Is banking a declining industry? A historical perspective

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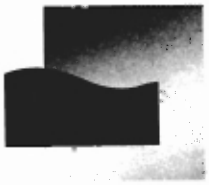

Regulation has been widely blamed for contributing to the decline of the commercial banking industry in the United States. Before one can evaluate the truth or falsity of this accusation, it is necessary to determine whether banking is indeed a declining industry. To answer this question, we examine a number of different measures of changes in the size of the banking industry in the United States during the twentieth century.

Few industries are as closely associated in the public image with the growth of modern economies as is commercial banking. Bankers have been widely caricatured as pulling the strings behind the "bosses of industry" and have been viewed with suspicion or fear in many quarters. Indeed, it would be difficult to understand the elaborate set of regulations intended to restrict the growth and thereby the power of commercial banks in the United States without first understanding the widespread distrust of banks and banking dating back to early U.S. history. In the 1800s, some states even went so far as to ban banks altogether.

But the image of bankers as all-powerful has changed dramatically in recent years, especially among bankers themselves, their regulators, and the business community. Over the past decade, banking in particular and depository institutions in general have come to be viewed as declining. This widespread perception is based primarily on their declining share of some measure of assets or liabilities for all financial institutions. An example is provided by figure 1, which shows the decline since 1952 in the combined total assets of U.S.-chartered commercial banks and U.S. offices of foreign banks as a percentage of the assets of all financial institutions. Several presentations at the Federal Reserve Bank of Chicago's 1993 Conference on Bank Structure and Competition noted this decline (Federal Reserve Bank of Chicago 1993).

The common view is that banks are losing out to a wide range of nonbank competitors such as finance companies, mutual funds, and private pension funds that are offering traditional types of banking products more efficiently, either because technological advances have eliminated advantages previously enjoyed by banks or because these competitors are free of costly regulations imposed on banks. The source of any decline is important in judging its welfare implications. If banking were a declining industry because of market forces, as was the fate of horse-drawn carriages, the railroads, and coal mining, then it would be of concern to bankers who lose their jobs but of little public policy concern.[1] Indeed, attempting to prevent the decline would reduce aggre-

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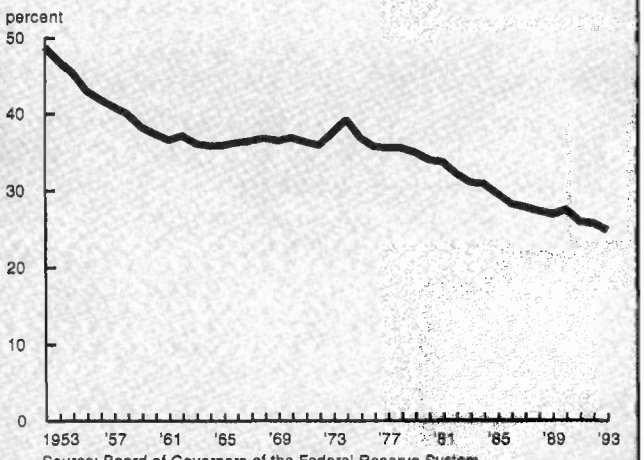
gate economic welfare. On the other hand, if the decline were attributable to excessive regulation that prevents banks from operating more effectively, or from introducing newer products for which demand is growing rapidly, then aggregate economic welfare would be reduced and the decline would be a legitimate public policy concern.

However, before anyone writes the banking industry's epitaph, it may be useful to look a little more closely at the evidence. This article examines a number of data series to determine whether banking is or is not a declining industry and, if it is, whether the decline is the result of market forces or of excessive and discriminatory regulation. Although the evidence is not clear-cut, several of the alternative measures examined in this article suggest that banking may not be declining.

FIGURE 1

Commercial banks' declining share of assets of all financial institutions



Source: Board of Governors of the Federal Reserve System, "Flow of funds accounts," various years.

Alternative measures of the size of the banking industry

There are serious conceptual and practical problems in measuring the output of any industry.[2] Because of the intangible nature of the output provided by service industries generally, and banks in particular, the problem of measuring output has occupied banking scholars for decades. The problem arises in a number of contexts—for example, in calculating shares of output in local markets for antitrust purposes, in measuring banking output and costs for the purpose of determining the relationship between size and efficiency, and in calculating the industry's contribution to gross domestic product (GDP). Some of the issues related to choosing the most appropriate measure of the size of the banking industry are discussed in the accompanying box.

