Banking Industry Consolidation: Past Changes and Implications for the Future

by

Daniel E. Nolle*

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*Office of the Comptroller of the Currency

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Please address questions to Daniel E. Nolle, Financial Economist, Bank Research Division, Office of the Comptroller of the Currency, 250 E Street SW, Washington, DC 20219, (202) 874-5250.

Introduction

Despite the merger waves of the 1960s and 1970s, structural change in the banking industry for most of the forty years prior to 1980 was evolutionary in nature, and consequently the performance of the industry was fairly predictable. Since 1980, however, commercial banking has undergone more radical structural change, the most obvious evidence of which is the substantial decline in the number of banks. This article highlights and describes those changes, providing a point of departure for discussing possible future changes in banking structure.

The fundamental causes of change in the commercial banking industry are discussed in the first section. We conclude that two changes in particular have had a direct impact on banking structure: the search for efficiencies, and the relaxation of geographic restrictions. The second section describes structural changes in the number and size distribution of banks, and the ways in which the number of banks has declined over time. The banking industry has far fewer, but larger banks, now than in 1980. Much of the consolidation of the industry, however, was due to corporate reorganizations within bank holding companies. The third section more fully explores the corporate reorganization phenomenon, and shows trends toward greater centralization of banking organizations as geographic barriers to branching are reduced.

The fourth section of the paper offers a simple projection of what the banking industry might look like if past structural changes persist through the end of the decade. Simple extrapolations of past consolidation trends are developed in order to consider possible changes in the number of banks by the beginning of 2001. Because the passage of interstate branch banking legislation looks increasingly likely, one scenario covering the possible impact of interstate branching is also incorporated into the projections. The paper concludes by summarizing what we know about actual structural changes in commercial banking, and discusses areas of further research that are warranted.

I. What Caused Structural Changes in the Banking Industry?

A number of recent studies treat the causes of consolidation as a secondary topic within the broader issue of the "decline" of the banking industry.[1] In general, these studies carefully point out that the shrinkage in the number of banks is not necessarily equivalent to a decline in banking's role in the economy. Nevertheless, this body of work at least loosely ties fundamental alterations in the economic and regulatory environment faced by banks to structural changes.

There is a consensus in this literature that the major "environmental jolts" experienced by the banking industry include the following factors.[2] Bartholomew and Mote (1991), Barth, Brumbaugh, and Litan (1992), Kaufman (1993), Rogers (1993), Boyd and Gertler (1993), and Wheelock (1993) argue that competitive pressures have increased from nonbanks, and large corporate borrowers are accessing the credit markets directly because of lower transactions costs; Boyd and Gertler (1993), and Rogers (1993) also discuss competition from foreign

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[1] See, e.g., Kaufman (1993), Rogers (1993), Boyd and Gertler (1993), and Barth, Brumbaugh, and Litan (1992). The literature on the "decline" of banking generally takes as its starting point the decrease in the banking industry's share of the provision of financial services. This research has moved rather rapidly from an assertion that the industry is in decline (see, e.g., Barth et al. (1992)), to a question about the issue (see, e.g., Boyd and Gertler (1993)). Wheelock (1993) provides a recent summary of the fundamental causes of change in the banking industry as they impact structural change. Boyd and Graham (1991) deal directly with the topic of consolidation, which they define as "a decrease in the number of firms in the industry combined with an increase in their average size."

[2] Rogers (1993, p. 3) coined the term "environmental jolts".

banks. Boyd and Gertler (1993), Rogers (1993), and Wheelock (1993) identify deregulation of product and geographic restrictions as a second fundamental change in the banking environment. In addition, technological change is mentioned by Barth, Brumbaugh, and Litan (1992), Kaufman (1993), and Rogers (1993), as a separate fundamental factor allowing nonbank financial intermediaries to compete more directly with banks. Further, Boyd and Graham (1991), Barth, Brumbaugh, and Litan (1992), Boyd and Gertler (1993), and Kaufman (1993), make the point that the existence of a deposit insurance scheme that is perceived to institutionalize the principle of "too big to fail" has contributed to structural changes in the industry as well.[3]

The more technically-oriented research moves from the kind of far-reaching discussion found in the "decline/future of the banking industry" literature, to an analysis of the impact of two particular stimuli for changes in the banking industry (which, at least implicitly, are connected to one or more of the fundamental changes dealt with in the "decline/future" literature). These stimuli are first, the search for improved performance, especially in terms of efficiency gains; and, second, the relaxation of geographic restrictions on banking.

One vein of the performance literature considers the impact of mergers on performance, while a second vein examines the impact of corporate organization on performance.[4] Both sets of work have implications for structural change in the industry. The

[3] A few studies also mention macroeconomic factors - inflation (Barth, Brumbaugh, and Litan (1992)). (Wheelock (1993)); and government budget deficits (Garrison (1993)) - as fundamental causes of change in the banking industry.

[4] Evanoff and Israilevich (1991), and Berger, Hunter, and Timme (1993) provide extensive surveys of the efficiencies literature. Srinivasan (1992) focuses on the mergers-and-efficiencies literature. There is still quite a debate on whether, and in what respect, mergers improve bank efficiencies. DeYoung and Whalen (1994) survey the corporate organization and performance literature, the conclusions of which are also open to further

reasoning linking the search for improvements in performance and banking industry consolidation runs as follows. Heightened competitive pressures compel banks to search for cost savings, revenue increases, and/or quality improvements via mergers. Mergers can result in performance improvements for at least two reasons. Bank mergers show the potential to weed out inefficiencies, as acquiring banks tend to be operated more efficiently than acquired banks.[5] In addition, within-holding company mergers allow banking companies to centralize their operations and, ultimately, to change from multi-bank entities to one-bank entities. This can improve performance by cutting costs (as separate boards of directors, regulatory fees, etc. are eliminated), and because the one-bank corporate form is less prone to X-inefficiencies than is the multi-bank holding company corporate form.

The other main stimulus for the merger wave in banking is the spate of recent changes in state laws restricting the geographic expansion of banking.[6] The reasoning linking the removal of intrastate branching restrictions and banking industry consolidation is twofold. First, mergers between unaffiliated banks allow acquiring banks to extend their reach into other geographic markets. Second, lowering legal barriers to intrastate branching has allowed multi-bank holding companies to merge existing subsidiary banks from different geographic locations into one another, permitting reductions in operating costs. Again, this is

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investigation.

[5] However, the evidence that these efficiencies opportunities are actually captured post-merger is spotty. See DeYoung and Whalen (1994) on this issue.

[6] Amel (1993) provides a compendium of intra-state branching laws. See also Van Walleghem (1992).

desirable because it allows multi-bank organizations to move toward becoming more efficient one-bank organizations.

There is also a logical argument for expecting an increase in consolidation from more extensive interstate banking, though the route is somewhat less direct than for intrastate branching.[7] Interstate banking laws allow an out-of-state bank to acquire a bank in the host state, provided the acquired bank remains a separately chartered subsidiary bank, an action that by itself would not reduce the number of banks in the system. However, if the acquiring bank purchases two or more banks in a host state which allows intrastate branching, it might be possible for the acquiring bank to merge the acquired banks, turning some of them into branches. What do the data tell us about the nature of past consolidation of the industry? Attention is directed first to changes in the number and size distribution of banks.

II. Structural Changes: Banks[8]

The number of banks dropped by twenty-five percent over the 1980-1993 period, a decline consistent with the popular impression of a "shrinking" banking industry. However, as Charts Ia and Ib illustrate, the decline in the number of banks was not the only significant structural change in banking. In particular, Chart Ia shows that the number of banking companies -- bank holding companies plus banks without a holding company affiliation -- dropped by one-third since 1980. At the same time, the number of branches soared during

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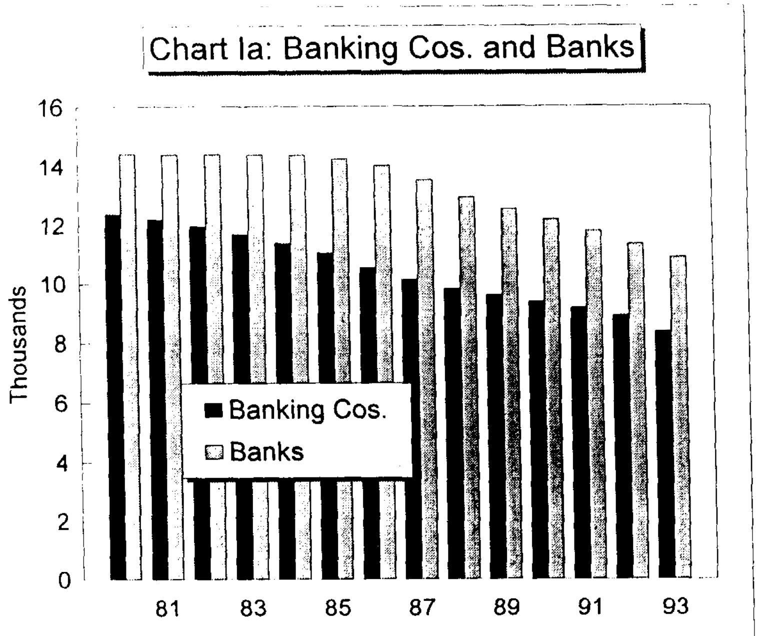
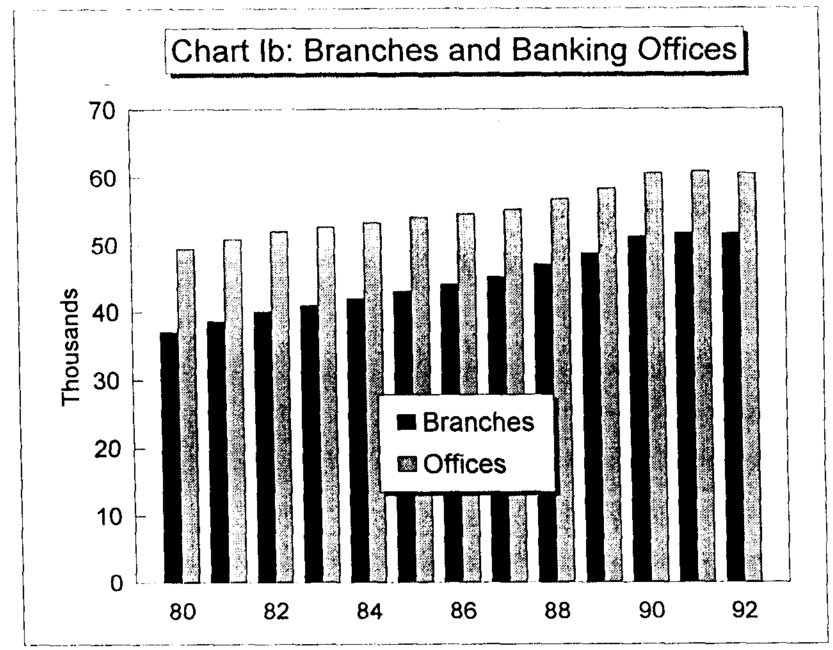
[7] Interstate banking laws generally allow an out-of-state bank or bank holding company to operate a *bank* in the host state, but few states allow out-of-state banks to *branch* across state lines. Savage (1993) gives a thorough review of past changes in, and the current state of, interstate banking. Amel (1993) lists interstate banking laws on a state-by-state basis.

[8] See Appendix 1 for a description of the data sources used in this study.

Banking Companies, Banks, and Branches





	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Bank Cos.	12,368	12,200	11,960	11,685	11,385	11,047	10,528	10,133	9,824	9,596	9,376	9,168	8,910	8,375
Banks	14,429	14,404	14,409	14,383	14,379	14,255	14,027	13,518	12,947	12,547	12,193	11,787	11,351	10,870
Branches	37,109	38,669	40,084	41,009	41,927	43,082	44,089	45,193	47,020	48,775	51,245	51,771	51,664	n.a.
Bank Offcs	49,477	50,869	52,044	52,694	53,312	54,129	54,617	55,326	56,844	58,371	60,621	60,939	60,574	n.a.

*Banks are all FDIC-insured commercial banks. Banking companies include independent FDIC-insured commercial banks, and bank holding companies with FDIC-insured commercial banks. Branches include all offices of a bank, other than the head office, at which deposits are received, checks paid, or money lent (ATMs and U.S. branches of foreign banks are not included). Banking offices are banks plus branches. n.a.: not available.

Source Federal Financial Institutions Examination Council (FFIEC), "Consolidated Reports of Condition and Income." 1993 data are preliminary.

the 1980s and early 1990s (Chart Ib), rising from 37,109 in 1980 to 51,771 in 1991, before dipping slightly in 1992.[9] As a consequence, while the number of banks declined substantially over the period, the surge in the number of branches meant that the number of banking offices -- banks plus branches -- actually increased by over twenty percent.

Breaking out the data by bank size groups reveals a distinct pattern to the decline in the number of banks. Charts IIa and IIb show that while the number of banks in the smallest size category (i.e., less than $100 million in assets) declined over the entire 1980 to 1993 period, the number of banks in every other size category increased. Another way of viewing this is that all of the *net loss* in the number of banks over the 1980-1993 period was in the small size category of banks. This conclusion holds even if assets are measured in real (1987) dollars, as Charts IIIa and IIIb show. Furthermore, the share of banking system assets accounted for by small banks declined over the period, while asset shares accounted for by the two largest size groups of banks increased (Charts IVa and IVb).[10]

Data on consolidation of the industry can be decomposed into failures, entry, and mergers.[11] Despite the perception that the number of banks has fallen because so many have failed, Chart V shows the importance of mergers in the on-going structural change of the banking industry. In particular, as Chart V indicates, even in the late 1980s, when the

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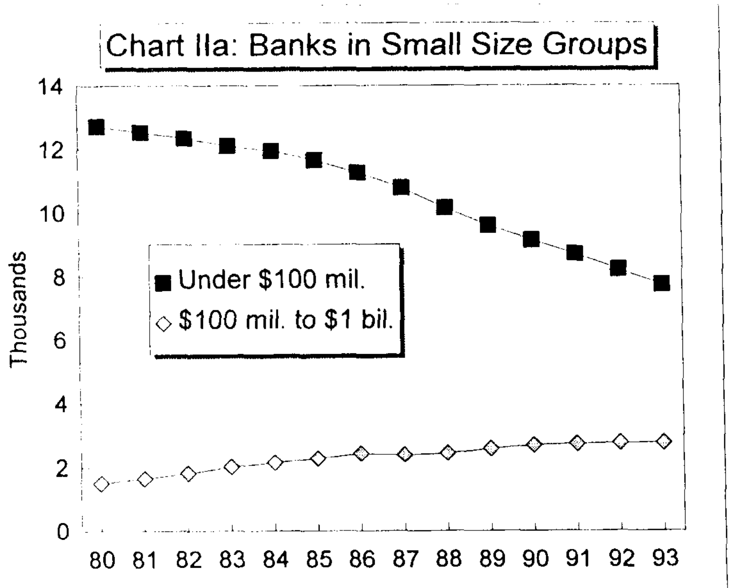
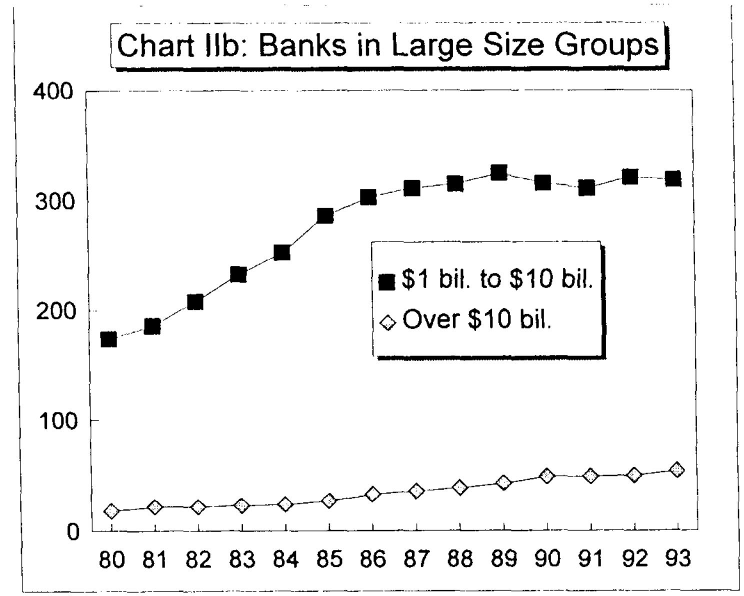
[9] The branches data do not include ATMs or U.S. branches and agencies of foreign banks. At the time this paper was written 1993 data was preliminary and did not appear to include comprehensive information on bank branches.

