However, if bankers and policymakers prefer not to expose the industry’s capital and U.S. taxpayers to additional risks arising from the deposit guarantee, then changes to the deposit insurance system will be necessary. In this section we explore a number of ideas for reforming the deposit insurance system so as to reconcile it with the existence of megabanks and the industry’s new structure.

A number of alternative approaches have been suggested for dealing with the catastrophe risk posed by megabanks. Organizationally, our discussion first focuses on the current system and its increased reliance on the banking industry’s

capital and the government's backup guarantee. Next, we look at options for risk reduction and risk avoidance while megabanks are retained within the current system. Finally, we explore the ramifications of removing megabanks from the deposit insurance system. None of the solutions is easy; all the options discussed here are complex and merit further research. Our intention here is only to survey the conceptual field, not to rigorously assess each approach.

MAINTAINING THE STATUS QUO—THE BANKING INDUSTRY AS PRIMARY INSURER OF MEGABANKS

In reaction to the \$150 billion total cost of the savings and loan crisis of the 1980s, lawmakers included in FDICIA provisions that fundamentally altered the mechanism by which the deposit insurance system is funded. Under FDICIA, the banking industry became more explicitly responsible for maintenance of the insurance funds and for any additional costs associated with the FDIC's divergence from least-cost procedures under a systemic-risk determination. In fact, perhaps the most profound and least understood change made by FDICIA to the deposit insurance system is that the FDIC, as administrator, now has the ability to call on the capital of the banking industry to recoup losses stemming from bank failures. In other words, the primary financial guarantor of the U.S. deposit insurance system is now the banking industry itself, not the U.S. Treasury.³⁰ Hence, should the BIF be severely taxed or exhausted by the failure of a megabank or by some other series of events, the banking industry would be called on to restore the deposit insurance fund to financial health. A megabank failure, even one that did not exhaust the BIF, could easily cost the banking industry tens of billions of dollars and significantly dampen lending and other economic and financial activity.

The funding of a megabank failure is intertwined with other issues as well, particularly the issues of "too big to fail" and fairness vis-à-vis small banks. The term, *too big to fail* (TBTF) refers to the practice followed by governments and bank regulators of protecting uninsured creditors and depositors of large banks when the banks fail. The main rationale behind TBTF is the need to avoid systemic risk. However, once depositors, creditors, and managers of large financial institutions realize that they are likely to be protected if the institution fails, a problem arises: banks likely to benefit from TBTF practices are able to pay a lower risk premium for borrowed funds and operate farther out on the risk-return frontier with less capital than if depositors and creditors were more sensitive to bank riskiness. TBTF then results in an increase in the relative riskiness of megabanks—an increase that, in turn, makes them more susceptible to failure. Finally, because TBTF (1) provides incentives for large depositors to place or shift funds to those large institutions that are likely to benefit from such

³⁰ The Treasury, however, continues to have a backup role as a provider of liquidity, and the system is still ultimately backed by the "full faith and credit" of the U.S. government.

a practice, and (2) because it provides those large institutions with certain cost and operating advantages, the practice can be seen as inherently unfair to smaller banks.

Although the moral hazard and incentive effects associated with TBTF were well-known before the consolidation trend of the 1990s, the greater number of large banking institutions and the emergence of megabanks have most likely exacerbated the TBTF problem.³¹ Indeed, we have shown above that the losses associated with the failure of the largest megabanks may very possibly result in the insolvency of the bank insurance fund and may even exceed the borrowing authority of the FDIC. Under such circumstances, the government will come under tremendous pressure to intervene to prevent a megabank failure. Indeed, despite government officials' claims to the contrary, many banking industry observers believe that a TBTF determination for the nation's largest banks is inevitable.

Current law provides that if a systemic-risk determination is made, the extra costs incurred because of the intervention (costs above those that would be realized if the least costly method of resolution were used) shall be recovered in a timely manner through a special assessment on all insured depository institutions. This special assessment will be in addition to any premiums being assessed the industry to restore or maintain the insurance fund balance.³² This systemic-risk funding arrangement raises additional questions about fairness, particularly because the extra costs (which could reach into the tens of billions of dollars) will fall partly on the vast majority of smaller banks for whom similar treatment, if they are distressed, is virtually inconceivable. The TBTF problem and the fairness issue, then, may persuade policymakers to be dissatisfied with the status quo and to explore other options for dealing with the megabank issue.