Because each of the measures used in past studies appears to contain conceptual or practical problems—difficulties in obtaining appropriate data, shortcomings in the quality of available data, lack of comparability of data over time, or a failure of the data to correspond closely to the theoretical concept they are used to measure—this article analyzes a number of them. Among the most frequently used measures of the size of the banking industry are 1) assets; 2) employment; and 3) revenues, earnings, and value added. We present data for each of these measures in turn, together with an indication of their strengths and shortcomings. Because assets and related balance sheet data have been, by far, the most frequently used measures of the size of the banking industry, we consider them first.

Assets

Total assets, earning assets, and total deposits have all been used at one time or another as measures or indexes of banking output. Such measures accord with the common perception of banks as firms that use "inputs" such as deposits, labor, and capital to produce "outputs" primarily in the form of loans and investments. This more or less commonsense view has greatly influenced the analysis of banks as firms and the measurement of bank output.

It is therefore not surprising that total assets or deposits, or some variant thereof, has long been the most popular measure of the size or output of the banking industry. Balance sheet data for banks are readily available at frequent intervals and serve as the basis for the widely used flow of funds data published quarterly by the Federal Reserve.[3] Moreover, in contrast with most other businesses, the products and services of banks have traditionally been closely related to the size and composi-

tion of their asset and liability portfolios. Throughout the nineteenth century and the first half of the twentieth century, the activities of commercial banks were largely limited to accepting and processing deposits and making loans and investments. Indeed, those functions still account for a substantial if declining proportion of the typical bank's activities.

Issues in the measurement of bank output

Analysts have tried to measure bank output for two purposes: to assess economies of scale in banking, and to calculate banks' contribution to gross domestic product (GDP). Earning assets or total assets were the most widely used measures of bank output in early studies of the relationship between scale—that is, size measured in terms of output—and cost in banking. However, critics pointed out that an equal number of dollars of credit extended for a given period of time, as would be reflected in asset measures, do not necessarily imply equal output in an economic sense. For example, a given dollar amount of consumer instalment loans does not necessarily represent the same output as the same dollar amount of loans to a large corporate customer. A consumer loan is likely to require much more risk-bearing, information gathering, credit analysis, and bookkeeping per dollar of loan principal than a loan to a large corporate customer (Benston 1965; Greenbaum 1967). Thus, simply adding the dollar amounts of all the loans on a bank's books would be adding apples and oranges. The only dimensions of output that could be said to be identical for loans of different types but equal dollar amounts outstanding are the amount and duration of the postponement of consumption by one group of economic units that is a prerequisite for making a loan enabling another economic unit to consume beyond its current income. A similar objection applies to adding the outstanding values of loans of the same type but of different sizes.

Another relatively obvious criticism of balance sheet measures of output is that output is a flow, measured in quantity or value per unit of time, whereas assets are a stock at a particular point in time. Only in banking and related financial industries have assets been widely used as a measure of output and relative importance. In other industries, sales or revenues are the preferred measure for some purposes, including the calculation of market shares for antitrust analysis. For most other purposes, there is fairly general agreement among economists that the most relevant measure of the size of an industry is its value added, or contribution to the total output of the economy. Although there may be issues affecting the industry for which assets or liabilities or employment are more useful measures—for example, changes in the importance of banking as a channel for monetary policy or banking's role in creating new jobs—the contribution of banking to GDP is a more general measure of the industry's importance in the economy.

In the search for a single index of banking output, considerable progress had been made by the late 1960s toward achieving consensus that some variant of bank revenue, rather than assets, was the preferred measure of final output. Of course, if one wishes to measure commercial banks' contribution to final output as measured by value added, rather than the value of final output per se, it is necessary to subtract from revenues the value of purchased inputs. Nevertheless, the persistence of conflicting views concerning the nature of the output of financial institutions led to a continuing debate over which measure of value added was most appropriate. Serious questions were raised about the "liquidity principle" used by the U.S. Commerce Department's Office of Business Economics to measure the contribution of banks and other financial intermediaries to GDP. According to the liquidity principle, bank output consists only of interest and other services to depositors, not to borrowers (Hodgman 1969). However, as Hodgman pointed out,