[10] These relative shifts in assets shares also hold when assets are measured in constant (1987) dollars.

[11] Specifically, the data on consolidation show the changes in the number of bank charters. Hence, mergers are the number of bank charters that disappeared as a result of acquisitions. "New banks" or "new charters" includes thrifts that converted to banks, beginning with the 1990 data. For failures, the number of FDIC-assisted transactions is included even though no charter disappearances are directly associated with them.

Number of Banks by Asset Size Groups (current dollars)

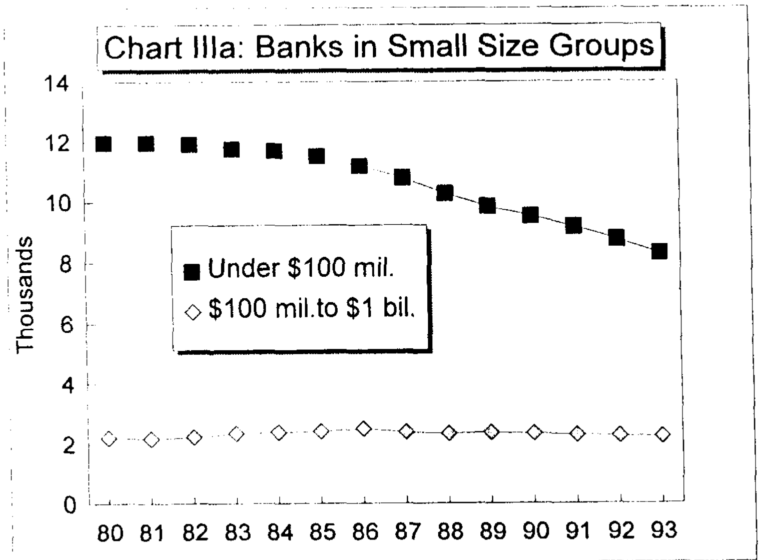


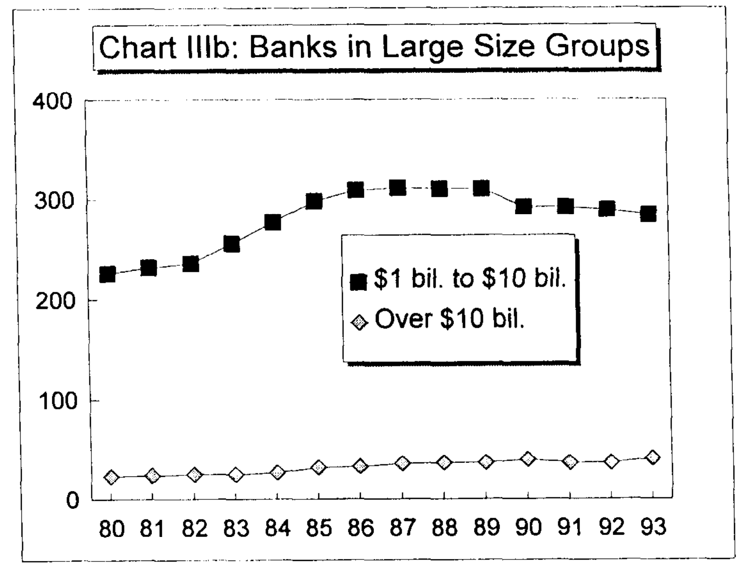


Asset Size	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Under $100 mil.	12,729	12,540	12,358	12,111	11,954	11,661	11,267	10,782	10,156	9,600	9,146	8,706	8,221	7,738
$100 mil.-$1 bil.	1,508	1,656	1,821	2,016	2,148	2,281	2,424	2,389	2,437	2,579	2,682	2,721	2,760	2,759
$1 bil.-$10 bil.	174	186	208	233	253	286	303	311	315	325	316	311	321	319
Over $10 bil.	18	22	22	23	24	27	33	36	39	43	49	49	50	54
Total	14,429	14,404	14,409	14,383	14,379	14,255	14,027	13,518	12,947	12,547	12,193	11,787	11,352	10,870

Source: FFIEC, "Consolidated Reports of Condition and Income". 1993 data are preliminary.

Number of Banks by Asset Size Groups (constant dollars)*





Asset Size	**1980**	**1981**	**1982**	**1983**	**1984**	**1985**	**1986**	**1987**	**1988**	**1989**	**1990**	**1991**	**1992**	**1993**
Under $100 mil.	11,967	11,971	11,917	11,754	11,698	11,515	11,185	10,782	10,262	9,832	9,520	9,168	8,760	8296
$100 mil.-$1 bil.	2,213	2,177	2,231	2,348	2,377	2,410	2,500	2,389	2,338	2,368	2,341	2,290	2,266	2,249
$1 bil.-$10 bil.	226	232	236	256	277	298	309	311	310	310	292	292	289	284
Over $10 bil.	23	24	25	25	27	32	33	36	37	37	40	37	37	41
Total	14,429	14,404	14,409	14,383	14,379	14,255	14,027	13,518	12,947	12,547	12,193	11,787	11,352	10,870

*GDP implicit price deflator (1987=100) used.

Source: FFIEC, "Consolidated Reports of Condition and Income". 1993 data are preliminary.

Chart IVa: 1980 Asset Shares, by Bank Size Groups (curr.$)

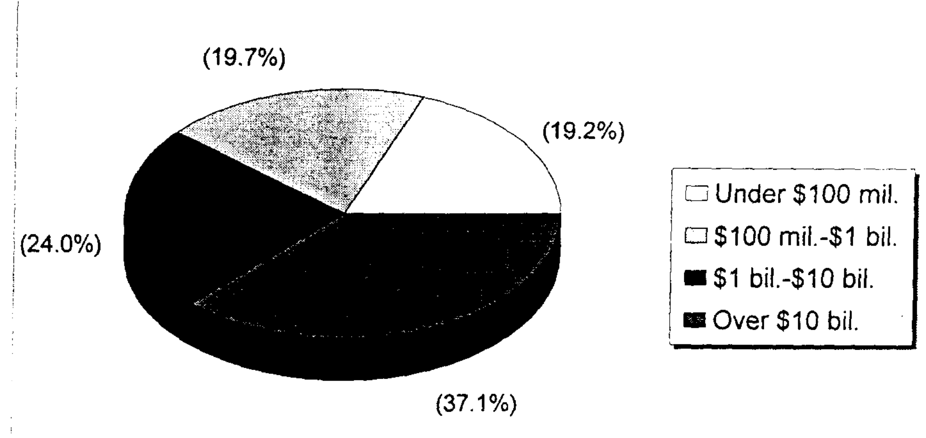
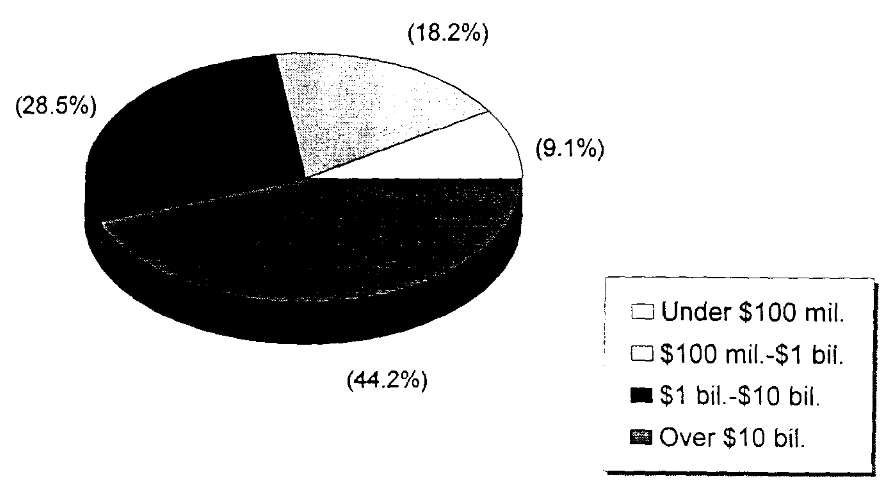


Chart IVb: 1993 Asset Shares by Bank Size Groups (curr.$)



Source: FFIEC, "Consolidated Reports of Condition and Income". 1993 data are preliminary.

number of bank failures exceeded 200 per year, the drop in the number of banks was dominated by mergers. Over the entire period from 1980 through 1993, 5,202 banks disappeared via mergers, three and one-half times the 1,456 bank failures.[12] Furthermore, Chart V makes it clear that the merger "wave" that began in the mid-1980s continued through 1993, even as the number of bank failures declined sharply. Given their importance, a closer look at bank mergers is warranted.

The number of bank mergers increased steadily through the first half of the 1980s, but really surged after 1986.[13] Chart VI and Table I reveal several important aspects of bank mergers over the 1987-1993 period. The majority of mergers were between banks within the same bank holding company ("intra-mergers"), but the number of mergers between unaffiliated banks ("inter-mergers") has risen over the past several years, surpassing intra-mergers in 1993.[14] Furthermore, as Table I shows, most banks disappearing via merger were small banks (under $100 million in assets), and in every size category within-holding company mergers dominated.

To summarize, the data show that there was a substantial decline in the number of banks, and the drop was essentially in the small bank category. Banks over $1billion in

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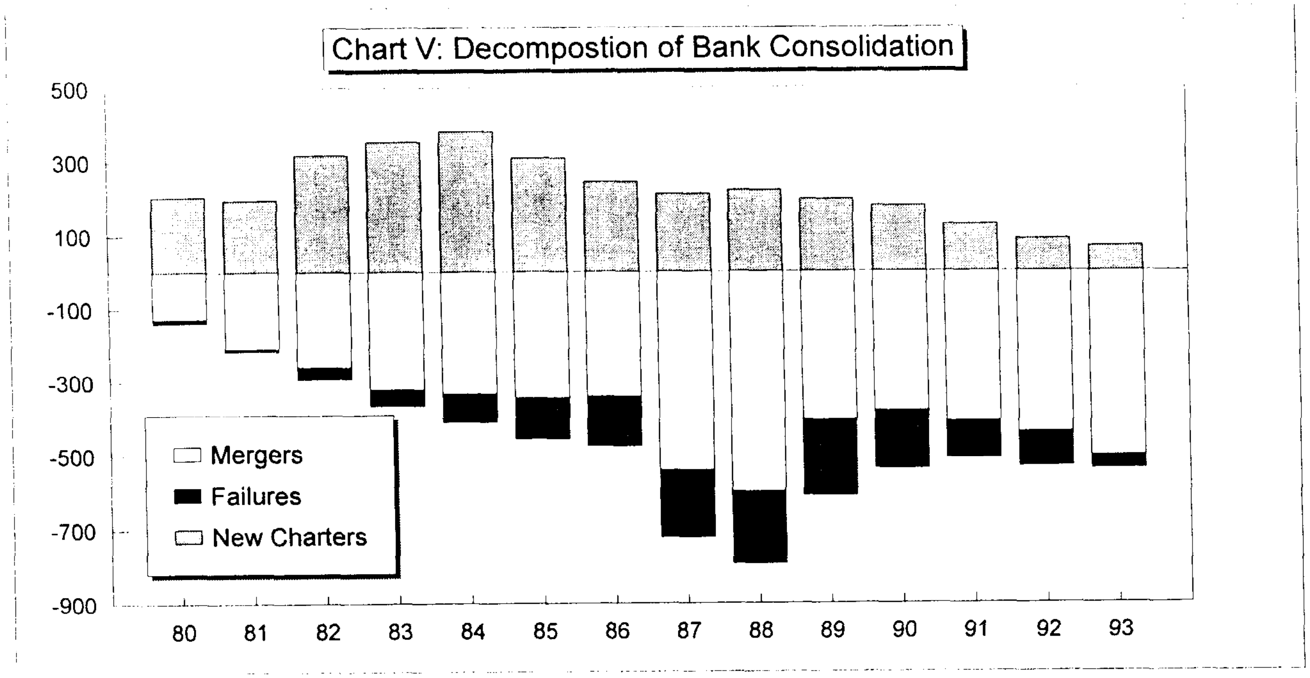
[12] In Chart V bank failures are defined as BIF-insured commercial banks that have been closed by their primary rgulator, or that have received financial assistance from the FDIC. This definition excludes savings banks, industrial banks, and uninsured banks for which the FDIC was named receiver. Appendix Chart A1 gives a more comprehensive count, by type of resolution.

[13] Nisenson (1991, p.14) explains that through the first half of the 1980s, "most holding companies operated the banks they acquired as separately chartered institutions", whereas since 1986 "holding companies...increasingly consolidated their existing operations and new acquisitions into fewer, separately chartered banks."

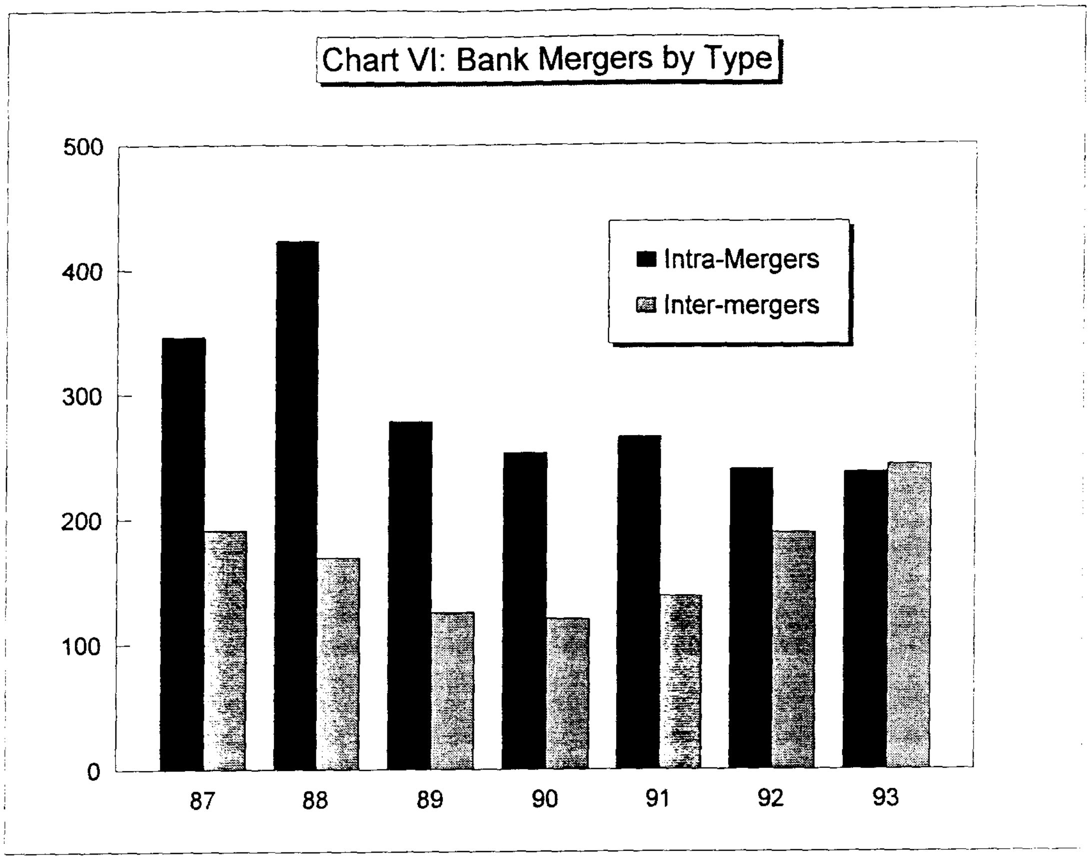
[14] A small number of mergers could not be identified as either "intra" or "inter" due to source data limitations. Hence, the components shown in Chart VI do not add to the total for some years.