ADDRESSING CATASTROPHE RISK: RISK REDUCTION AND TRANSFER

As an alternative to the status quo, with its increased reliance on the banking industry's capital and the government's backup guarantee, policymakers and bank regulatory authorities could try to reduce the likelihood that a megabank failure would be catastrophic to the BIF. They could do this directly: either by addressing the issue of fund adequacy or by transferring some of the catastrophic risk to the private sector; or indirectly: by trying to reduce the potential losses of a megabank failure.

³¹ A thorough discussion of the TBTF problem can be found in Stern and Feldman (2004) and Gup (2004).

³² Normally, deposit insurance premiums are calculated on the basis of an insured institution's total domestic deposits. However, a special assessment to recover any additional losses incurred as a result of a "systemic-risk determination" are based on each insured institution's average total liabilities (total assets less total tangible equity less total subordinated debt—averaged over the previous 6-month period).

The Issue of Fund Adequacy

At year-end 2003 the BIF had a balance of \$33.8 billion and a ratio of reserves to insured deposits of 1.32%. As we have seen, a fund of this size is probably adequate to cover almost any loss scenario short of a top-ten bank failure.³³ But although there is a good chance that the BIF could be depleted by the failure of one of the nation's largest commercial banks, it is questionable whether maintaining a larger fund would be beneficial or financially prudent. The issue is one of scale. Because of the magnitudes of the potential losses involved, moderately increasing the size of the BIF is not likely to materially affect the probability of BIF insolvency. Results from Oshinsky (1999a), for example, show that the probability of a BIF insolvency does not significantly decrease even with a reserve ratio as high as 1.40% of insured deposits. In a separate study, Oshinsky (1999b) found a similar lack of improvement when he examined the prospects of merging the BIF and the Savings Association Insurance Fund (SAIF).³⁴ The probability of insolvency for the combined fund, for example, was 6.2%, compared with 6.5% for the BIF alone. Results from Bennett (2002) reinforce this finding. In her baseline simulations, the reserve ratio for a merged BIF and SAIF would have to be 2.54% to earn an A rating (corresponding to a 0.07% probability of default under Standard and Poor's rating system). These findings are not surprising, given that the size of the top ten commercial banks dwarfs that of all but the largest savings association.³⁵ And since the solvency of the insurance fund is so closely tied to the top ten megabanks, the addition of the SAIF's balance did little to affect the outcome of the simulations. This is not to say that there are not other good reasons for merging the funds. Indeed, there are. But a merger would not change the fact that excessive concentration has exposed the BIF to catastrophic losses should a megabank fail. And although it is certainly possible to build a fund that is large enough to reduce nearly to zero the probability of insolvency, a fund of that size may be difficult to justify economically.

Possible Methods for Transferring Risk

If enlarging the BIF to reduce the probability of fund insolvency resulting from a large-bank failure is not a feasible option, how else might the FDIC reduce its catastrophe risk exposure? One approach might be to use some type of loss-sharing arrangement with the private sector. This could involve, for example, the use of reinsurance contracts; or the FDIC could issue some type of capital market instrument that would effectively transfer some of the catastrophic loss to the private, nonbank sector. In effect, this kind of approach would broaden

³³ In 1998 pro forma simulations, the probability of the BIF's becoming insolvent in the absence of a top ten bank failure was only 0.5% (Oshinsky, 1999a).

³⁴ When year-end 2003 numbers are used, the combined fund would have about \$46 billion in reserves.

³⁵ Washington Mutual, Inc., with assets of \$276 billion at year-end 2003, would rank among the top ten banking companies.

the FDIC's access to new sources of capital. And that is the key. As long as the FDIC can hold or have immediate access to a large enough pool of liquid capital, it can always cover the larger losses expected from a megabank failure.

Reinsurance Reinsurance contracts could be written, for example, to insure the FDIC's losses above a certain amount or threshold (known as *excess of loss* protection) or for a certain percentage of its losses (a *pro rata* contract). For *excess of loss* coverage, once the FDIC's losses exceeded the threshold, the reinsurer would bear all remaining loss, subject to any cap if one were specified. For example, the FDIC could seek a \$5 billion policy to reinsure itself against any losses greater than, say, \$20 billion in a calendar year. The \$5 billion in total coverage could be obtained from a single insurer or from several reinsurers in smaller amounts. All terms, rates, claims, procedures, and conditions of these contracts would be negotiable.