> a closer examination of banking activity and banking costs will reveal that *financial services* (rather than deposits or loans) are the products of banking. . . . When banks are viewed as financial service firms we see that the banking product sold to *borrowers* is not only credit but intermediation and that a portion of a bank's interest receipts is paid by the borrower to cover the costs of intermediation rather than as a payment for liquidity or consumption foregone by the ultimate lender. This portion of "interest" received by banks should be regarded as part of their gross value product in the national accounting sense. The remainder of interest paid to banks will, under competitive conditions, be paid in turn by the banks to the ultimate lenders who are depositors and

Support for the view that banking is declining in relative importance is typically based on the downward trend in the share of total assets at all financial institutions (see figure 1), or particular categories of assets accounted for by commercial banks or by all depository institutions. As table 1 shows, the decline in banks' share of short-term business credit, the traditional bread and butter lending activity of commercial banks, has been even more dramatic than that of banks' share of total assets. The data are frequently presented with such a sense of urgency that one might be led to believe that the decline in asset share is a sudden, recent development that requires an immediate response.

However, a closer review of the evidence shows that neither this decline nor the concern over it is of recent origin. A pioneering study of U.S. financial institutions conducted by Raymond Goldsmith in the 1950s and 1960s reported that commercial banks' share of total assets of financial intermediaries had declined from 71 percent in 1860 to 63 percent in 1900 and 32 percent in 1963 (Goldsmith 1958, 1969).[4] Table 2 shows commercial banks' share of the total assets of financial institutions for selected dates from 1860 through 1993. Thus, the more recent decline in the market share of commercial banks should not be overly surprising. Much of it simply reflects the fact that, because banks were the first major financial institution in the United States, it was virtually inevitable that they would lose market share over time to newer types of financial institutions offering previously unknown products, for example, pension funds and mutual funds.

Nor is evidence of a decline in banks' market share limited to the United States. As the data in table 3 indicate, banks' share of total liabilities of financial intermediaries in the United Kingdom also declined between 1913 and 1991. Similar declines have occurred in most of the 30 major foreign countries analyzed by Goldsmith (1969).

But even before Goldsmith's study, bankers lamented that the traditional business of banking was shrinking and that if banks were to survive they would have to expand the scope of their activities. Thus, as corporations relied increasingly on internal sources of funds and less on bank loans in the 1920s, banks expanded their lending to include consumer and residential real estate loans. The same decade also saw the rapid expansion of banks and bank securities affiliates into the underwriting and distribution of corporate securities. Retrospec-

stockholders. Conceptually, therefore, the *net* interest received by banks should be included in gross product originating rather than set to zero by definition.*

But while Hodgman and others were gaining considerable support for some variant of revenue as the single index of output in banking, the literature on bank costs moved in a very different direction. First, researchers began to estimate separate cost functions for individual functional areas within the bank (Benston 1965; Bell and Murphy 1968). Later, they began to use the translog and related multiproduct cost functions (Benston, Hanweck, and Humphrey 1982). Neither of these approaches required using a single index of banking output.

The objections noted above to using assets as the measure of banking output apply fully only to attempts to aggregate many different types of loans or other banking products into a single index of banking output. As long as each category of loans is relatively homogeneous—for example, consumer loans that do not vary greatly in size or riskiness—it may be unobjectionable to use total loans outstanding as a measure of the output associated with that category. The reason is that, if all the loans in a particular category are identical in size, maturity, risk, and other important characteristics, then the number of loan accounts, total revenue, and other alternative measures of output associated with that category would be proportional to the amount outstanding. Thus, asset measures may be a reasonable choice for the estimation of multi-product cost functions that utilize a large number of output categories rather than a single index of overall output. Indeed, recent studies comparing the performance of stock and flow measures of output in bank cost studies have concluded that there is not much empirical evidence to favor one over another (Humphrey 1992). But it is still true that this approach finesses the issue rather than addressing it; there is no presumption that a dollar of consumer loans represents the same output as a dollar of commercial and industrial loans.

*Hodgman 1969, p. 191.

TABLE 1

Composition of short-term credit market debt of nonfinancial corporate business
(1950-92)

	1950	1960	1970	1980	1990	1992
	(----------percent----------)					
Bank loans	91	87	83	71	59	59
Nonbank finance loans	6	9	9	14	17	18
Commercial paper	1	2	6	9	12	12
Foreign loans	--	--	--	1	9	9
Bankers' acceptances	2	2	2	5	3	2
Total	**100**	**100**	**100**	**100**	**100**	**100**
Billion dollars	20	43	125	324	951	882

Source: Board of Governors of the Federal Reserve System, *Balance Sheets for the U.S. Economy, 1945-92,* March 10, 1993.

tively, and almost certainly incorrectly, some blamed the banking collapse of the early 1930s on the entry by banks into some of these new and unfamiliar activities.