	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Mergers	128	209	258	320	332	343	340	541	598	405	379	409	438	502
Failures	10	7	34	45	79	118	142	200	217	205	159	106	97	37
New Charters	205	197	318	354	382	310	246	212	221	196	179	128	87	68
Net Change	68	-23	29	-5	-191	-133	-223	-502	-576	-411	-355	-386	-453	-483

Mergers: bank charters that disappeared as a result of acquisition. Failures: failed banks include commercial banks insured by the BIF that have been closed by their primary regulator or have received financial assistance from the FDIC. New Charter include conversions of thrifts to banks, 1990-1993. For some years net change differs from the sum of the components because of non-insured commercial banks or non-commercial banks converting to insured commercial banks, insured commercial banks converting to non-insured or non-commercial banks, voluntary suspensions and liquidations, and source data entry errors. Assisted transactions, though counted as bank failures, did not result in the disappearance of bank charters.

Source: Federal Reserve IMS Structure File; Office of the Comptroller of the Currency, "Condition and Performance of Commercial Banks 1992." 1993 data are preliminary.



	1987	1988	1989	1990	1991	1992	1993
Intra-Mergers	346	423	278	253	266	240	237
Percent of Total	*64.0*	*70.7*	*68.6*	*66.8*	*65.0*	*54.8*	*47.2*
Inter-Mergers	191	169	125	120	138	189	243
Percent of Total	*35.3*	*28.3*	*30.9*	*31.7*	*33.7*	*43.2*	*48.4*
Total Mergers	541	598	405	379	409	438	502

Intra-merger: a merger of two banks within the same bank holding company that results in the disappearance of one bank charter. Inter-merger: a merger between two unaffiliated banks that results in the disappearance of one bank charter. The sum of Intra-mergers plus Inter-mergers may not add to the total number of mergers because the type of a small number of mergers could not be identified.

Source: Federal Reserve IMS Structure File.

Table I: Bank Mergers by Asset Size Groups and Type

Bank Asset Size Group	1987	1988	1989	1990	1991	1992
Under $100 million	**368**	**430**	**336**	**242**	**289**	**297**
Percent of Total	*68.0*	*71.9*	*83.0*	*63.9*	*70.7*	*67.8*
Intra	218	289	224	154	169	147
Inter	150	141	112	85	118	144
$100 mil. to $1 bil.	**157**	**154**	**60**	**113**	**103**	**122**
Percent of Total	*29.0*	*25.8*	*14.8*	*29.8*	*25.2*	*27.9*
Intra	120	131	49	84	86	83
Inter	37	23	11	27	14	36
Over $1 billion	**7**	**8**	**6**	**22**	**13**	**17**
Percent of Total	*1.3*	*1.3*	*1.5*	*5.8*	*3.2*	*3.9*
Intra	6	3	5	15	11	9
Inter	1	5	1	7	2	8
Total Mergers	541	598	405	379	409	438

Components may not add to totals because the type of some mergers could not be identified, or because for a small number of banks financial data from the Call Reports did not match Structure File data.

Source: Federal Reserve IMS Structure File; FFIEC "Consolidated Reports of Conditio and Income."

assets increased their share of industry assets to almost 75 percent in 1993, up from just over 60 percent in 1980. Hence, the general perception that the industry is consolidating into fewer, larger banks is accurate. However, the number of branches soared, so that the total number of banking offices (banks plus branches) rose more than 20 percent over the period. At the bank level, consolidation was due primarily to mergers, and within-holding company mergers were the single most important component of consolidation. Hence, banking company structural changes, particularly with respect to intra-mergers, and branching, deserve further attention.

III. Structural Changes: Banking Companies

Previous research and the above bank-level data on the pattern of consolidation in the industry lead us to expect a number of changes in the pattern of corporate organization in banking. First, in light of the fact that, on net, consolidation involved the disappearance of small banks, we would expect a large decline in the number of "independent banks" (i.e., banks not belonging to a holding company), which tend to be small in size. In addition, previous research suggests that the choice of corporate organization is a key consideration in a banking company's drive for increased efficiency; and that a more centralized organization that closely approximates a one-bank holding company (OBHC) with branches might be superior to a multi-bank holding company (MBHC) with many bank subsidiaries. Hence, we would expect to see more one-bank holding companies, fewer multi-bank holding companies, and fewer banks per multi-bank holding company over time, to the extent this is permitted by more liberalized intra-state branching legislation. On the other hand, because most states enacted some form of interstate banking legislation over the 1980-1993 period, we would expect to see more multi-state multi-bank holding companies, as banking companies took advantage of increased opportunities to expand geographically. What do the data reveal?

III.A. Nationwide Trends

Charts VIIa and VIIb confirm that, over time, the number of independent banks has dwindled, and the asset share accounted for by this type of banking company has declined correspondingly. Interestingly, the plunge in the number of independent banks (6,562 fewer in 1993 compared to 1980) was far greater than the total consolidation accounted for by *all* failures and mergers between unaffiliated banks (approximately 3,700).[15] That is, the decomposition of consolidation does not explain, even in a proximate sense, the huge drop in the number of independent banks. By deduction, a large percentage of that decline must be accounted for by acquisition (in the Linder-Crane sense[16]) of independent banks by bank holding companies, which subsequently retained the independent banks as separately chartered entities (else the change would have shown up as a charter disappearance, and hence as part of the consolidation data discussed in the previous section); and/or a voluntary switch by some independent banks to a bank holding company form. A large decline in the number of independent banks is consistent with expectations, based on data presented in the previous section on the disappearance of small banks. Furthermore, Newman and Shrieves (1993) present evidence that independent banks are less efficient than subsidiary banks of either

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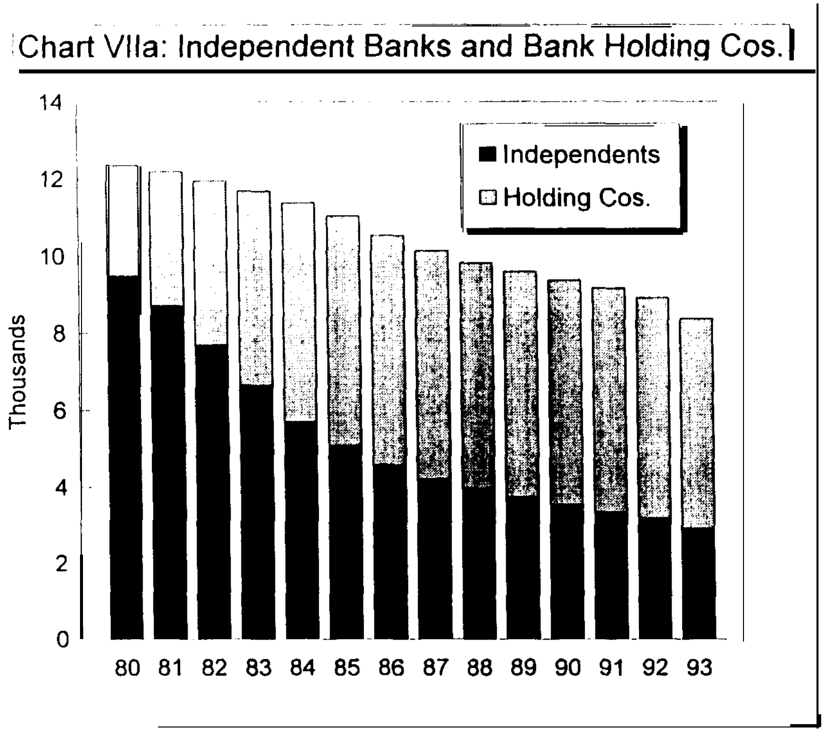
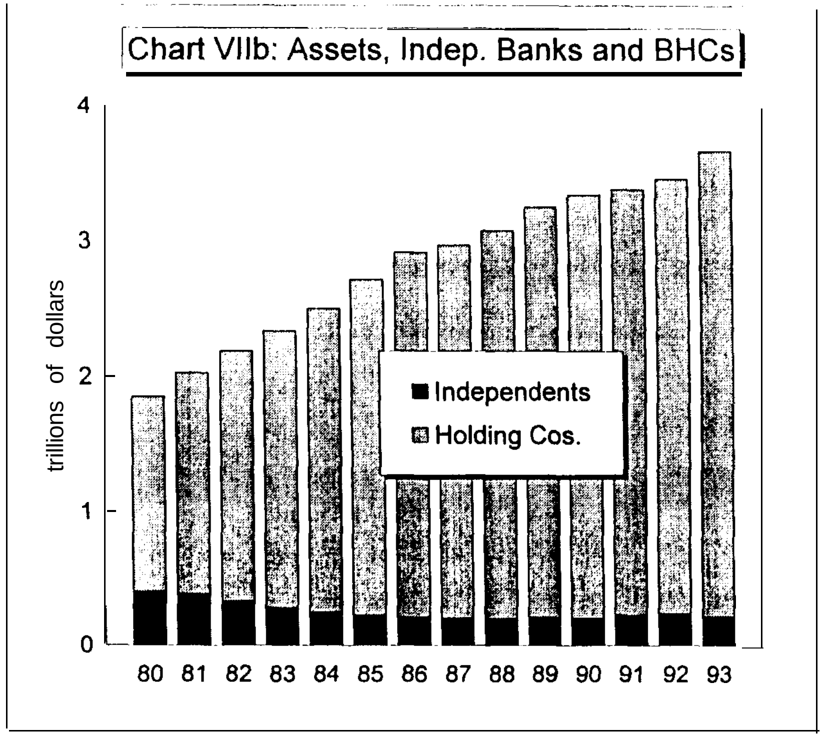
[15] The combined figure for failures and inter-mergers over 1980-1993 is approximate because the distinction between inter-mergers and intra-mergers has not been calculated for the 1980-1986 period. Based on the 1987-1993 period, when that breakdown is available, a rough calculation suggests that perhaps 45 percent of all mergers over 1980-1986 were between unaffiliated banks.

[16] Linder and Crane (1992, p. 36) distinguish between acquisitions ("banks continue to exist as legal entities after they are acquired by a holding company"), and mergers, where the acquired bank ceases to exist as a separately-chartered entity.

Independent Banks and Bank Holding Companies





	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Independent Banks:														
Number	9,482	8,708	7,693	6,646	5,703	5,094	4,589	4,230	3,969	3,746	3,545	3,358	3,182	2,920
Assets (bil.$)	405	383	330	281	247	225	212	203	201	209	204	229	240	215
Asset Share (%)	22	19	15	12	10	8	7	7	7	6	6	7	7	6
Bank Holding Companies:														
Number	2,886	3,492	4,267	5,039	5,682	5,953	5,939	5,903	5,855	5,850	5,831	5,810	5,728	5,455
Assets (bil.$)	1,450	1,645	1,858	2,057	2,255	2,493	2,707	2,766	2,878	3,042	3,137	3,154	3,219	3,452
Asset Share (%)	78	81	85	88	90	92	93	93	93	94	94	93	93	94

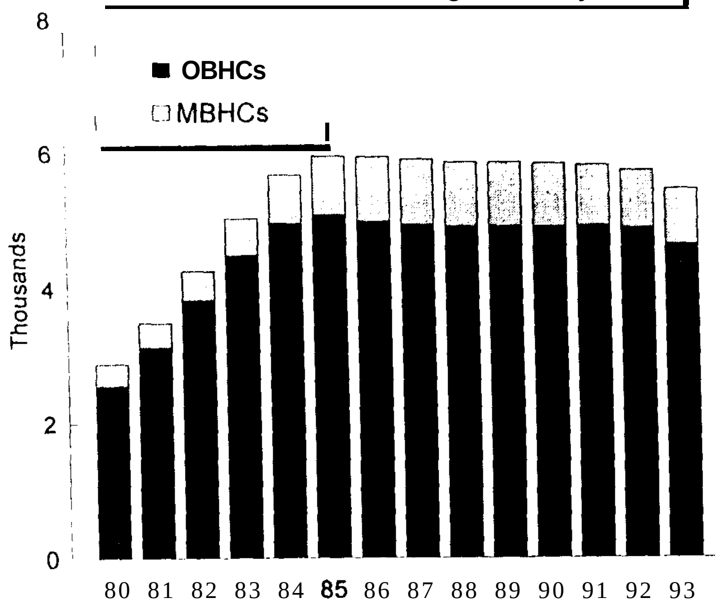
Source: FFIEC, "Consolidated Reports of Condition and Income." 1993 data are preliminary.

OBHCs or MBHCs. That finding may help explain the large drop in the number of independent banks, but further research in this vein is warranted.

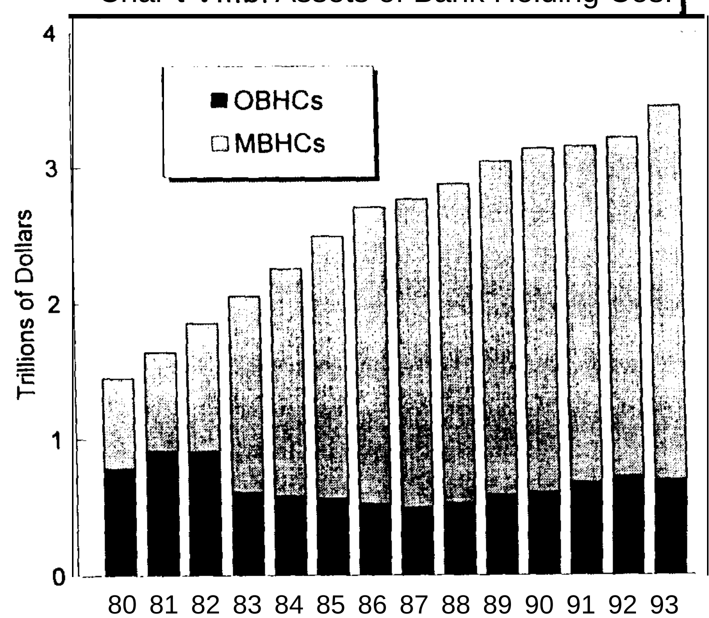
Charts VIIIa and VIIIb focus attention on several aspects of the increase in bank holding companies. The number of OBHCs increased substantially over the period, a development in line with the idea that in their drive for efficiency banking companies will choose a more centralized corporate organization, especially as barriers to branching decline. However, as Chart VIIIa shows, the increase in the number of OBHCs came at the beginning of the 1980-1993 period, ahead of the strong impetus for improved efficiencies arising out of the poor banking performance in the mid-to-late-1980s, and before much of the liberalization in intra-state branching restrictions, which picked up momentum just as the increase in the number of OBHCs peaked. Furthermore, not only did the number of MBHCs increase over 1980-1993, but total banking system assets in multi-bank holding companies soared. results seemingly at odds with the efficiencies-cum-deregulation expectations.

At least part of the explanation for the rise in the number of multi-bank holding companies has to do with the distinction between multi-bank holding companies that operate within the borders of a single state (one-state multi-bank holding companies - OSMBHCs), and those that own banks in more than one state (multi-state multi-bank holding companies - MSMBHCs), as illustrated in Charts IXa and IXb. Those charts document substantial increases in the number and assets of MSMBHCs, trends consistent with the relaxation of barriers to interstate banking that occurred throughout the 1980-1993 period. Clearly, analyses of the determinants and performance of different types of corporate organization in banking need to be mindful of the distinction between multi-state and single-state MBHCs.

Chart VIIIa: Bank Holding Cos., by Type



Char-t VIIIb: Assets of Bank Holding Cos.