Alternatively, another type of reinsurance contract, called a *facultative* contract, could be written to insure the FDIC only against losses associated with the failure of an individual megabank, not against losses experienced by the insurance fund. These contracts could provide either *pro rata* or *excess of loss* coverage. A *pro rata* policy would provide the FDIC with coverage against a fixed percentage of losses stemming from a megabank failure, while the *excess of loss* policy would provide protection for all or part of the losses above a stated threshold. In this way, at least part of the FDIC's catastrophe risk exposure from individual megabanks could be transferred to the private sector.

Several studies that have examined the feasibility of using the private reinsurance market for this purpose, however, have suggested that there may be some significant barriers to this approach.³⁶ Among them are the reinsurance industry's limited capital capacity for insuring catastrophe risk, the cyclical nature of the reinsurance market, and pricing difficulties caused by moral hazard, agency problems, and informational barriers. Pricing may be a particularly difficult issue. Froot (2001) found that premiums for reinsurance in the property and casualty sector were high relative to expected losses, especially after a catastrophic event. During the period studied (1980–1994) premiums averaged 7 times expected losses but were dramatically higher (as much as 25 times expected losses) for low-probability, high-loss events. One possible reason for the extraordinarily high premiums demanded by reinsurers for low-probability, high-loss event coverage is that capacity for this end of the reinsurance market is extremely limited. Another explanation is that a paucity of data on low-probability events makes it difficult for the reinsurance industry to accurately assess its risk exposure. Without an accurate risk assessment, pricing becomes nearly impossible. To ensure profitability, therefore, reinsurers still willing to offer such coverage tend to charge premiums that are many multiples above estimated

³⁶ See, for example, Sheehan (2001), Walker (1995), and FDIC (1993). For a more general discussion of the problems and limitations of the reinsurance market, see also Froot (2001, 1997), Cutler and Zekhauser (1997), and Jaffe (1997).

fair value. Because of these difficulties, the FDIC may find reinsurance to be a relatively expensive risk-sharing alternative.

Additionally, people in the reinsurance industry have suggested that “systemic-risk banks” may be uninsurable simply because of the magnitude of the losses involved and the uncertainty surrounding the government’s response to a megabank failure.³⁷ Indeed, leading reinsurers who participated in a recent FDIC-sponsored feasibility study indicated that they would generally prefer not to be exposed to losses from the failure of a single large bank and would prefer a transaction that excludes, or substantially limits, coverage of the largest banks.³⁸ Two reasons were given for this preference. First, several of the reinsurers stated that they already held risk from large banking institutions whose credit-default risk trades in the private marketplace in the form of either bank debt, credit-default swaps, or insurance. Consequently these reinsurers said they would be more receptive to a transaction that did not include the largest 100–150 banks. Second, the reinsurers believed that individual bank risk is sufficiently complex, opaque, and subject to rapid change as to severely limit their ability to accurately assess it.

In sum, the possibility of successfully engaging the private reinsurance market to reduce the FDIC’s risk exposure to megabanks appears to face significant obstacles. Nevertheless, the idea of transferring some of the FDIC’s catastrophe risk to the private market remains appealing, and if these problems can be overcome in the future, its potential should be further explored.

Securitization In addition to the reinsurance market, the securities markets also offer an alternative avenue for transferring and diversifying the catastrophe risk faced by the FDIC. Wall (1997), for example, has proposed that the FDIC issue securities for which the promised interest payments would be contingent on the condition of the insurance fund. If the BIF required taxpayer contributions to satisfy deposit insurance claims, the security would receive no payment. Although Wall envisioned his “capital notes” only as a mechanism through which the deposit insurer could gather information about how the private market viewed the risks faced by the BIF, others have suggested using such securities to help absorb deposit insurance losses.

Catastrophe bonds (CAT bonds), for example, have already been used in the private sector to provide *excess of loss* catastrophe coverage for losses stemming from hurricane damage. In the event that a hurricane causes the issuer of these securities to incur losses above a stated threshold, buyers will forfeit any earned interest and/or their principal. Similar instruments could be used in much the same way by the FDIC.³⁹ Moreover, securities such as CAT bonds avoid some of the problems associated with reinsurance. For example, credit risk (i.e., the

³⁷ FDIC (1993), p 32.