The 1950s were marked by renewed concern over banks' loss of business, this time to then rapidly growing nonbank depository institutions, such as savings and loan associations, which at the time were free of such regulatory restrictions as interest rate ceilings on deposits and reserve requirements. Indeed, the widely discussed Gurley-Shaw thesis held that if regulation continued to restrain traditional banks relative to their nonbank competitors, the result would be the development of more and more "near monies" such as time and savings deposits at thrift institutions, and the continued shrinkage of the banking industry (Gurley and Shaw 1955, 1956, 1960). Eventually, a point would be reached at which monetary policy, if it continued to operate only through traditional banks, would lose its effectiveness. A quick examination of table 2 shows that, rather than preempting commercial banks, savings and loan associations and savings banks are themselves now declining rapidly in importance. A history of the Office of the Comptroller of the Currency published in 1968 also remarked on the loss of market share by commercial banks in the postwar period and attributed it to excessive regulation of banks in combination with tax and other incentives enjoyed by some nonbank competitors (Robertson 1968). Like most other research on the issue, both the Gurley and Shaw study and that of the Comptroller's office relied on balance sheet data to support the thesis that banking was in decline.

Improving the asset measure

Assets probably give an adequate picture of the size of the banking industry in the nineteenth century. However, there is reason to believe that even for the first half of the twentieth century and certainly for more recent decades, reported assets give a distorted and incomplete view of the output of the commercial banking industry. The asset figures typically used in these analyses include only bank-owned or "on-balance-sheet" assets. But banks also manage or otherwise service assets owned by others. These activities are referred to as "off-balance-sheet." The economics of banking, as opposed to accounting conventions, suggests that banks should be measured by some measure that reflects the full range of their activities, such as revenues, income, or value added. However, because on-balance-sheet assets are the most readily available and frequently used yardstick of the size of the banking industry, it may be worthwhile to try to correct banks' aggregate balance sheet for a number of failings, in particular its exclusion of important off-balance-sheet activities, and bring it closer to what might be called an "economic balance sheet." We will discuss some of these exclusions and the adjustments needed to correct for them in the following sections.

Bank trust services

Among the most important off-balance-sheet activities are bank trust services, perhaps the oldest off-balance-sheet activities engaged in by banks in the United States. Indeed, a number of banks began as strictly trust companies providing only trustee or fiduciary services and expanded into deposit and other banking services primarily as an accommodation to their customers. Today, few strictly trust com-

TABLE 2

Share of assets of financial institutions in the United States
(1860-1993)