	1980	1982	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
One-Bank Holding Companies (OBHCs)														
Number	2,546	3,119	3,828	4,488	4,958	5,082	4,983	4,934	4,905	4,907	4,896	4,914	4,878	4,635
Assets (bil $)	786	914	914	613	587	567	526	500	533	591	613	682	727	700
Multi-Bank Holding Companies (MBHCs)														
Number	340	373	439	551	724	871	956	969	950	943	935	896	850	820
Assets (bil $)	665	731	944	1,443	1,668	1,926	2,182	2,266	2,345	2,451	2,524	2,472	2,492	2,752

Source FFIEC, "Consolidated Reports of Condition and Income." 1993 data are preliminary

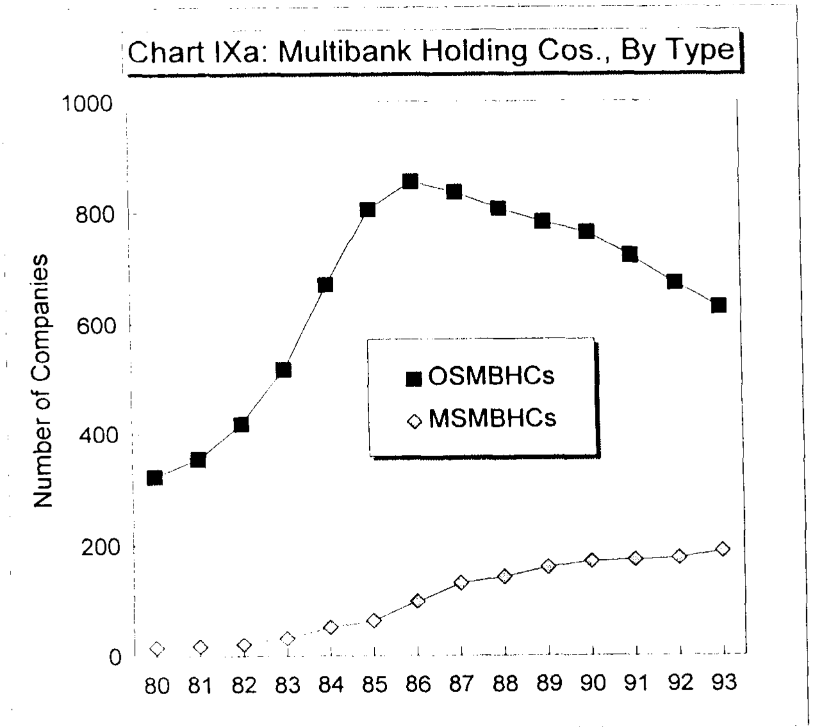


Chart IXa: Multibank Holding Cos., By Type

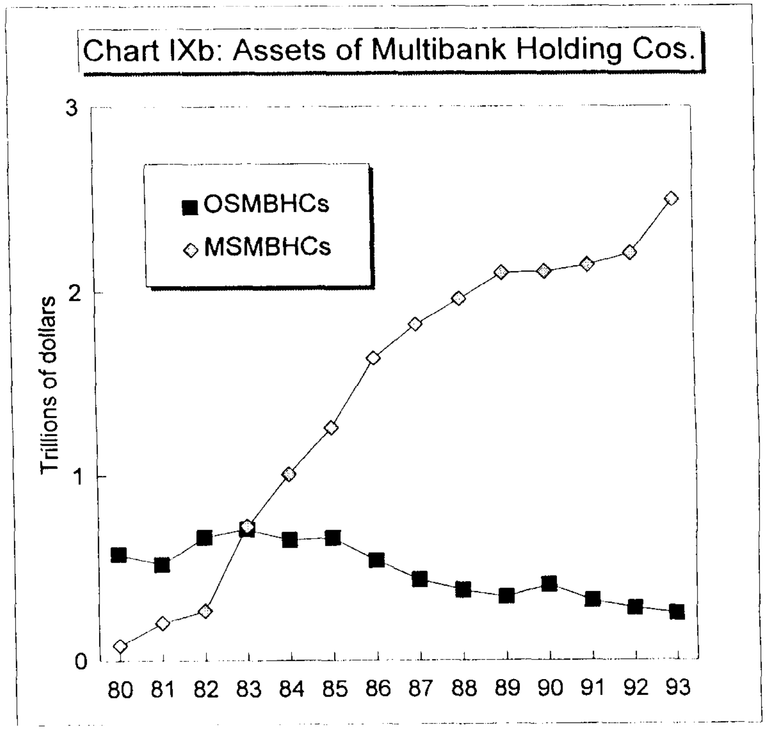


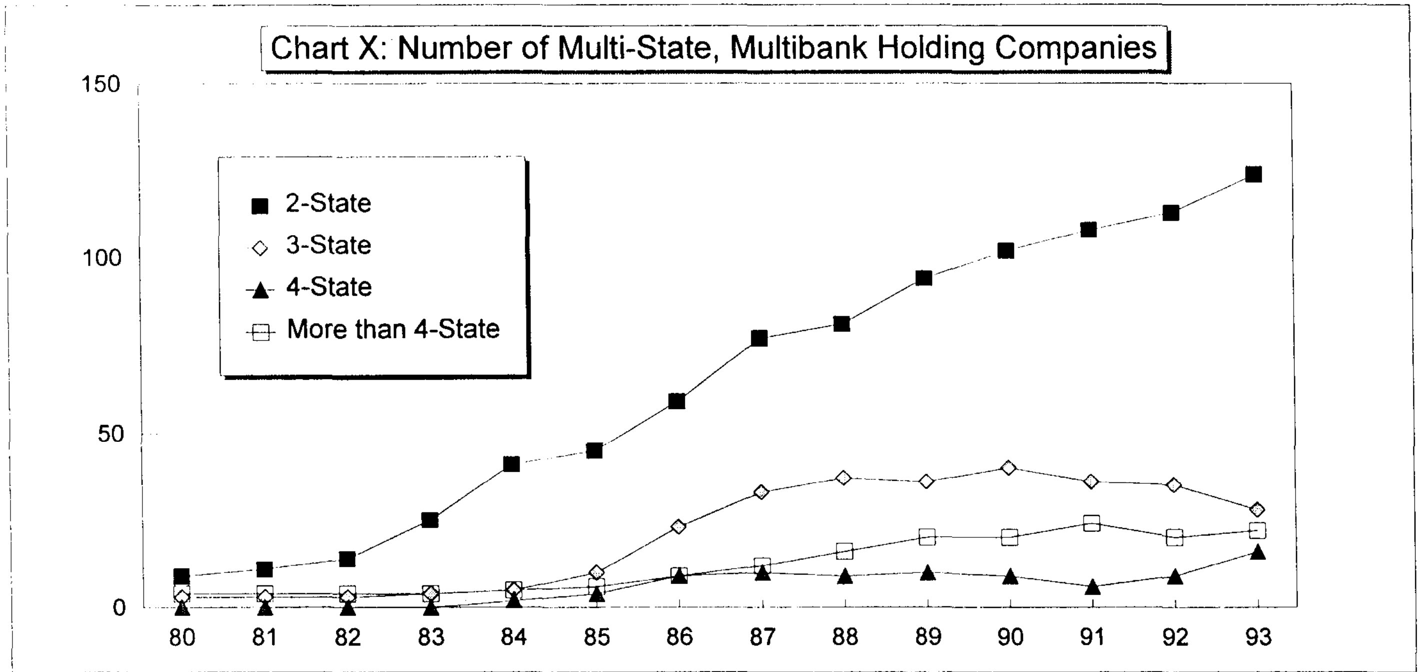
Chart IXb: Assets of Multibank Holding Cos.

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
One-State Multi-Bank Holding Companies (OSMBHC)														
Number	324	355	418	518	671	806	856	837	807	783	764	722	673	630
Assets (bil.$)	580	523	671	714	658	667	543	442	385	348	415	328	287	257
Multi-State Multi-Bank Holding Companies (MSMBHC)														
Number	16	18	21	33	53	65	100	132	143	160	171	174	177	190
Assets (bil.$)	85	208	273	729	1010	1259	1639	1824	1960	2103	2109	2144	2205	2495

Source. FFIEC, "Consolidated Reports of Condition and Income." 1993 data are preliminary.

Beyond this, there is evidence on the pattern of multi-state expansion by bank holding companies, which may address both the decline in the number of OSMBHCs since the mid-1980s, and part of the drop in the number of independent banks discussed earlier. As Chart X shows, especially since the mid-1980s, banking companies moving into just one state besides their home state accounted for the vast majority of multi-state bank holding companies. In particular, the number of MSMBHCs operating in just two states increased from 59 in 1986 to 124 in 1993. That change alone could account for more than one-fourth of the decrease in the number of OSMBHCs, as those single-state banking companies became two-state banking companies. Furthermore, jumping across state lines via the acquisition of a small independent bank may have been the route many two-state multi-bank holding companies chose (though, again, little research has been focused on this issue).

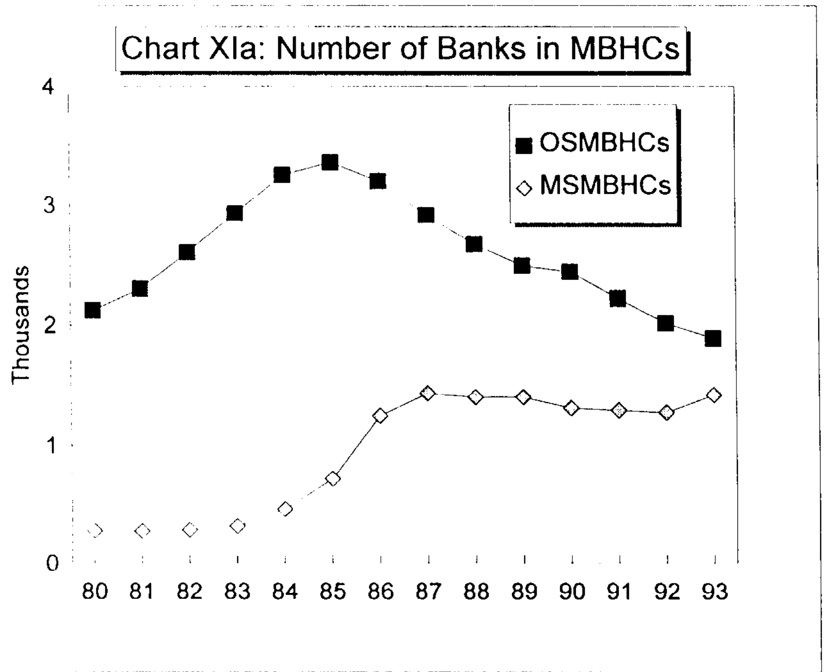
What explains the increase in the early 1980s in the number of OSMBHCs, a trend inconsistent with expectations of greater centralization of corporate organization? One possibility is that, as the liberalization of within-state branching laws was being undertaken, bank holding companies increased their acquisitions, particularly of small independent banks, retained them as separate subsidiaries initially, and then over time consolidated them. Information in Charts XIa and XIb is consistent with this "two-phase" consolidation story. Over the early 1980s OSMBHCs increased the number of banks under their control and, subsequently, the number of banks per company declined. However, after 1984, some of the drop in banks-per-company was the result of a larger drop in total numbers of banks in OSMBHCs.

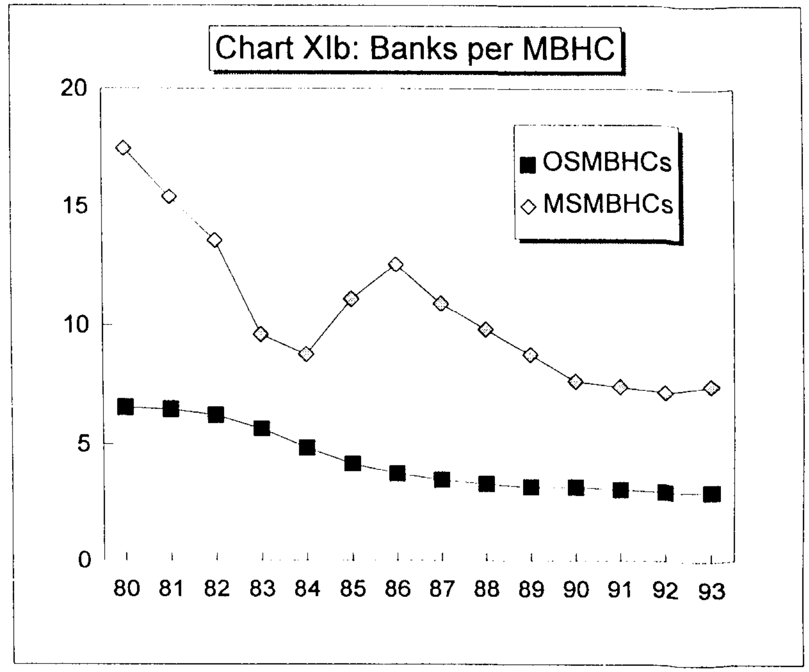


Type of MSMBHC	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
2-State	9	11	14	25	41	45	59	77	81	94	102	108	113	124
3-State	3	3	3	4	5	10	23	33	37	36	40	36	35	28
4-State	0	0	0	0	2	4	9	10	9	10	9	6	9	16
More than 4-State	4	4	4	4	5	6	9	12	16	20	20	24	20	22
Total	16	18	21	33	53	65	100	132	143	160	171	174	177	190

Source: FFIEC, "Consolidated Reports of Condition and Income." 1993 data are preliminary.

Banks in Multibank Holding Companies





	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
OSMBHC	324	355	418	518	671	806	856	837	807	783	764	722	673	630
Banks	2,122	2,300	2,604	2,932	3,253	3,359	3,203	2,916	2,670	2,491	2,439	2,220	2,014	1,891
Banks per Co.	6.5	6.5	6.2	5.7	4.8	4.2	3.7	3.5	3.3	3.2	3.2	3.1	3.0	3.0
MSMBHC	16	18	21	33	53	65	100	132	143	160	171	174	177	190
Banks	279	277	284	317	465	720	1,252	1,438	1,403	1,403	1,313	1,295	1,277	1,424
Banks per Co.	17.4	15.4	13.5	9.6	8.8	11.1	12.5	10.9	9.8	8.8	7.7	7.4	7.2	7.5

Source: FFIEC, "Consolidated Reports of Condition and Income". 1993 data are preliminary.

For MSMBHCs, the "two-phase" consolidation story more closely matches the facts. Unambiguously, multi-state multi-bank holding companies reduced the number of banks per company, even as the total number of banks in MSMBHCs increased. In addition, as Chart XII shows, the number of branches per MSMBHC rose significantly over the 1980-1993 period, a development in line with "phase 2" of the acquisition-then-consolidation process.[17]

Table II provides additional insight on the nature of structural changes in bank holding companies. In particular, over time a growing share of OSMBHCs were accounted for by smaller companies. In the early 1980s, one-third of single-state multi-bank holding companies were large (i.e., over $1 billion in assets); but by the mid-to-late 1980s, fewer than fifteen percent were large. Clearly, OSMBHCs "left" the group by merging together, or by "consolidating up" to a OBHC form, or by becoming multi-state bank holding companies. Over time, a growing proportion of OSMBHCs tend to be smaller companies, with fewer banks, and a smaller branching network than in the past. The implications of this trend for community banks have not be addressed elsewhere, and are beyond the scope of this paper, but certainly merit further study.

III.B. Evidence at the State Level

The review of data on nationwide trends in banking company structures reveals a complex story, and one that in part hinges on distinctions between OSMBHCs and MSMBHCs. In particular, the question of what form of corporate organization banking

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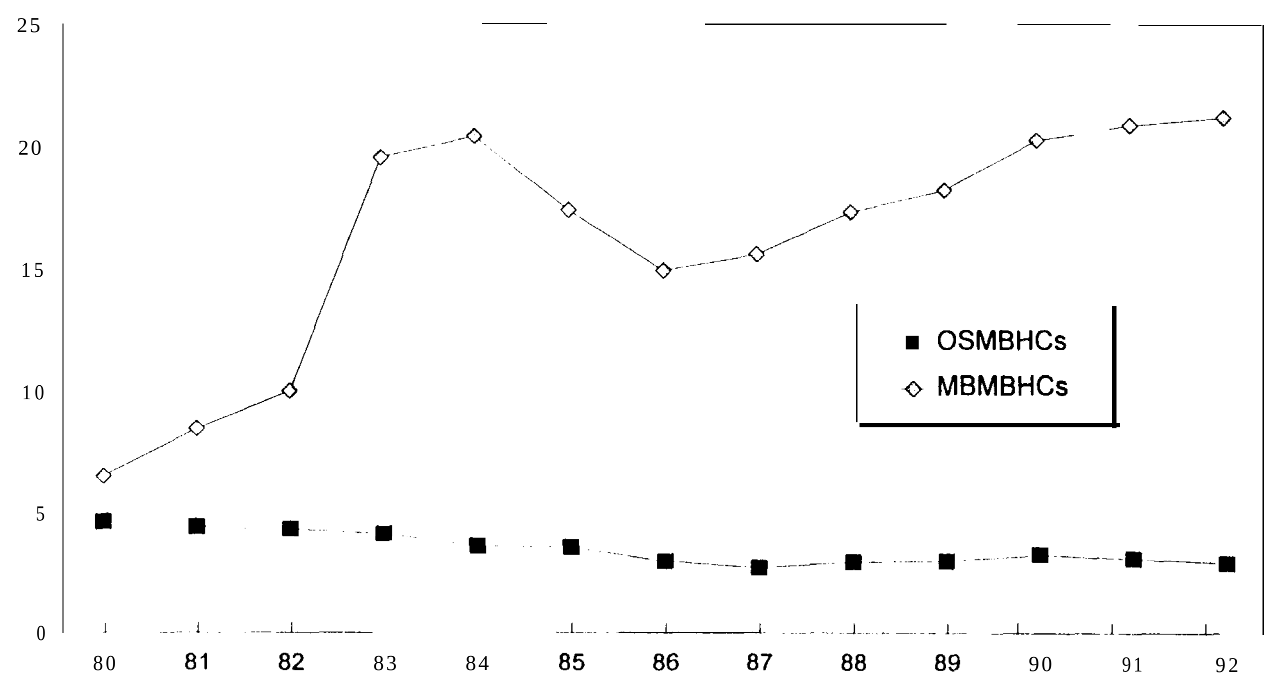
[17] As the table below Chart XII shows, the number of branches in banks in MSMBHCs soared over the 1980-1993 period. This increase cannot be accounted for just by the conversion of subsidiary banks to branches. In fact, it represents entry into the industry via branching. Amel and Liang (1992) explain entry via branching in terms of changes in intra-state branching law and interstate banking law liberalization. Clearly, more work on the nature and scope of entry and branching, particularly by type of banking company, is warranted.