³⁸ MMC Enterprise Risk (2001).

³⁹ Sheehan (2003) explores the potential use of catastrophe securities for diversifying the FDIC’s risk exposure to a large-bank failure.

risk that the reinsurer will be unable to pay its obligations) is no longer an issue. However, on the negative side, CAT securities suffer from some of the same pricing problems that plague the reinsurance market for low-probability, high-loss events: high transactions costs, limited capacity, and difficulties in accurately determining expected losses. Hence, like reinsurance, catastrophe securities may prove relatively expensive to issue.

Parenthetically, interest payments on these securities could be made directly from the insurance fund or from a special annual assessment on the largest banking companies. In fact, under FDICIA the FDIC already has the authority to charge large banks higher premiums. Because this segment of the industry represents the source of nearly all the catastrophe risk faced by the FDIC, a special assessment seems reasonable.

Other insurance-like financial instruments, including exchange-traded property catastrophe options and futures, are also being developed as vehicles by which insurers can diversify, avoid, or reduce their risk exposures to catastrophic events. Some of the instruments hold considerable promise, but the market for them is not well developed. In fact, the Chicago Board of Trade recently delisted—for lack of interest—some catastrophe options that had been trading since the mid-1990s. Hence, it is too soon to assess the usefulness of catastrophe securities to the FDIC. However, the potential for the FDIC to reduce its increased risk exposure by securitizing the risk of either excessive deposit insurance losses or a single catastrophic megabank failure offers tantalizing possibilities, and the development of such securities should be closely monitored and studied.

IMPOSING NEW REGULATORY REQUIREMENTS ON MEGABANKS

The approaches discussed above seek to reduce or transfer catastrophe risk at the level of the system or agency. But policymakers and bank regulators could also attempt to reduce the deposit insurance system's risk exposure by imposing new regulatory requirements on individual megabanks. Some of these approaches have been previously proposed but were evaluated mainly for their potential to introduce additional market discipline into the banking system or as a means of obtaining a market perception of individual bank risk. Our interest, however, is in the proposals' potential for reducing the FDIC's exposure to catastrophic losses stemming from a megabank failure.

Increased Capital Levels for Megabanks

Regulators could, for example, require megabanks to increase their overall capital levels, both as a means of instilling greater market discipline and as an added cushion to absorb operating losses. Increased capital levels would, in turn, lower a bank's probability of failure. A lower failure risk, combined with the prompt corrective action provisions of FDICIA, should in turn act to reduce the loss exposure of the deposit insurance fund. Higher capital requirements for large banks—in the range, say, of 10%—are also consistent with what the market

might require of banks in the absence of their deposit insurance protection. For example, in the year 2003, FDIC-insured commercial banks maintained, on average, a total equity capital-to-asset ratio of about 9.1%.⁴⁰ This ratio is just over half of the industry's average for the same ratio before deposit insurance was introduced in 1933.⁴¹ It is also significantly less than the 11% median capital-to-asset ratios maintained by large finance companies throughout most of the 1990s.⁴² This suggests that, in the absence of federal deposit insurance, the market would probably require banks to maintain capital ratios in the range of 10% or more.

Admittedly a higher minimum capital requirement for large banks would impose some additional costs, but these can be viewed as payment for deposit insurance coverage and for other aspects of the government's safety net, some or all of which are arguably underpriced. As argued by Shull and Hanweck (2002), these costs would also tend to discourage megamergers by eliminating the growth incentive to achieve TBTF status and by removing at least some of the competitive problems vis-à-vis small banks. It should also be noted that current minimum capital requirements are international in scope and that raising capital requirements would be in direct contradiction to ongoing international efforts to modernize capital regulation for internationally-active banks.⁴³ Raising capital requirements unilaterally could also affect the competitiveness of U.S. banks, though its doing so would depend to a large degree on the costs of meeting the higher requirement. For large well-run banks, these costs need not be significant, especially if regulators allow subordinated debt to fulfill the *additional* capital requirement.⁴⁴

⁴⁰ Since the mid-1990s, the core capital, or "leverage," ratio for U.S. commercial banks has averaged only about 7.7% of balance-sheet assets (unweighted). Core capital is the amount of capital that would be readily available to absorb losses. It consists of common equity capital plus noncumulative perpetual preferred stock plus minority interest in consolidated subsidiaries. Goodwill and other intangible assets are not included in core capital.