	1860	1880	1900	1912	1929	1939	1948	1960	1970	1980	1993
	(percent)										
Commercial banks	**71.4**	**60.6**	**62.9**	**64.5**	**53.7**	**51.2**	**55.9**	**38.2**	**37.9**	**34.8**	**25.4**
U.S.-chartered banks and bank holding companies	71.4	60.6	62.9	64.5	53.7	51.2	55.3	37.6	37.2	32.4	21.7
U.S. offices of foreign banks	--	--	--	--	0.0	0.0	0.6	0.6	0.7	2.4	3.7
Thrift institutions	**17.8**	**22.8**	**18.2**	**14.8**	**14.0**	**13.6**	**12.3**	**19.7**	**20.4**	**21.4**	**9.4**
Savings and loan associations	0.0	2.2	3.1	3.0	6.0	4.2	4.7	11.8	13.0	15.5	7.4[a]
Savings banks	17.8	20.6	15.1	11.8	8.0	9.2	7.4	6.9	6.0	4.2	
Credit unions	--	--	--	--	0.0	0.2	0.2	1.1	1.4	1.7	2.0
Insurance companies	**10.7**	**13.9**	**13.8**	**16.6**	**18.6**	**27.2**	**24.3**	**23.8**	**18.9**	**16.1**	**17.4**
Life insurance	1.8	9.4	10.7	13.6	14.8	23.5	20.6	19.4	15.1	11.5	12.8
Property/casualty	8.9	4.5	3.1	3.0	3.8	3.7	3.7	4.4	3.8	4.5	4.6
Investment companies	**--**	**--**	**--**	**--**	**2.4[c]**	**1.9[c]**	**1.3[c]**	**2.9**	**3.5**	**3.6**	**14.9**
Mutual funds	--	--	--	--	--	--	--	2.9	3.5	3.4	14.2
Stock and bond	--	--	--	--	--	--	--	2.9	3.5	1.5	10.2
Money market	--	--	--	--	--	--	--	--	--	1.9	4.0
Closed-end funds	--	--	--	--	--	--	--	[b]	[b]	0.2	0.7
Pension funds	**--**	**--**	**0.0**	**0.0**	**0.7**	**2.1**	**3.1**	**9.7**	**13.0**	**17.4**	**24.4**
Private	--	--	--	--	0.4	0.8	1.6	6.4	8.4	12.5	16.7
State and local government	--	--	0.0	0.0	0.3	1.3	1.5	3.3	4.5	4.9	7.6
Finance companies	**--**	**0.0**	**0.0**	**0.0**	**2.0**	**2.2**	**2.0**	**4.6**	**4.8**	**5.1**	**4.7**
Securities brokers and dealers	**0.0**	**0.0**	**3.8**	**3.0**	**8.1**	**1.5**	**1.0**	**1.1**	**1.2**	**1.1**	**3.3**
Mortgage companies	**0.0**	**2.7**	**1.3**	**1.2**	**0.6**	**0.3**	**0.1**	[b]	[b]	**0.4**	**0.2**
Real estate investment trusts	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**0.0**	**0.3**	**0.1**	**0.1**
Total *(percent)*	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Total *(trillion dollars)*	**.001**	**.005**	**.016**	**.034**	**.123**	**.129**	**.281**	**.596**	**1.328**	**4.025**	**13.952**

[a]The end of the first quarter of 1993 was the last date for which data for savings and loan associations and savings banks were reported separately. The figures for that date were: savings and loans, 6.0 percent; savings banks, 1.9 percent.

[b]Data not available.

[c]Breakdown between open- and closed-end funds not available.

Sources: Data for 1860-1948 from Raymond W. Goldsmith, *Financial Structure and Development*, Studies in Comparative Economics, New Haven, CT: Yale University Press, 1969, Table D-33, pp. 548-9. Data for 1960-1993 from Board of Governors of the Federal Reserve System, "Flow of funds accounts," various years.

TABLE 3

Share of total liabilities of intermediaries, United Kingdom
(1913-91)

Year	Banks	Building societies	Insurance companies	Pension funds
	(----------percent----------)			
1913	64	4	32	--
1930	61	8	31	--
1939	55	12	32	n.a.
1960	43	12	30	14
1970	32	17	27	16
1980	30	20	25	21
1990	28	17	26	26
1991	27	18	27	26

Note: n.a. indicates data not available.

Source: Harold Rose, "The changing world of finance and its problems," working paper no. 167-93, Institute of Finance and Accounting, London Business School, 1993, p. 29.

panies exist. To serve customers who wish to invest in securities other than bank deposits, many banks have long operated trust departments in which they provide fiduciary, investment, managerial, and custodial services for a fee. Trust department assets are assets that the bank manages or otherwise services but does not own, and that therefore do not appear on the bank's balance sheet.

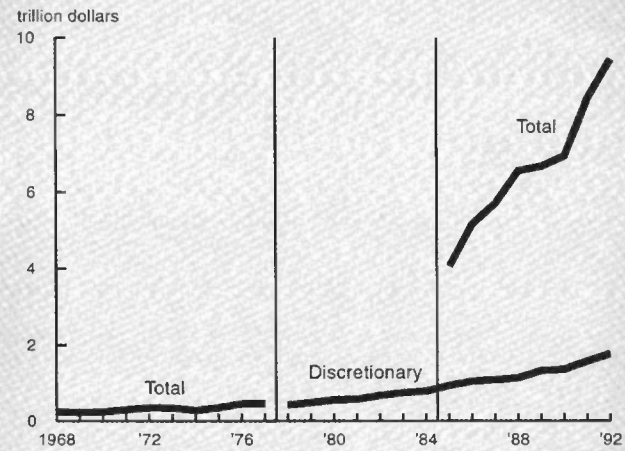
Trust accounts come in various types and require different amounts of servicing by the bank; accordingly, they generate different amounts of fee income for banks. Most trusts can be classified as personal trusts, estates, or employee benefit trusts. The trust contracts with the trustee bank for the kind of services that it requires. Almost all trust contracts call for custodial and recordkeeping services, including performance measurement, timely valuation, portfolio analysis, Employee Retirement Income Security Act (ERISA) and other required disclosure assistance, benefit disbursement, cash management, and proxy monitoring.