/Chat-t XII: Branches per Bank, by Type of Multi-Bank Holding Co.



	1980	1982	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
One-State Multi-Bank Holding Companies (OSMBHCs)													
Branches	9,820	10,166	11,241	12,086	11,733	11,941	9,507	7,860	7,826	7,436	7,891	6,819	5,841
Branches/Bank	4.6	4.4	4.3	4.1	3.6	3.6	3.0	2.7	2.9	3.0	3.2	3.1	2.9
Multi-State Multi-Bank Holding Companies (MSMBHCs)													
Branches	1,823	2,348	2,838	6,193	9,484	12,514	18,690	22,399	24,267	25,537	26,581	26,980	27,068
Branches/Bank	6.5	8.5	10.0	19.5	20.4	17.4	14.9	15.6	17.3	18.2	20.2	20.8	21.2

Source FFIEC, “Consolidated Reports of Condition and Income.” 1993 data are preliminary

Table II: Asset Size Distribution of Bank Holding Companies.
Percent of Bank Holding Companies, by Type, in Asset Size Groups

Size Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
OBHCs														
Under $100 mil.	86	86	85	84	84	84	84	84	83	81	79	78	75	74
$100 mil. - $ 1 bil.	11	11	13	14	14	14	14	15	16	18	20	21	23	24
$1 bil. - $10 bil.	3	3	2	2	2	1	1	1	1	1	1	1	1	1
Over $10 bil.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Multi-Bank Holding Companies:														
OSMBHCs														
Under $100 mil.	22	26	28	31	35	36	36	38	36	36	33	32	31	33
$100 mil. - $ 1 bil.	47	44	45	45	47	49	51	51	54	54	57	58	61	60
$1 bil. - $10 bil.	28	27	25	22	16	14	13	10	10	10	10	10	8	7
Over $10 bil.	3	3	3	2	1	1	1	0	0	0	0	0	0	0
MSMBHCs														
Under $100 mil.	6	6	10	3	0	0	3	4	6	8	8	9	11	8
$100 mil. - $ 1 bil.	25	11	0	6	8	6	10	14	17	21	29	27	25	31
$1 bil. - $10 bil.	50	61	67	48	49	46	44	46	41	37	33	35	36	34
Over $10 bil.	19	22	24	42	43	48	43	36	35	35	31	29	28	27

OBHCs: One-bank holding companies; OSMBHCs: Multibank holding companies with banks in one state only; MSMBHCs: Multibank holding companies with banks in more than one state; Assets: the sum of assets in commercial banks owned by the holding company. Percentages for each type of BHC may not add to 100 percent due to independent rounding.

*Less than 0.5 percent.

Source: FFIEC, "Consonlidated Reports of Condition and Income". 1993 data are preliminary.

companies have chosen is complicated by differences in state branching laws, differences in interstate banking laws, and differences in the pace at which those laws have been changed over the 1980-1993 period. One way to focus more clearly on banking company choices of corporate organization is to ask the following question: Is there a difference in choice of corporate organization for banks operating in states which have a tradition of statewide branching, compared to those which have retained, or only recently relaxed, restrictions on branching? In particular, do we see a large and growing proportion of banking companies choosing to consolidate into more centralized organizations in states where such consolidation is possible? And in states which have been very restrictive in their branching provisions, do we see a greater proportion of multi-bank organizations?

In order to answer these questions, forty states were divided into three groups on the basis of their laws on statewide branching.[18] Sixteen states had statewide branching laws on the books prior to 1980. Banking companies in this group of states have had a long-standing opportunity to rationalize their bank and branch networks into a centralized form, and if it were optimal to be a OBHC, most would be.[19] At the extreme, we would expect to see no changes over the 1980-1993 period in the proportion of one-bank versus multi-bank companies. A second group of states, those retaining substantial restrictions on statewide branching until at least 1990, was also chosen. Banking companies in these states have had

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[18] Amel (1993) sets out the status of branching and interstate banking laws for all fifty states and the District of Columbia. Eleven states did not fit unambiguously into any of the three groups due to the timing and/or nature of their changes in branching legislation.

[19] DeYoung and Whalen (1994) raise the point that some bank holding companies appear to have chosen to retain two banks, one with a national charter, and one with a state charter. The issue of whether, and how, this benefits a bank company is a topic for further research.

limited opportunities to consolidate subsidiary banks, and could be expected to have chosen a multi-bank form of organization. Finally, a group of states which substantially liberalized branching laws during the 1985-1988 period was chosen.[20] In these states we would expect to see a decrease in the number of multi-bank companies, and an increase in the number of one-bank companies, as statewide branching laws were enacted. As a definitional issue, it is important to note that, for the purposes of this exercise, "OBC" signifies a bank holding company operating only one bank in a given state, whether or not the company operates additional banks in other states; and "MBC" refers to a banking company operating two or more banks in a given state, regardless of its banking presence in other states. Under these conditions, what form of corporate organization have banking companies chosen?

Charts XIIIa, XIIIb, and XIIIc present rough measures of the response of banking organizations to different branching environments. The most obvious pattern revealed in those charts is that the number of bank holding companies operating only one bank in a given state rose substantially in the early 1980s, *regardless* of branching regimes. This result is not anticipated by our hypotheses, at least in the case of those states with restrictions on banking throughout the period, as well as those which liberalized branching restrictions after 1984.[21]

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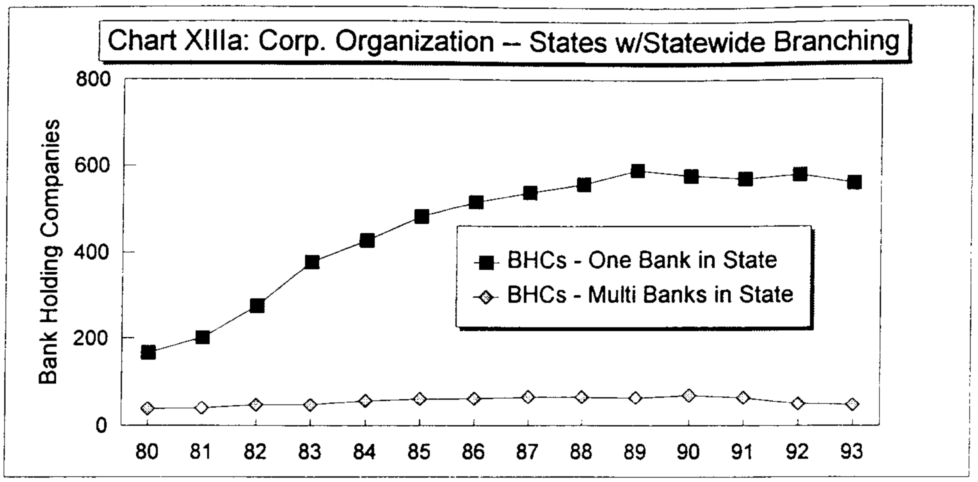
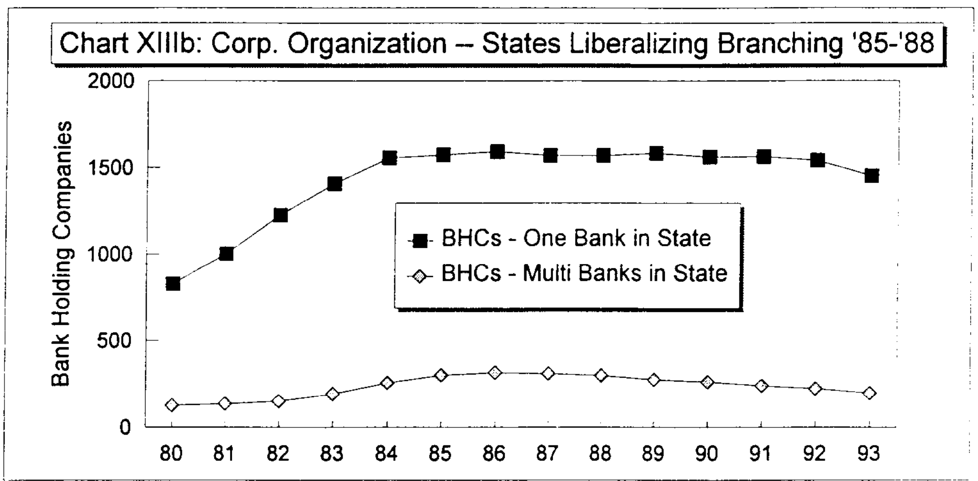
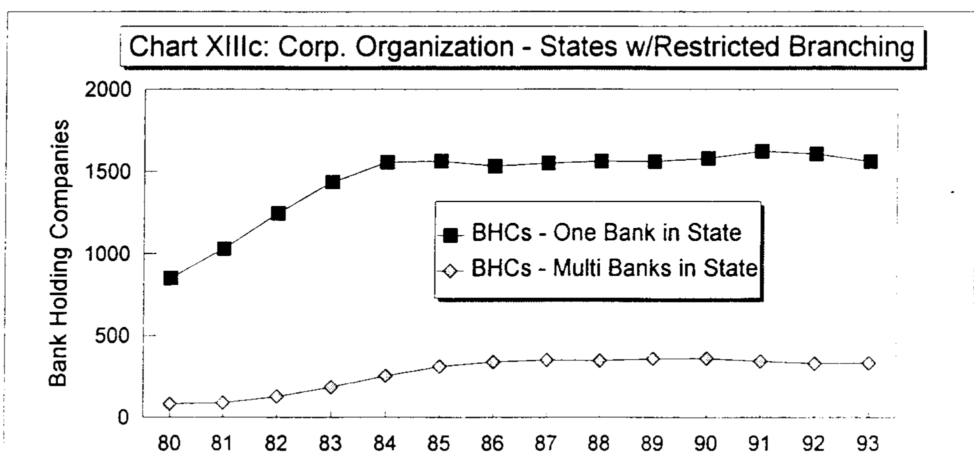
[20] Statewide branching prior to 1980: Alaska, Arizona, California, the District of Columbia, Delaware, Idaho, Maryland, Maine, North Carolina, New Jersey, New York, Nevada, Rhode Island, South Carolina, South Dakota, Vermont. States liberalizing branching laws in 1985-1988: Florida, Hawaii, Nebraska, Oregon, Washington, Louisiana, Michigan, New Hampshire, North Dakota, Oklahoma, Texas, Virginia, West Virginia, Wyoming. States with restricted branching until at least 1990: Arkansas, Colorado, Illinois, Iowa, Kentucky, Mississippi, Missouri, Montana, New Mexico, Pennsylvania.

[21] Huggins (1986) discusses "five key advantages" to the bank holding company versus the independent bank form. "Improved management control" includes aspects related to improvements in efficiency, but Huggins also discusses advantages related to acquisitions, product expansion, tax considerations, and "operational flexibility". Clearly, the huge shift toward the OBHC form, regardless of the status of branching legislation, deserves further attention.







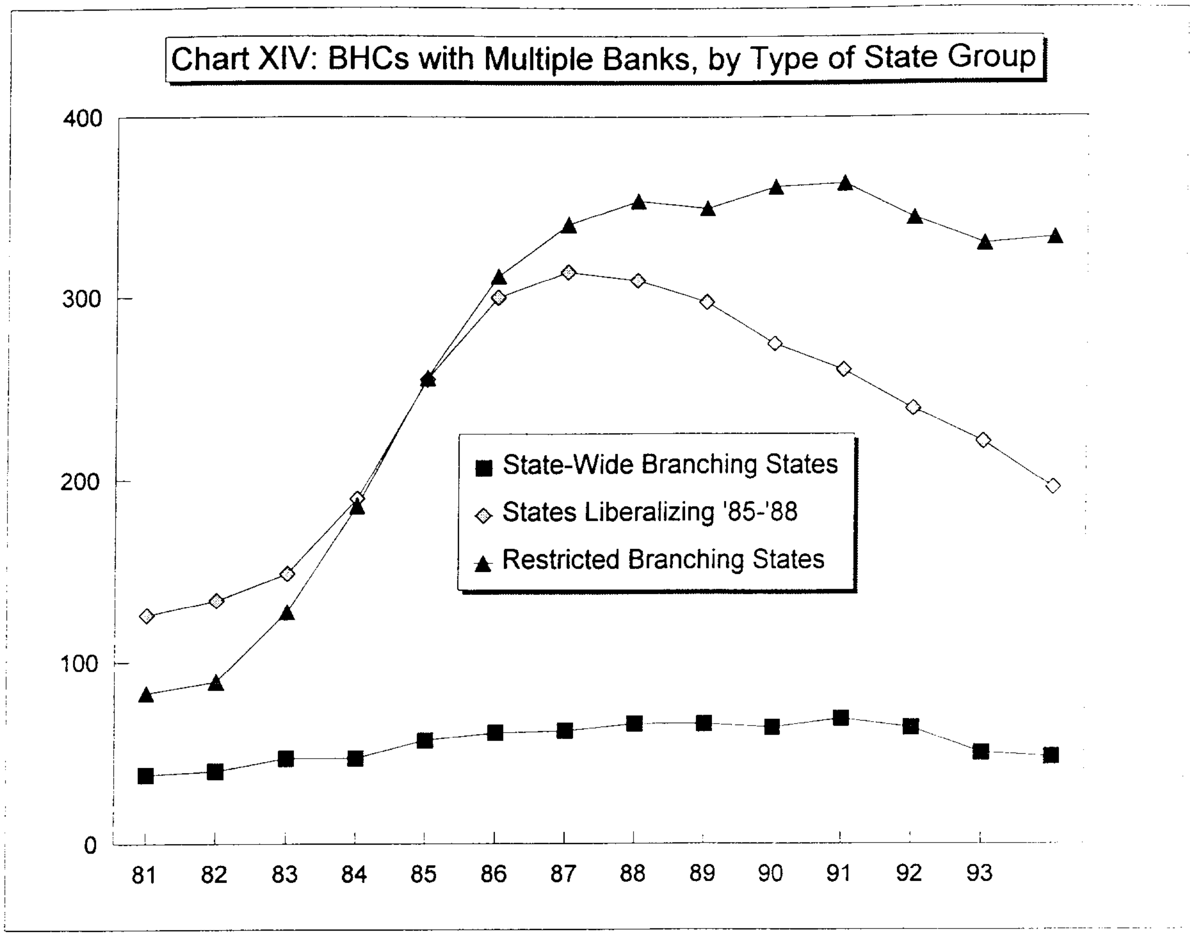
States with statewide branching prior to 1980: Alaska, Arizona, California, the District of Columbia, Delaware, Idaho, Maryland, Maine, North Carolina, New Jersey, New York, Nevada, Rhode Island, South Carolina, South Dakota, Vermont. States liberalizing branching laws in 1985-1988: Florida, Hawaii, Nebraska, Oregon, Washington, Louisiana, Michigan, New Hampshire, North Dakota, Oklahoma, Texas, Virginia, West Virginia, Wyoming. States with restricted branching until at least 1990: Arkansas, Colorado, Issinois, Iowa, Kentucky, Mississippi, Missouri, Montana, New Mexico, Pennsylvania.