⁴¹ Kaufman (1992).

⁴² Kwast and Passmore (1997).

⁴³ Recently, bank regulators have offered a new international capital accord (Basel II) that abandons the current fixed-ratio approach to capital regulation, in favor of a more flexible approach that relies on a bank's own internal value-at-risk models for calculating capital requirements. The new approach is supposed to better reflect the underlying risk of an institution's own credit portfolio and create more appropriate risk-taking incentives for banks. Analysis of the Basel II proposal by FDIC economists, however, suggests that the new risk-based capital regime could result in significant reductions in minimum capital requirements for many of the largest U.S. banks (French, 2004). Moreover, as proposed, Basel II's institution-specific, minimum capital requirements fail to consider the significant external costs of a large bank failure.

⁴⁴ Subordinated debt is unsecured debt of medium to long maturity that is subordinated to all other indebtedness of the bank, including deposits, and is not supported by any form of credit enhancement. Numerous proposals over the last decade have suggested that regulators should impose a subordinated-debt requirement on large banks. However, most of these proposals have not sought to require subordinated debt on top of existing capital requirements. In our view, this is a major weakness of past proposals. If banks are required to issue subordinated debt on this basis, the FDIC is protected only to the extent that subordinated debt replaces deposits. Protection would not be so limited if the subordinated debt requirement supplemented (rather than replaced) existing capital requirements.

A Subordinated Debt Requirement

As a funding instrument, subordinated debt has several characteristics that make it attractive to regulators. It shares some attributes of capital yet is clearly debt, and the interests of debtholders coincide more closely with those of the FDIC than do the interests of those who possess any other form of commercial bank liability or equity. Subordinated debtholders do not share in the upside potential of the bank (unlike shareholders), are long-term creditors, and face a high likelihood of loss in the event of the institution's failure. Indeed, in liquidation, the priority status of subordinated debt is wedged between that of general creditors and that of shareholders. In past resolutions of failed banks, the FDIC has generally not protected holders of subordinated debt.

Subordinated debt also has the advantage of being one of the least-expensive sources of bank capital. A recent report by the U.S. Shadow Financial Regulatory Committee estimates that the transaction costs of subordinated-debt offerings are less than half those of common stock offerings for large banks.⁴⁵ This cost advantage has also been suggested by Jones (2000). In addition, issuing and holding subordinated debt has tax advantages that tend to hold down the overall costs. However, the cost of a subordinated-debt requirement to a banking organization will ultimately depend on how, how much, and where the funds are raised (at the bank level or the holding company level), but on the whole the costs of requiring a minimum level of subordinated debt do not appear to be large.

Yet, despite the amount of attention and study this proposal has received over the last decade, regulators have so far deferred any decision on whether to adopt a subordinated-debt requirement.⁴⁶ Regulatory ambivalence about a sub-debt requirement, however, is based largely on the potential merits of using sub debt as an instrument of market discipline, as a means for gathering market information about a bank's health, or as a market-based trigger for regulatory action. Earlier assessments have downplayed the benefits of using subordinated debt as a protective cushion against losses resulting from a megabank failure. The emergence of megabanks, however, has made the loss-reducing property of subordinated debt much more important. In this light, a sub-debt requirement offers a highly practical and effective means of transferring at least some of the FDIC's catastrophe risk exposure to the private sector.

Indeed, Sheehan (2000) suggests that sub debt might more appropriately be characterized as a limited form of private deposit insurance with similarities to both reinsurance and a catastrophe bond. Subordinated debtholders, for example, would be exposed to losses only if losses exceeded the bank's equity capital. If the bank failed, subordinated debtholders would receive less than full

⁴⁵ The Shadow Financial Regulatory Committee (2000).

⁴⁶ For a thorough discussion of the subordinated-debt proposal and an assessment of it from a regulatory perspective, see Board of Governors of the Federal Reserve System (2001) and Marino (2000).

payment and might lose their entire investment. In this way, Sheehan explains, subordinated debt would work just like a catastrophe bond: investors would purchase a security with predetermined event-linked payments, and the catastrophe would be the bank's failure. Equivalently, this would be much like the FDIC's purchasing a layer of reinsurance. The reinsurer (subordinated debt-holder) would pay for losses only in excess of bank equity, with the loss capped by the outstanding amount of subordinated debt. Losses greater than equity plus subordinated debt would be borne by general creditors, uninsured depositors, or the insurance funds.