Some banks also provide investment management services, either as an agent or as a trustee.[5] Trust accounts whose assets are managed by the bank are generally referred to as discretionary, while accounts that are in the custody of the bank but managed by others are referred to as nondiscretionary. At year-end 1992, bank trust departments, trust companies, and thrift institutions held $1.8 trillion of discretionary assets and $7.7 trillion of nondiscretionary assets; the commercial bank share was 87 percent of the former and 94 percent of the latter (Federal Financial Institutions Examination Council 1992). Total trust assets serviced by commercial banks at year-end 1992 totaled $8.8 trillion, more than 2.5 times the assets on the balance sheets of banks. Moreover, bank trust assets have expanded rapidly in recent years, rising from $283 billion at year-end 1968 to $4.1 trillion in 1985 and $8.8 trillion in 1992. As figure 2 shows, the most rapid growth in recent years has been in nondiscretionary assets.

Banks face little competition for custodial trust services. Few if any financial institutions other than banks or trust companies offer them,

FIGURE 2

Assets of bank trust departments and trust companies



Note: Discretionary and nondiscretionary accounts were not distinguished from 1968 to 1977, and purely custodial accounts were excluded; only discretionary assets were reported from 1978 to 1984. From 1985 on, nondiscretionary assets include purely custodial accounts.

Source: Federal Financial Institutions Examination Council, *Trust Assets of Financial Institutions*, 1992.

TABLE 4

Ten largest bank trust departments, personal and employee benefit accounts
(1992)

	Trust assets					
	Discretionary	Nondiscretionary	Total	Bank assets	Discretionary trust assets/ bank assets	Total trust assets/ bank assets
	(billion dollars)				(ratio)	
State Street Bank (Boston)	113	1,165	1,278	16.5	6.8	77.5
Morgan Guaranty (New York)	38	695	733	76.7	0.5	9.6
Bank of New York	30	685	715	36.5	0.8	19.6
Citibank (New York)	23	399	422	163.8	0.1	2.6
Northern Trust (Chicago)	37	341	378	11.9	3.1	31.8
Mellon Bank (Pittsburgh)	37	323	361	29.6	1.3	12.2
Bankers Trust (New York)	128	222	351	55.8	2.3	6.3
Chase Manhattan (New York)	17	339	356	74.5	0.2	4.8
Boston Safe Deposit	19	217	236	8.3	2.3	28.4
Bank of America (San Francisco)	112	107	219	133.4	0.8	1.6

Source: Federal Financial Institutions Examination Council, *Trust Assets of Financial Institutions*, 1992.

and only a few trust companies are not chartered as banks. The ten largest bank trust departments according to assets in personal and employee benefit accounts are listed in table 4. Two of the institutions—State Street Bank and Boston Safe Deposit—are basically trust companies rather than banks, although both have bank charters. As the data in the table make clear, the trust assets held by each of these institutions greatly exceed the assets on its balance sheet.

Banks also provide corporate trust services. Such services include serving as trustee for the holders of corporate and municipal securities and as registrar, paying agent, transfer agent, and recordkeeper for publicly issued securities, including mutual funds. As trustee for the debt security holders, the bank trust department monitors scheduled payments for timeliness and represents the holders' interests in disputes. The largest bank trust departments in each corporate trust activity are listed in table 5. Only as mutual fund transfer agents do commercial banks appear to face serious competition.

When personal trust assets held by bank trust departments are added to balance sheet assets for the years since 1900, the share of assets held by banks increases somewhat, but the downward trend is basically unaltered. For the period since 1968, adding personal trusts increases commercial banks' share of total assets by an amount ranging from 4.5 percentage points to 9 percentage points. However, the downward trend remains and is in fact intensified in percentage terms, since the ratio of banks' personal trust assets to total assets of financial institutions fell by 50 percent over that period, whereas banks' share of balance sheet assets fell only about a third. As figure 3 shows, essentially the same conclusion holds when other assets are included over which bank trust departments exercise managerial discretion. These assets, which include roughly one-third of employee benefit trust assets, were nearly three times as large as personal trust assets at year-end 1992 but have grown at roughly the same pace in recent years. Thus, while their inclusion substantially increases banks' average share of the market over the period, it does little to moderate its downward trend. Including trust assets over which banks do not exercise managerial discretion would moderate the decline, but because a narrower range of services is provided in conjunction with such accounts, they should not receive the same weight as discretionary assets.