Source: FFIEC, "Consolidated Reports of Condition and Income." 1993 data are preliminary.

However, Charts XIIIa, XIIIb, and XIIIc also contain information on the pattern of bank holding company reliance on multiple banks operating in a given branching environment. Because those numbers in all three types of states are swamped by the one-bank numbers, a separate focus on multi-bank patterns is given in Chart XIV.

The patterns shown in Chart XIV are consistent with expectations. In the case of states with a long-standing tradition of liberalized branching, the number of MBCs remained basically flat over the period. The states which maintained significant restrictions on intra-state branching, and those states liberalizing branching laws over the 1985-1988 period, both show significant increases in the first half of the 1980s in the number of banking companies operating multiple banks within a given state's borders. Subsequently, however, the number of MBCs dropped sharply in states liberalizing their branching laws, while the number of MBCs remained basically flat in non-liberalizing states.

Another way to calculate the response of banking companies to a change in the opportunity to alter their corporate organization is to look at the number, and assets, of multi-bank companies *relative to* one-bank companies. Charts XVa and XVb show, respectively, the ratio of the number of MBCs to OBCs, and assets in MBCs to assets in OBCs. The patterns are basically consistent with the hypothesis that, given the opportunity, banking companies will chose to centralize their network of banks. Chart XVa reveals that the relative number of banks choosing to operate multiple banks in a state with liberal branching laws declined over the 1980-1993 period. By contrast, in those states which maintained significant restrictions on branching throughout most of the period, the relative number of

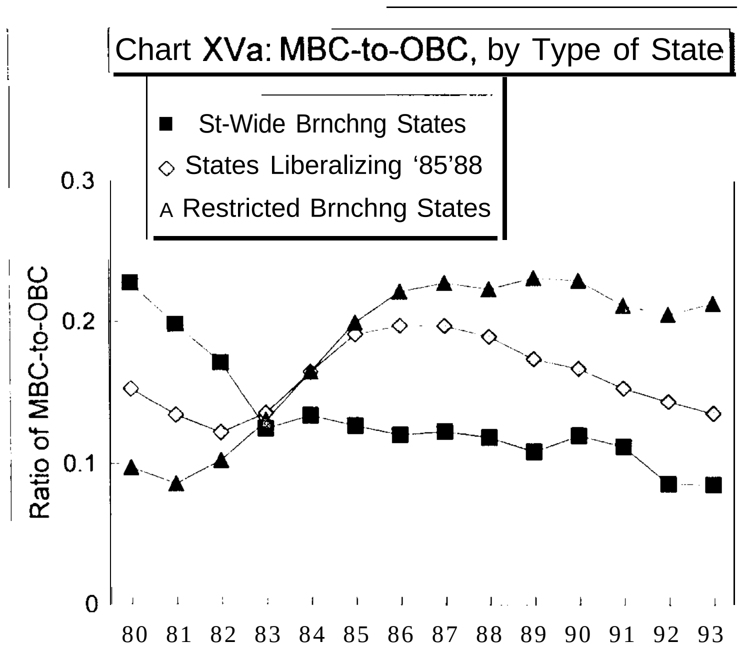


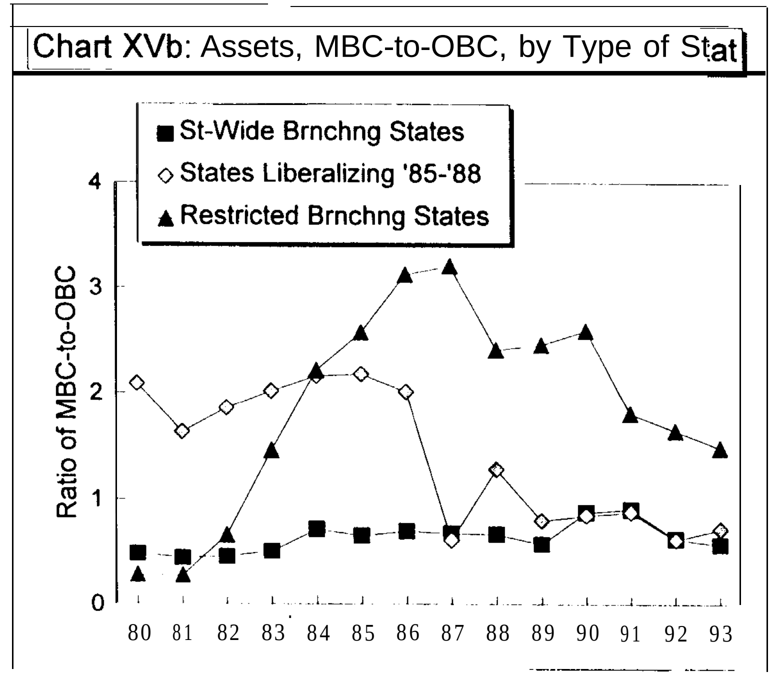
Number of Bank Holding Companies Operating Two or More Banks in a State, by Type of State Group

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Pre-1980 State-Wide Branching States	38	40	47	47	57	61	62	66	66	64	69	64	50	48
States Liberalizing Branching Laws in 1985-1988	126	134	149	190	255	300	314	309	297	274	260	239	221	196
States with Restricted Branching Until at least 1990	83	89	128	186	256	312	340	353	349	361	363	344	330	333

States with statewide branching prior to 1980: Alaska, Arizona, California, the District of Columbia, Delaware, Idaho, Maryland, Maine, North Carolina, New Jersey, New York, Nevada, Rhode Island, South Carolina, South Dakota, Vermont. States liberalizing branching laws in 1985-1988: Florida, Hawaii, Nebraska, Oregon, Washington, Louisiana, Michigan, New Hampshire, North Dakota, Oklahoma, Texas, Virginia, West Virginia, Wyoming. States with restricted branching until at least 1990: Arkansas, Colorado, Issinois, Iowa, Kentucky, Mississippi, Missouri, Montana, New Mexico, Pennsylvania.

Source: FFIEC, "Consolidated Reports of Condition and Income." 1993 data are preliminary.





	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Pre-1980 State-Wide Branching States														
MBC/OBC: Cos.	0.23	0.20	0.17	0.12	0.13	0.13	0.12	0.12	0.12	0.11	0.12	0.11	0.09	0.09
MBC/OBC: Assets	0.48	0.44	0.46	0.51	0.72	0.66	0.70	0.68	0.67	0.58	0.88	0.91	0.63	0.57
States Liberalizing Branching Laws in 1985-1988														
MBC/OBC: Cos.	0.15	0.13	0.12	0.14	0.16	0.19	0.20	0.20	0.19	0.17	0.17	0.15	0.14	0.13
MBCIOBC: Assets	2.09	1.63	1.86	2.02	2.16	2.18	2.01	0.61'	1.28	0.80	0.85	0.88	0.62	0.72
States with Restricted Branching Until at least 1990														
MBC/OBC: Cos.	0.10	0.09	0.10	0.13	0.16	0.20	0.22	0.23	0.22	0.23	0.23	0.21	0.21	0.21
MBC/OBC: Assets	0.28	0.27	0.66	1.46	2.21	2.57	3.13	3.21	2.41	2.46	2.59	1.81	1.65	1.49

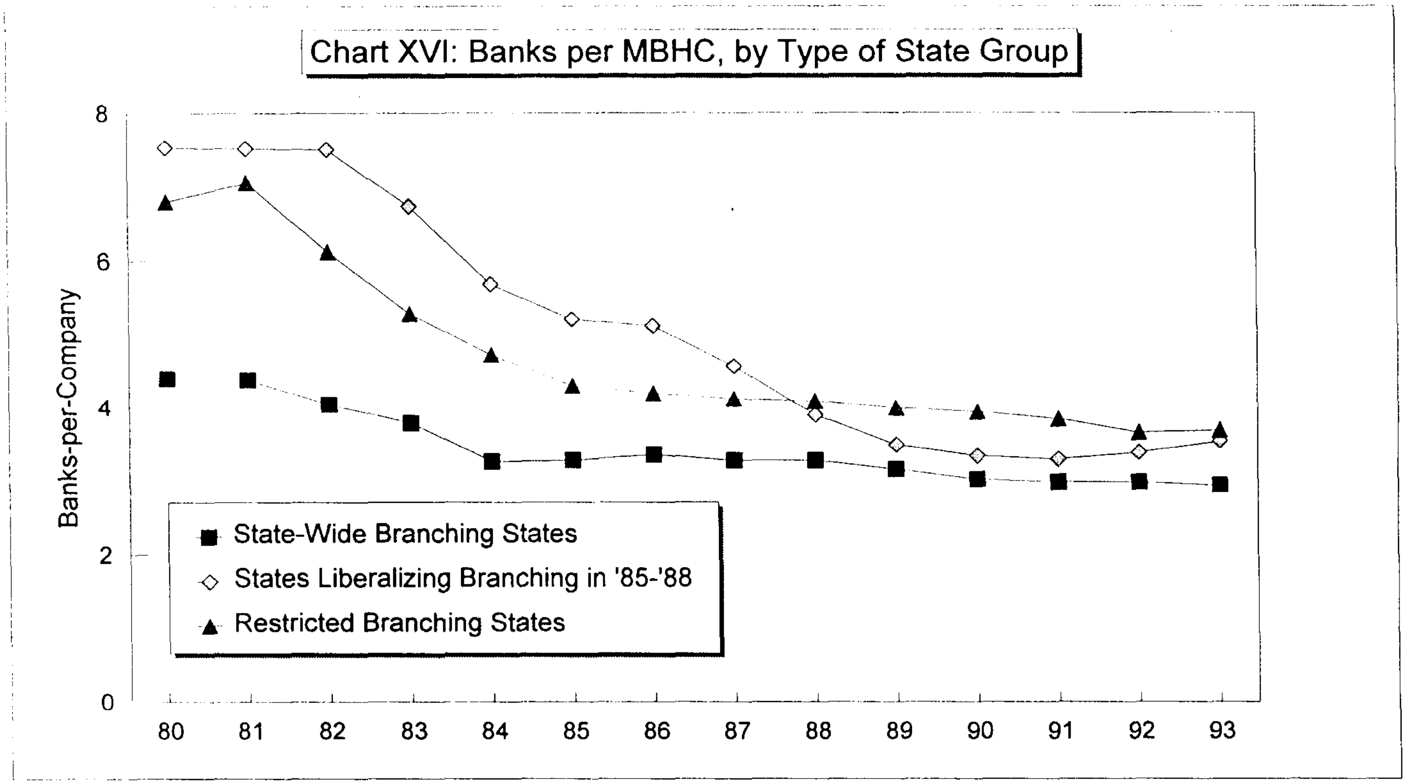
OBCs Bank holding companies operating a single bank in a given state; MBCs: Bank holding companies operating multiple banks in a given st

Source FFIEC, "Consolidated Reports of Condition and Income " 1993 data are preliminary.

companies choosing a multi-bank form increased. In addition, in those state which liberalized branching laws midway through the period, the relative number of multi-bank companies first rose (a pattern consistent with banking companies positioning themselves to consolidate acquisitions after liberalized branching laws would have been enacted), then dropped off as greater opportunity for consolidating banking networks within a given "liberalizing" state arose.

On the asset side, the thrust of the results is similar, though at least one anomaly presents itself. In line with expectations, the relative importance of multi-bank companies, as measured by assets, remains roughly flat (though there was a jump up in 1990-1991). At the same time, for those states relaxing branching restrictions in the mid-1980s, the relative importance of MBCs declined significantly as, and after, branching laws were liberalized. Finally, in those states retaining branching restrictions until at least 1990, the relative importance of multi-bank companies increased through the first half a the period. However, the sharp drop which occurred in the relative importance of multi-bank companies thereafter is not necessarily consistent with our expectations.

Additional perspective on choice of corporate organization is provided in Chart XVI, which illustrates changes in the number of banks per multiple-bank company in the three groups of states. As anticipated, in those states with a tradition of liberalized branching, the number of banks per multi-bank company declined over the period, a result consistent with the expectation that companies will take advantage of opportunities to centralize operations. However, there was also a downward trend in the number of banks per MBC in both of the other two groups of states. While such a decline after the mid-80s could be expected for



Banks per Multi-Bank Holding Company, by Type of State Group

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Pre-1980 State-Wide Branching States														
Banks/Co	4.4	4.4	4.0	3.8	3.3	3.3	3.4	3.3	3.3	3.2	3.0	3.0	3.0	2.9
States Liberalizing Branching Laws in 1985-1988														
Banks/Co	7.5	7.5	7.5	6.7	5.7	5.2	5.1	4.6	3.9	3.5	3.3	3.3	3.4	3.5
States with Restricted Branching Until at least 1990														
Banks/Co	6.8	7.1	6.1	5.3	4.7	4.3	4.2	4.1	4.1	4.0	3.9	3.8	3.7	3.7

Source: FFIEC, "Consolidated Reports of Condition and Income." 1993 data are preliminary.

those state liberalizing branching laws during the 1985-1988 period, the sharpest drop in banks per MBC came in the early 1980s. Furthermore, even in those states which did not liberalize branching laws, or did not do so until after 1989, the number of banks per MBC declined substantially, especially in the early part of the period. This could be viewed as evidence that multi-bank companies sought to centralize operations even in the face of branching restrictions.

Banking company structure has changed substantially over the past decade and a half. Much of the data reviewed above is consistent with the hypothesis that, in their search for improved efficiencies, banking companies have generally chosen to consolidate their banking networks. In addition, the analysis presents evidence that that strategy is manifested most strongly in states where geographic restrictions on banking have been reduced. However, the plunge in the number of independent banks remains unexplained, as does the rise in the number of one-bank holding companies, and the increase in the number of banking companies operating a single bank in a given state regardless of the status of branching laws.[22] Furthermore, this study presents only *circumstantial* evidence on these issues. Though suggestive, its real virtue is to identify trends, the meaning of which may become apparent only after the application of more sophisticated analysis. Rather than pursue that course, this article poses one more question: on present trends, what would the future structure of banking look like?

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[22] But see footnote 21 on the Huggins (1986) piece.

IV. Future Structure of the Banking Industry

If past structural changes persisted through the end of this decade, what would the structure of the banking industry be at the beginning of the year 2001? Using a simple approach, this section addresses that question. The point, it should be made clear, is *not* to predict future structure; rather, it is to provide a basis for discussion of why we would or would not expect current trends to persist, and to encourage thinking on what "environmental jolts" might loom on the horizon. As a first order of business, the possible impact of the enactment of interstate branch banking is considered. That is followed by a "judgmentally adjusted extrapolation" of past changes in banking structure, and a discussion of what underlies such an exercise.

IV.A. Interstate Branching - Hypothetical Impact

At the time of this article was written, the Congressional passage of interstate branching legislation seemed highly likely.[23] There is little guidance in the banking literature on what the structure of the industry would be in the event interstate branching were enacted; in the absence of such guidance, a simple thought exercise yields information on some of the possible dimensions of the legislation. Essentially, interstate branch banking legislation would allow a bank to own and operate a branch in any state outside its home state. The purchase of an existing branch might have a subtle change on banking structure, but the number of institutions would not change, and we ignore that possibility. In addition, for the purposes of this particular subsection, the possibility of an out-of-state bank acquiring a bank in another

[23] See, e.g., *The Wall Street Journal*, "House Approves Bill to Permit Interstate Banks," March 23, 1994.

state, and subsequently turning it into a branch of the parent bank, is also ignored.[24] Instead, the focus is on the possible consolidation of the industry that could occur if banking companies in the position to make an immediate change did so.