The use of subordinated debt as a coinsurance agent, however, would require policymakers and the FDIC to rethink the fundamental nature of deposit insurance. A sizable subordinated-debt requirement for large banks could be viewed as a major reform of the deposit insurance system, one that shifted insurance risk from the FDIC and the banking industry to the securities market. Although subtle, this shift would, in effect, redefine the structure of the deposit insurance system and the relative roles played by the FDIC, the banking industry, and the U.S. Treasury.

Other Measures

In addition to raising capital levels and imposing a subordinated-debt requirement, other measures designed to directly reduce deposit insurance losses have been proposed. One is that megabanks acquire some form of supplemental insurance coverage either for depositors or for the banks themselves. Another is that megabanks be subjected to increased supervision and reporting requirements designed to give supervisors and private creditors additional information on an institution's risk taking. Also, Shull and Hanweck (2002) recommend several types of restraints on large bank mergers, including a requirement that in each large bank merger case an evaluation is done of the long-term competitive effects of cumulative approvals and how they affect the industry's structure. Some of these various measures are already being implemented (see, for example, the Federal Reserve Board's LCBO Supervisory Program), and others are being studied. Hanc (1999) offers a broad review of many of these reform proposals. What sets these approaches apart, however, is their emphasis on treating large banks differently. In essence, they recognize the new reality: megabanks have become a distinct group of institutions that pose a substantively different risk to the deposit insurance system. As such, they merit a separate and distinctively more intensive approach to supervision and regulation, an approach whose purpose is to prevent a megabank failure or, at the very least, reduce the losses associated with its failure. Yet these proposals all stop short of taking the more drastic step of excluding megabanks from the deposit insurance system—a previously unthinkable idea that now merits some discussion.

Excluding Megabanks from the Deposit Insurance System A straightforward approach to reducing the risks posed by megabanks is simply to exclude them

from the deposit insurance system. The consolidation of the 1990s and the rise of giant financial institutions has essentially split the banking industry into two distinct groups—megabanks and the rest of the industry. If megabanks as a group (or some subgroup of them) were removed from the deposit insurance system and given the same status under the federal safety net as nonbank financial institutions that have systemic-risk potential, the deposit insurance system could continue to provide insurance protection to the thousands of depositors at the smaller banks with very little risk of ever having to rely on the industry's capital or the government's backup guarantee. Since the risks to the deposit insurance fund are almost totally related to the risks posed by the top 10–25 banking companies, the deposit insurance system would face a much smaller threat of insolvency in the foreseeable future.

The implications of removing megabanks from the deposit insurance system are many and complex. Consequently, a thorough treatment of the proposal is beyond the scope of this article. We can speculate, however, about what some of the major implications might be. First and foremost, excluding megabanks from deposit insurance coverage would remove nearly all the insolvency risk from the deposit insurance fund. It would also place megabanks on the same competitive field as large nonbank financial institutions and for the most part largely alleviate any fairness issues vis-à-vis smaller banks. Without government deposit insurance, megabanks might also be exposed to the full range of market discipline.⁴⁷ Private creditors and depositors, for example, would surely seek to charge a risk premium compatible with a megabank's risk profile. Naturally, in order to assess the bank's riskiness, private creditors would demand more and better information about the bank's activities and risk taking. A megabank's depositors and creditors might also seek other guarantees in the private sector. In turn, insurance companies would seek more information and might want to impose restrictive covenants on the megabank's activities. In all likelihood the private sector would also demand capital levels more in line with those of nonbank financial institutions. As a result, megabanks would be forced by the market to adopt a more cautious approach to risk taking.

Of course, excluding megabanks from the deposit insurance system also has many negative aspects. Excluding megabanks from the deposit insurance system might remove them from the federal statutory framework governing the resolution of failed depository institutions. This framework has been designed specifically to promote the efficient, expeditious, and orderly liquidation of failed banking institutions and has, for the most part, been tremendously successful. Indeed, the FDIC's track record of timely and efficient resolution of failed institutions has minimized disruptions to depositors, mitigated the adverse economic effects of financial-institution failures, and promoted public

⁴⁷ This outcome would depend, of course, on the market's perception of the likelihood that the government would bail out a failing institution.

confidence in the banking system in times of crisis. In contrast, the resolution of a failed megabank outside the current legal framework would seem nightmarish.