TABLE 5

Largest bank providers of corporate trust services
(1992)

Corporate and municipal security trusteeship	Securities, principal amount (billion dollars)
Citibank (New York)	222
First National Bank (Chicago)	197
Bank of New York	160
Chemical Bank (New York)	149
Bankers Trust (New York)	132
Texas Commerce (Houston)	99
Chase Manhattan (New York)	94
State Street (Boston)	92
Bank of America (San Francisco)	91
United States Trust (New York)	87

Stock or bond transfer agent	Number of issues
Citibank (New York)	16,030
Chemical Bank (New York)	12,109
Bank of New York	8,124
Bankers Trust (New York)	2,961
Seattle-First National	2,849
Ameritrust Texas (Dallas)	2,360
American National (St. Paul)	2,223
Security Pacific (New York)	1,905
First Chicago Trust (New York)	1,542
First National of Boston	1,347

Mutual fund transfer agent	Number of issues
PNC National (Wilmington, DE)	427
Investors Fiduciary Trust (Kansas City)	241
Firstar (Milwaukee)	132
Putnam Fiduciary (Boston)	71
Investors Trust (Boston)	44
NationsBank (Dallas)	32
Norwest Bank (Minnesota)	23
Wells Fargo (San Francisco)	22
Fifth-Third Bank (Cincinnati)	8
Wilmington Trust	7

Source: Federal Financial Institutions Examination Council (1992).

The reentry of banks into securities activities

Primarily through the nonbank subsidiaries of their parent holding companies, banks have also been entering or reentering areas of activity long considered off-limits to banks, at least since the enactment of the Glass-Steagall Act in 1933. Although banks' own aggressiveness and inventiveness have been the driving force in this development, much of it would have been impossible without a series of rulings by the Comptroller of the Currency and the Board of Governors of the Federal Reserve System (Kaufman and Mote 1990). As of today, banking organizations, subject to some quantitative restrictions that are more onerous for smaller institutions, may serve as full-service or discount securities brokers, may underwrite and deal in a full range of municipal and corporate debt, futures, options, swaps, and other derivative securities as well as corporate equities, and may manage or broker (but not underwrite or sponsor) mutual funds.

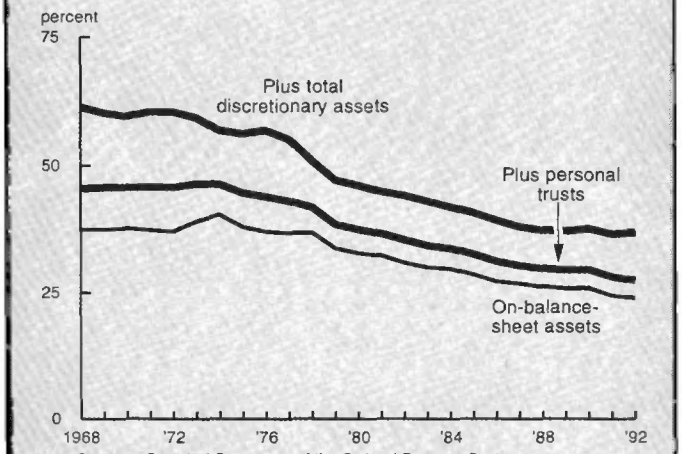
In recent years, commercial banks have made significant inroads into the underwriting of new securities. In 1993, two bank holding companies—J. P. Morgan and Citicorp—ranked among the top 15 underwriters of all new domestic securities sold in the United States. The remaining 13 were investment banks. Three banks ranked among the top 15 underwriters of both investment-grade and junk bonds and also among the top five underwriters of asset-backed securities. It is of interest to note that only one commercial bank ranked among the top 15 underwriters of municipal revenue bonds, most of which they were not permitted to underwrite until recent years. But this is the same number of banks that rank among the top 15 underwriters of municipal general obligation bonds, which banks have always been permitted to underwrite. As we have noted elsewhere, it is only since the late 1970s that banks have become aggressive in pursuing securities underwriting activities (Kaufman and Mote 1990). In part this may reflect differences in corporate culture between these activities and more traditional commercial banking activities.