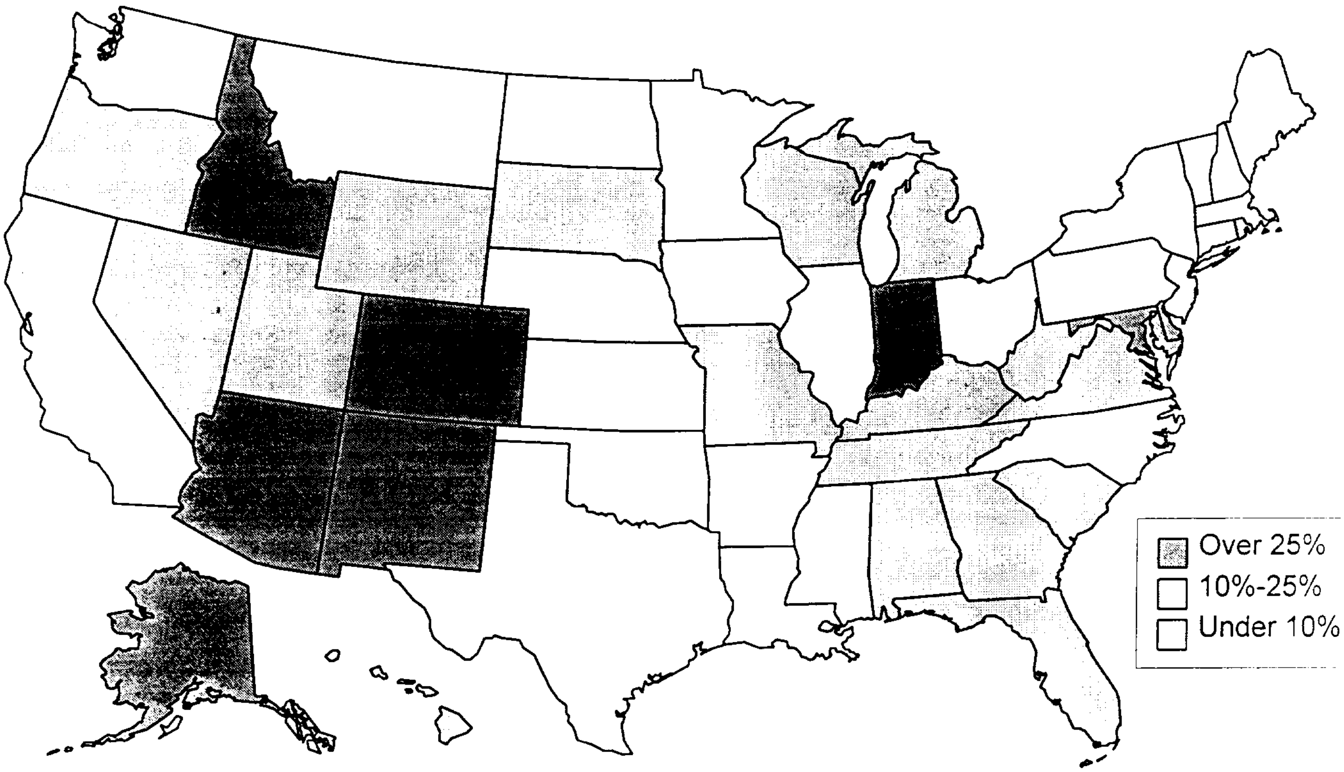
Specifically, a simple calculation was made of the maximum possible decrease in the number of banks that could occur if every multi-state multi-bank holding company merged all of its out-of-state subsidiaries banks into branches of the lead bank in the home state. Under those conditions, as the map and accompanying chart on the next page make clear, there would be 1,234 fewer banks - a decline of over eleven percent in the current number of commercial banks. The impact would be spread quite differently across states, however. Nine states (Arkansas, Arizona, Colorado, Delaware, Idaho, Indiana, Maryland, New Mexico, and Rhode Island) and the District of Columbia would lose more than one-quarter of their banks. However, twenty states would lose fewer than ten percent of their banks, and the remaining twenty-one would lose between ten and twenty-five percent.

It should be stressed that the above exercise is not a forecast or projection. In particular, the analysis in the previous section clearly showed that, despite a trend toward centralization, some banking companies have chosen to retain multiple subsidiaries, even in states with a long-standing tradition of statewide branching. Hence, it is reasonable to expect that even upon the enactment of interstate branching, some multi-state multi-bank holding companies will choose to retain a number of separately chartered banks in different states. Nevertheless, evidence on how banking companies have reacted to the possibility of intra-state branching shows that many banks are likely to pursue the opportunities to consolidate

[24] That possibility is considered in the next section.

Interstate Branching: Hypothetical Impact

% decrease in number of banks



Decrease in number of commercial banks, by state*

State	Number	Percent	State	Number	Percent	State	Number	Percent
ALL	1,234	11.3	KS	32	6.5	ND	10	7.1
			KY	35	11.3	OH	45	7.1
AL	37	17.3	LA	3	1.4	OK	10	2.7
AK	3	37.5	ME	4	19.0	OR	7	15.6
AZ	14	37.8	MD	26	28.0	PA	18	6.9
AR	21	8.2	MA	9	15.0	RI	2	28.6
CA	10	2.6	MI	36	17.3	SC	9	11.5
CO	82	25.9	MN	44	7.7	SD	13	10.8
CT	5	10.9	MS	4	3.4	TN	41	16.5
DE	18	56.3	MO	76	15.5	TX	30	3.0
DC	6	31.6	MT	9	7.7	UT	4	12.1
FL	77	20.2	NE	21	5.8	VA	29	17.6
GA	48	12.1	NV	5	25.0	VT	1	5.0
HI	1	12.5	NH	1	4.5	WA	6	6.8
IA	31	5.8	NJ	11	11.2	WV	39	2.6
ID	8	38.1	NM	28	34.6	WI	88	20.2
IL	88	9.2	NY	11	6.3	WY	10	18.2
IN	62	26.3	NC	4	5.7	TR*	2	12.5

* Change in the number of banks, if each multi-state bank holding company turned all of its subsidiaries into branches of its lead bank and no other consolidation occurred. TR = U.S. territories. Base period is year-end 1993.

Source: FFIEC "Consolidated Reports of Condition and Income"; Office of the Comptroller of the Currency staff estimates across state lines that the enactment of interstate branching would provide. With this in mind, attention is turned to a hypothetical look at the future.

IV.B. The Banking Industry in 2001?

As section III.B showed, the patterns of structural changes at the banking company level are complex, making even an extrapolation (as compared to a projection or forecast) of the changes difficult. As an alternative, this section focuses on extrapolating changes in the number of banks, the implicit reasoning being that changes in banking company structure manifest themselves, in a proximate sense, as changes in the number of banks.[25] The procedure followed in this section is straightforward (details are contained in Appendix 2). Using data on the pattern of mergers, failures, and entry on a state-by-state basis over the seven year period 1987-1993, two state-by-state "extrapolations" of the future number of banks were calculated, to yield the cumulative amount and type of consolidation over the next seven years, through the end of the year 2000. By design, the procedure is essentially mechanical in nature, though judgmental adjustments were made in several ways, two of which apply to both the "non-interstate branching" and the "interstate branching" scenarios. First, it was assumed that extrapolating the pattern of bank failures over the 1992-1993 period, rather than the entire 1987-1993 period, would provide a more useful set of results to consider. In addition, working from the observation that entry has slowed tremendously over

[25] Miller (1988) and Hannan and Rhoades (1992) provide two different analytic approaches to project future bank structure. For a projection methodology that starts from a similar point as the extrapolations in this study, but that includes as well projections of the number of bank holding companies, see Nisenson (1991). Rhoades (1992) considers the hypothetical case of all mergers allowable under the Justice Department guidelines being consummated.

the recent past, it was decided that entry over the remainder of the decade would be calculated at one-third the 1987-1993 pace.

Because there is no direct guidance from past data on the impact of interstate branching on consolidation, a judgment call was also made for the "interstate branching" scenario. In particular, a higher rate of within-holding company mergers was calculated, as multi-state multi-bank companies take advantage of the opportunity to turn out-of-state subs into branches of the lead bank in the organization, and as one-state multi-bank holding companies engage in some degree of "competitive" consolidation of subsidiaries. Furthermore, a higher rate of mergers between unaffiliated banks was used in the interstate branching scenario, reflecting the possibility that banks will acquire other banks across state borders in order subsequently to be able to "branch" the cross-border sub into the lead bank in the home state.[26]

The results of these "thought exercises" are presented in Charts XVIIa, XVIIb, and XVIII. Chart XVIIa illustrates the composition of consolidation under the assumption that there is no interstate branching legislation enacted. The decrease of just under 2,100 banks extrapolated for the period 1994-2000 is about two-thirds of the amount of consolidation that occurred over 1987-1993. By assumption, the extrapolation yields large differences in the number of failures and new charters compared to the 1987-1993 actuals. However, the net differences between failures and entry for the extrapolation period compared to the 1987-1993 period are similar -- a net addition of 116 banks (extrapolation), and 167 banks (1987-1993).

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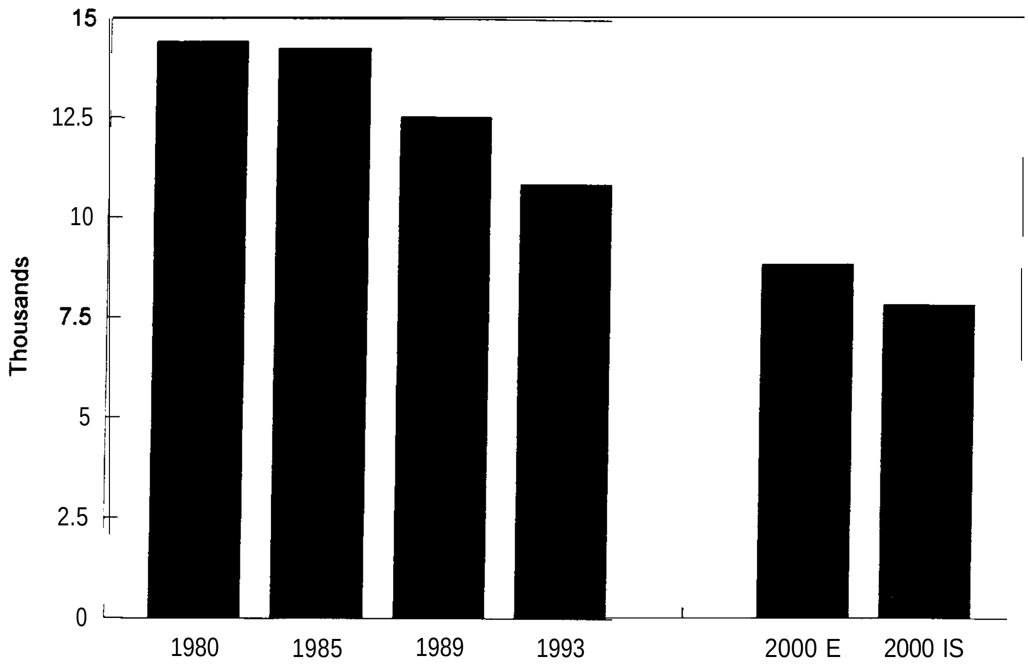
[26] This possibility has been commented on in the business press. See, e.g., *The Wall Street Journal*, "Banks Bracing for the Removal of Interstate Barriers," March 11, 1994.

[Chart XVIII: Number of Commercial Banks - Actual and Hypothetical]

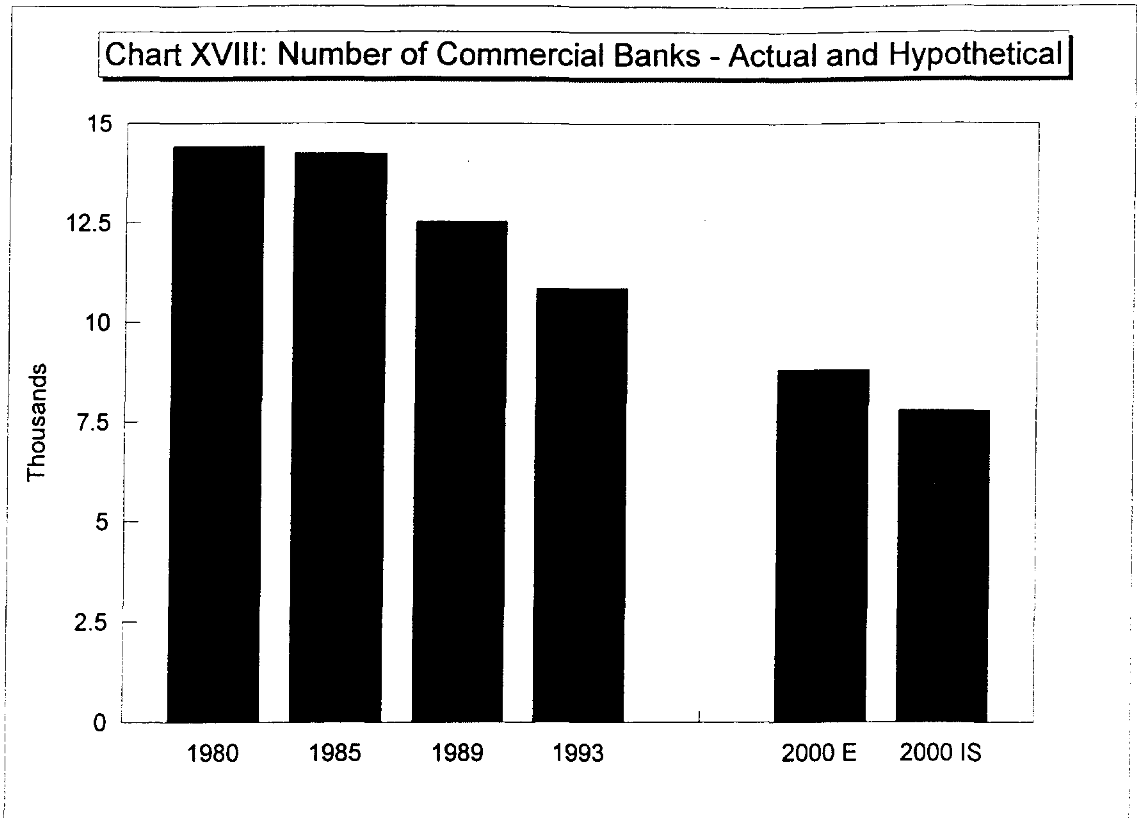


Number of Commercial Banks: Actual and Hypothetical

1980	1985	1989	1993	2000 E	2000 IS
14,429	14,255	12,547	10,870	8,808	7,796

2000 E: Extrapolation under the assumption that interstate branching does not apply. 2000 IS: Extrapolation under the assumption that full interstate bank and branching become effective in 1996.

Source: FFIEC. "Consolidated Reports of Condition and Income"; Federal Reserve, IMS Structure File, OCC staff extrapolations. The extrapolations were based on IMS Structure File data. See Appendix 1 for a discussion on the issue of matching Structure File and Reports of Condition and Income data.



Number of Commercial Banks: Actual and Hypothetical

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Source: FFIEC, "Consolidated Reports of Condition and Income"; Federal Reserve, IMS Structure File; OCC staff extrapolations. The extrapolations were based on IMS Structure File data. See Appendix 1 for a discussion on the issue of matching Structure File and Reports of Condition and Income data.

Hence, most of the difference between the actual consolidation over 1987-1993, and the hypothetical consolidation over 1994-2000 is due to mergers. That is, if intra-mergers and inter-mergers were to proceed over 1994-2000 at the same pace as was the case for the 1987-1993, *relative to* the number of banks in existence at the beginning of the period, total consolidation of the industry would be about two-thirds of the amount achieved over the past seven years.

An "extrapolation" was also made which incorporates the hypothetical impact of the enactment of interstate branching legislation. Specifically, it was assumed that: 1) interstate branching legislation is passed at the federal level in 1994; 2) as an interim phase, full, nationwide interstate banking becomes possible at the beginning of 1995; 3) full interstate branching becomes possible at the beginning of 1996; and 4) no states subsequently choose to "opt out" of -- i.e., disallow at the state level -- either interstate banking or interstate branching provisions. In addition, it was assumed that the multi-state multi-bank holding companies in existence at the end of 1993 are still in existence at the beginning of 1996 when interstate branching takes effect, and that as a group they "branch up" seventy-five percent of their out-of-home-state subs by year-end 2000.[27]

Chart XVIIIb illustrates the result of this procedure. No impact of interstate branching on failures or entry was calculated, though the geographic diversification of risk, which has been cited as a virtue of interstate branching, might be expected to reduce failures somewhat:

[27] The assumption that the number of multi-state multi-bank holding companies grows no bigger or smaller than those in existence at the end of 1993, while probably unrealistic, is not as strong as it might first appear for the sake of calculating consolidation. That is, if two MSMBHCs merged, and prior to the merger both were bent on completely "consolidating up" their subs into branches of the lead bank in the home state, the total additional possible "interstate consolidation" is one bank -- i.e., the lead bank in the acquired MSMBHC.

and entry of full-service banks might be expected to be lower than it otherwise would be, due to the entry of new branches. Hence, by assumption, the difference between the two scenarios is due to mergers. Intra-mergers in the interstate branching scenario are up by more than 500 over the non-interstate extrapolation, due to faster consolidation within state borders by multi-bank companies, and by MSMBHCs merging out-of-state subs into their lead banks. Specifically, it was assumed that seventy-five percent of the 367 possible "interstate intra-mergers" that existed at year-end 1993 would be consummated by year-end 2000.