Another negative aspect of removing the federal deposit guarantee from megabanks is that the removal could confuse consumers. Because consumers have come to regard the government's deposit guarantee as a ubiquitous and unbreakable covenant, the government's withdrawal of deposit insurance from a group of megabanks might result in a loss of confidence among all depositors and might introduce instability into the nation's banking system.

Furthermore, removing deposit insurance from megabanks would not ameliorate the TBTF problem. Actually, it might even exacerbate it. After all, the systemic-risk threat of a megabank failure would still remain, only now the government would no longer have a legal or regulatory framework in place to handle such a failure. Bank managers, depositors, and creditors might, therefore, come to believe that a megabank was more likely than ever to receive a bailout or other form of government assistance in order to prevent a complicated and protracted resolution, with attendant economic disruptions and political fallout. Some have also argued that with TBTF practices in place, excluding megabanks would simply replace explicit deposit insurance with an implicit guarantee for which the government received no payment. Moreover, without the explicit deposit insurance link, the government might find it harder to justify safety-and-soundness supervision over the institutions—a situation that could increase both the risk of failure and the failure's cost to the government.

In summary, excluding megabanks from the deposit insurance system would have both advantages and disadvantages, and it is not immediately clear whether the option would be a good one. But the idea itself—though it may seem radical and politically unpalatable—may in reality be nothing more than a recognition that megabanks have outgrown the deposit insurance system.

V. SUMMARY AND CONCLUSIONS

The basic premise of this article has been that consolidation in the U.S. banking industry over the past decade has so fundamentally altered the industry's structure that policymakers and bank regulatory authorities need to rethink the financial safety net for depository institutions. In particular, the emergence in the last few years of megabanks—institutions whose size dwarfs anything before seen in the history of the U.S. banking industry—has raised serious questions about the scope, operation, and viability of the nation's deposit insurance system. Indeed, concentration among the largest U.S. banks has inextricably linked the health of the U.S. deposit insurance system to that of the top ten commercial banking companies. For example, the failure of any one of the top-5 banking companies could be catastrophic, overwhelming the resources of the FDIC and exposing the banking industry and the federal government (taxpayers) to huge potential liabilities. Although the probability of a large-bank failure is remote, it is not so small that it can be dismissed.

In the past, a fully capitalized bank insurance fund was mathematically capable of handling any single bank failure. Now, however, in the event of a megabank failure it would have to rely more heavily on the U.S. Treasury for short-term liquidity funding. Longer-term, the banking industry is now responsible for repaying any losses to the deposit insurance fund and maintaining adequate fund reserves. Should a megabank fail, this liability could easily amount to tens of billions of dollars. Such costs would surely have tremendous economic and political consequences.

Finally, this article has explored a number of approaches to reforming the deposit insurance system so as to reconcile it with the risks posed by megabanks and the new industry structure. One approach is to have the FDIC seek ways of sharing some of the risk with the private sector. This could involve, for example, the use of reinsurance contracts or the FDIC's issuance of some type of security, such as a catastrophe bond, that would effectively transfer to the private sector some of the catastrophic loss stemming from a megabank failure. Alternatively, the FDIC could attempt to reduce its risk exposure by trying to minimize the probability of a large-bank failure. This approach calls for bank regulatory authorities to impose more stringent supervisory and regulatory requirements on megabanks. For example, megabanks could be required to hold more capital, in the form of either equity or subordinated debt, so as to reduce the likelihood of failure by expanding the pool of capital available to absorb losses when they occur. Other measures, such as requiring some form of supplemental insurance or increasing the supervisory and reporting requirements, have also been suggested as a means of reducing the likelihood of a megabank failure. Finally, the heretofore-inconceivable idea of excluding megabanks from the deposit insurance system altogether has also been explored as a means of eliminating any catastrophe risk to the deposit insurance system. Although each alternative has its pluses and minuses, they all have one thing in common: a recognition that consolidation in the banking industry, with the subsequent concentration of deposits in a few megabanks, poses a new and growing risk to the health of the deposit insurance system.

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