Inter-mergers were assumed to increase by half over the non-interstate extrapolation of past patterns, as more banks seek to position themselves to take advantage of interstate branching. Hence, the total additional impact on consolidation of the enactment of interstate branching is calculated to be about 1000 more banks. Chart XVIII shows the result of the extrapolation exercises in terms of numbers of banks in existence by the year 2001.

How realistic are these outcomes? The concluding section addresses that question in light of what we know, and of what we need yet to discover, about past structural changes in the banking industry.

V. Conclusions

The main stimuli for structural change in the banking industry seem likely to persist over the remainder of this decade. In particular, increased competition and the expansion of geographic powers are certain to effect structural decisions made by bankers. Among the most important of those actions will be mergers between unaffiliated banks, and continued within-holding company consolidation. It is difficult to guess at how much "inter-merger" activity there will be, or at what pace those mergers will take place. It seems safe to assume.

however, that in the event interstate branching legislation is passed, inter-merger activity over the next seven years will exceed its pace of the previous seven years. The hypothetical pattern of inter-mergers in the extrapolations does not, therefore, seem unreasonable.

The pattern of within-holding company consolidation is a complex subject, as the review of past structural changes revealed. Certainly, there is a tendency toward greater centralization, as shown by the decline in the number of banks per multi-bank holding company, and as manifested in the relative trend toward one-bank versus multi-bank company structure in states which have liberalized their branching laws. Still, the nature and scope of the performance gains associated with a particular type of change in corporate organization bear more investigation. Though the extrapolations of within-holding company consolidation seem too low, it is difficult to guess at what the actual magnitude of this aspect of consolidation will be.

Other aspects of structural change, actual or potential, that warrant further research are the huge drop in the number of independent banks, and the possible impact of interstate banking and branching on failures and entry. Beyond this, an explicit account of the structural impacts of competitive pressures from nonbank financial intermediaries is crucial to a comprehensive understanding of past changes in the banking industry. As well, the nature of the linkages between "environmental jolts" to the industry, and structural change need to be made transparent.

It seems quite likely that under any circumstances there will still be thousands of banks, and thousands of bank holding companies, in existence as the next century dawns. Far fewer of these banks will be small, independent institutions, but the role of independent banks in closely monitoring credit allocation at the local, community level will be carried on by subunits of bank holding companies. The ways in which the changes outlined above have effected, and will effect, banking industry performance is beyond the scope of this article. Surely, though, the effort to understand structural change is a key to component to an intelligent discussion of what banks will and/or should do.

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Appendix 1: Data Issues

This article uses data from the "Consolidated Reports of Condition and Income" ("Call Reports") compiled by the Federal Financial Institutions Examination Council (FFIEC) for structure and performance data on extant banks. Unless otherwise noted "Consolidated Reports of Condition and Income" or "Call Report" refers to the FFIEC 031, 032, 033, and 034 reports. In the current study a "bank" is defined as any FDIC-insured commercial bank with positive assets at the time of filing the Call, a definition that generally excludes industrial banks, savings banks, trust companies without deposits, uninsured banks, a small number of banks with no assets and, except where noted, U.S. branches and agencies of foreign banks. Some, or all, of these exclusions may be included in other studies. Hence, the aggregate figures in this study for banks, branches, and bank holding companies may be slightly smaller than those reported elsewhere.

The Call Report does not carry data on how banks entered or disappeared from the system, i.e., how the banking industry actually consolidated. For direct information on consolidation this paper follows Nisenson (1991) in using the IMS Structure File data base compiled by the Federal Reserve Board. Use of that data source makes possible a detailed decomposition of consolidation of the industry, on a bank-by-bank basis. The IMS Structure File, which is compiled on essentially a "real time" basis, rather than quarterly as is the case with the Call Reports, does not contain any financial data on banks, but deals with the same universe of banks as file the Call Reports. However, for a given set of criteria on what constitutes a "bank", the Structure File generally includes a few more banks than the Call Reports, presumably because the Structure File includes some banks that did not file a Call in the quarter they disappeared.

Appendix 2: Extrapolation Methodology[28]

Four components of banking industry consolidation over the 1987-1993 period -- intra-mergers (within holding company mergers), inter-mergers (mergers between unaffiliated banks), failures, and entry -- were extrapolated through year-end 2000, on a state-by-state basis. (Appendix Table 1 shows the state-by-state decomposition of consolidation; notes to that table give the definitions of the components, which essentially are bank charter disappearances or appearances.) Two scenarios were considered: extrapolation of past trends under the assumption that legislation allowing nationwide interstate branching is not enacted, and a "judgmental adjustment" of that extrapolation under the assumption that interstate branching legislation is passed in 1994 and fully enacted by 1996.

For both scenarios, the extrapolation of past trends for failures and entry focused on the 1992-1993 period. For failures, the extrapolation was:

FAILS = FAIL FACTOR * NPRBANKS93

where FAILS is the cumulative number of failures over the 1994-2000 period; FAIL FACTOR is the ratio of banks that failed in 1992 and 1993 to the number of banks with a nonperforming ratio of greater than or equal to 100% at year-end 1991 (multiplied by 7/2 to extrapolate the trend of the two year period 1992-1993 over the seven year period 1994-2000); NPRBANKS93 is the number of banks at the end of 1993 that had a ratio of nonperforming assets to primary capital of greater than or equal to 100 percent. (Nonperforming assets include the sum of loans and leases 90 days or more past due, plus nonaccrual loans, plus other real estate owned; primary capital includes equity capital, plus allowance for loan and lease losses, plus minority interest in consolidated subsidiaries, plus total mandatory convertible debt.) Failures for 1991-1993 did not include assisted transactions.

Entry was calculated as:

ENTRY = ENTRY SHARE * ENTRY FACTOR * NOBANKS93

where ENTRY is the cumulative number of new charters over the 1994-2000 period; ENTRY SHARE is the ratio of *de novos* and thrift conversions over the 1987-1993 period to the number of banks that existed at year-end 1986; ENTRY FACTOR, by assumption, is one-third the pace of entry over the 1987-1993 period; NOBANKS93 is the number of banks at the end of 1993.

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[28] This methodology is based closely on previous work by Nisenson (1991).

For the "non-interstate" scenario, intra-mergers were calculated as:

INTRAS = INTRA FACTOR * INTRAPO93

where INTRAS is the cumulative number of intra-mergers over the 1994-2000 period; INTRA FACTOR is placed at .62 – the ratio of total intra-mergers over the 1987-1993 period to the total possible number of within holding company mergers at year-end 1986; INTRAPO93 is the number of within holding company mergers that could take place if every MBHC collapsed all of its subs, in a given state, into branches of its "lead" (i.e., largest) bank in that state. (That is essentially the scenario of complete intra-state branching).

Inter-mergers were calculated as:

INTERS = INTER FACTOR * INTER SHARE * NOBANKS93

where INTERS is the cumulative number of inter-mergers over the 1994-2000 period; INTER FACTOR is placed at 1.00 – i.e., the pace of inter-mergers over the 1987-1993 period is assumed to apply for the extrapolation period; INTER SHARE is the ratio of inter-mergers over 1987-1993 to the number of banks at year-end 1986; and NOBANKS93 is the number of banks at year-end 1993.

For the "interstate branching" scenario, failures and entry were estimated as above, and inter-mergers were assumed to proceed at 1.5 times the 1987-1993 rate, as banks under take to position themselves to take advantage of interstate branching. Intra-mergers were calculated in two parts, INTRAS and ISBR. INTRAS was calculated as above, except that INTRA FACTOR was raised to .75, under the assumption that with interstate branching enacted, multi-state multi-bank holding companies (MSMBHCs) will increase the rate at which they consolidate their subsidiaries within a given state, and one-state multi-bank holding companies will engage in "competitive consolidation" of their subsidiaries at a faster rate than in the "non-interstate" scenario. MSMBHCs will also, under interstate branching, be able to "branch up" subs across state lines. Hence, an additional component of within holding company consolidation -- ISBR -- was calculated as:

ISBR = ISBR FACTOR * ISBRPO93

where ISBR FACTOR is set at .75, under the assumption that 75 percent of the possible within-company, cross-border mergers of subsidiaries into the lead bank in the home state are consummated by year-end 2000; and ISBRPO93 is the potential within-company, cross-border mergers for all MSMBHCs that existed at the end of 1993.

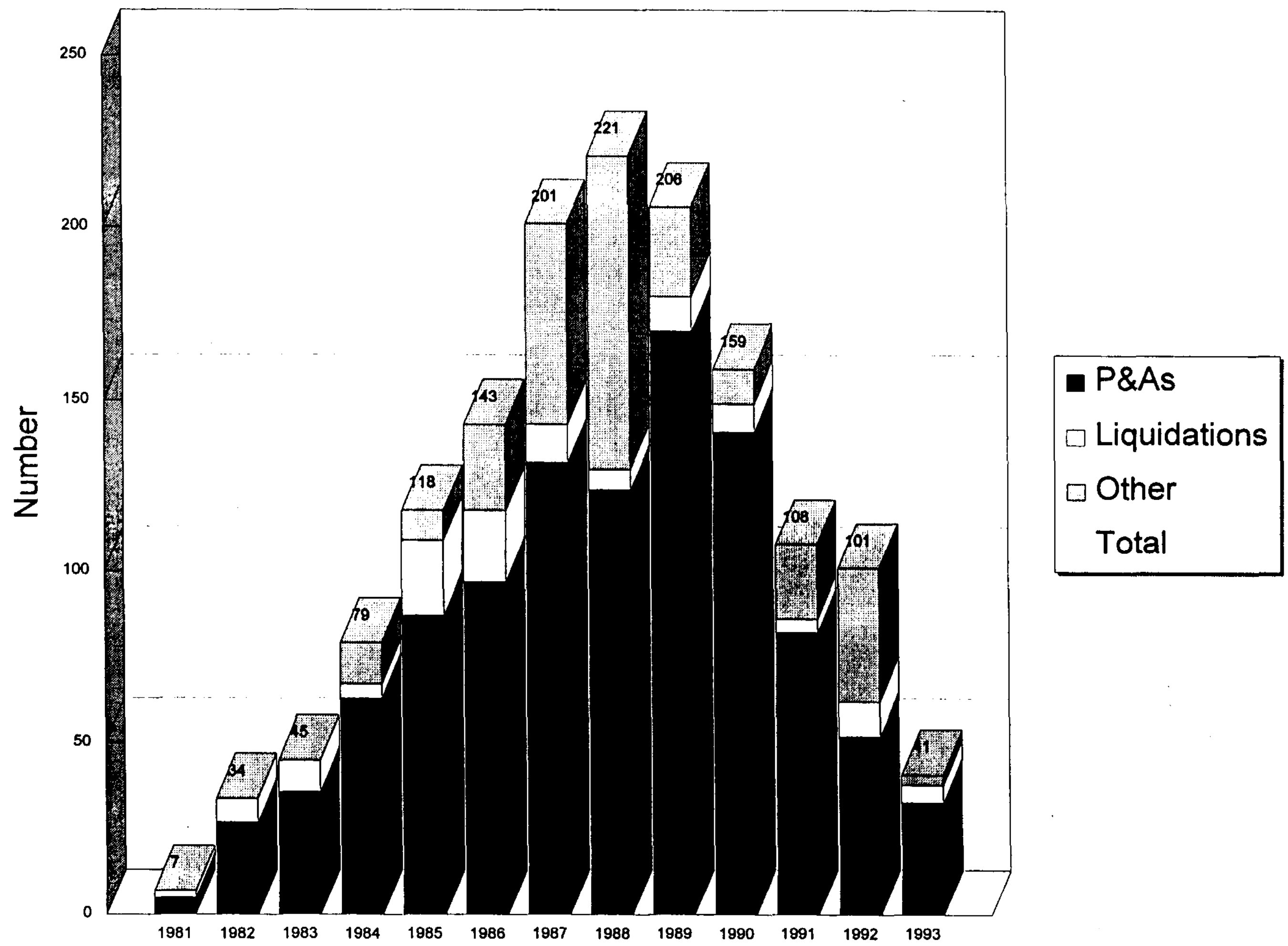
Appendix Table 1: State-by-State Decomposition of Consolidation, 1987-1993

STATE	BANKS 1986	INTRA MERGERS 1987-1993	INTER MERGERS 1987-1993	FAILS 1987-1993	ENTRY 1987-1993	CHANGE in NO. of BANKS	BANKS 1993
AK	15	2	2	5	2	-7	8
AL	229	24	15	2	28	-15	214
AR	256	5	5	3	13	1	257
AZ	54	0	11	16	12	-17	37
CA	445	20	56	39	60	-56	389
CO	438	91	37	39	38	-122	316
CT	60	10	5	20	25	-14	46
DC	20	1	2	5	8	-1	19
DE	34	6	4	1	16	-2	32
FL	411	65	51	30	128	-29	382
GA	369	52	24	2	105	30	399
HI	10	5	0	1	0	-2	8
IA	614	26	51	13	6	-84	530
ID	24	0	7	0	4	-3	21
IL	1219	222	82	8	50	-262	957
IN	355	87	29	6	7	-118	237
KS	612	38	72	25	15	-122	490
KY	331	23	16	2	20	-22	309
LA	298	17	21	57	15	-81	217
MA	102	38	2	16	17	-42	60
MD	91	13	4	2	18	2	93
ME	22	3	2	1	7	-1	21
MI	345	128	25	1	16	-137	208
MN	727	107	48	20	16	-159	568
MO	610	91	40	15	27	-120	490
MS	141	3	20	2	3	-22	119
MT	169	43	8	7	9	-52	117
NC	64	1	17	2	29	6	70
ND	176	24	16	8	3	-35	141
NE	430	23	44	8	15	-70	360
NH	53	14	0	9	7	-31	22
NJ	117	36	13	10	39	-19	98
NM	94	7	3	5	2	-13	81
NV	16	0	2	0	6	4	20
NY	195	24	11	11	27	-19	176
OH	304	40	20	4	22	-41	263
OK	519	27	56	79	12	-148	371
OR	59	2	11	1	5	-14	45
PA	302	46	31	2	37	-40	262
RI	14	1	2	1	1	-7	7
SC	73	4	7	1	18	6	79
SD	134	8	9	3	9	-14	120
TN	283	39	29	1	35	-34	249
TX	1972	418	143	470	77	-961	1011
UT	50	1	13	5	3	-17	33
VA	171	15	12	6	28	-6	165
VT	25	4	1	2	3	-5	20
WA	94	4	23	2	26	-6	88
WI	566	108	36	0	15	-130	436
WV	211	36	29	1	3	-63	148
WY	106	40	7	5	1	-51	55
USTERR	17	1	1	1	3	-1	16
TOTAL	14046	2043	1175	975	1091	-3166	10880

Intra-Merger: disappearance of a bank charter as a result of the acquisition of one bank in a bank holding company by another bank in that same company. Inter-Merger: disappearance of a bank charter as a result of the acquisition of a bank by another bank unaffiliated with it. "Fails": commercial banks insured by the BIF that have been closed by their primary regulator. Unlike the aggregate numbers in the charts and tables in the text, state-by-state figures for "fails" do not include assisted transactions. New Charters include conversions of thrifts to banks, 1990-1993.

Source: Federal Reserve Board IMS Structure File.

Chart A1: Commercial Bank Resolutions: 1981-1993
By Type of Resolution



Source: Federal Deposit Insurance Corporation News Releases, 1981 to Present; Office of the Comptroller of the Currency

Type of Resolution	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Purchase & Assumptions	5	27	36	63	87	97	132	124	170	141	82	52	33
Liquidations	2	7	9	4	22	21	11	6	10	8	4	10	5
Other	0	0	0	12	9	25	58	91	26	10	22	39	3
Total	7	34	45	79	118	143	201	221	206	159	108	101	41