Banks and mutual funds

Mutual funds are one of the newer and, since the late 1970s, more rapidly growing types of financial institutions. As figure 4 shows, mutual funds have increased their share of assets of all financial institutions from 1.8 percent in 1977 to 14.2 percent in 1993. This rapid increase is the result of both a rapid inflow of new funds into mutual funds, in part reflecting the introduction of money market funds in the early 1970s, and the sharp increase in stock and bond prices in recent years. Ex-

FIGURE 3

Commercial banks' share of assets adjusted for discretionary trust assets



Sources: Board of Governors of the Federal Reserve System, "Flow of funds accounts," various years; and Federal Financial Institutions Examination Council, *Trust Assets of Financial Institutions*, various years.

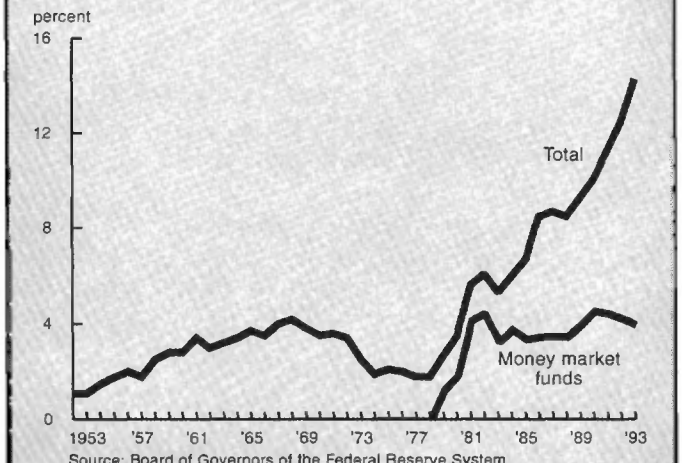
cept for money market funds, mutual funds are valued at market prices. In contrast, the assets of depository institutions, insurance companies, and finance companies are typically measured by book value.

Mutual funds are open-ended investment funds sponsored (organized) by an entity called an investment company that sells shares to raise a third-party pool of funds for investment in securities. The shares represent an interest in the pool and are generally valued at the day-end net asset price of the asset portfolio. The fund stands ready to buy and sell shares continuously at this price. The sponsor investment company may manage the fund by providing investment advice, provide the necessary back-room operations including recordkeeping, custodial, and transfer services, and/or market and sell the shares directly to the public, or it may hire one or more third parties to do so. Thus, mutual funds consist of a sponsor, investment manager, share distributor, and operations agent. These four functions may be conducted by a single entity, four different entities, or something in between.

Commercial banks are traditionally portfolio investors that raise funds by selling primarily debt instruments (deposits) to second parties. Thus, unlike the case with mutual funds, most bank investors are creditors rather than owners, whose returns are fixed. But many bank customers also wish to invest in securities offering greater risks and hopefully higher returns than can be obtained on bank deposits. This has been especially true in recent years as households have become wealthier and older and have placed increasing emphasis on saving for retirement through pension plans. As indicated above, banks have long provided some of these services through their trust departments. It has been common practice for trust departments to commingle trust accounts for investment purposes in order to reduce transaction costs and realize operating economies.

FIGURE 4

The rise in mutual funds' share of assets of all financial institutions



Source: Board of Governors of the Federal Reserve System, "Flow of funds accounts," various years.

In 1965, however, the Comptroller of the Currency permitted the First National Bank of New York, the predecessor of Citibank, to commingle its managing agency accounts and to advertise them to the general public. Customers would receive participation units in the pool. This change was challenged by the

securities industry and ultimately struck down by the Supreme Court, which ruled that it violated the provisions of the Glass-Steagall Act separating commercial and investment banking. The court ruled that commingling managing agency accounts and selling participation shares in them was in effect dealing in securities, which was prohibited. The court concluded that such a "bank investment fund finds itself in direct competition with the mutual fund industry" (Fischer, Gram, Kaufman, and Mote 1984). The decision temporarily stalled banks' efforts to offer a competitive investment product. However, a 1972 decision by the Board of Governors of the Federal Reserve System that explicitly permitted banks to act as investment managers for mutual funds, while prohibiting them from brokering such funds, helped banks to enter this market.

Although the Glass-Steagall Act prohibited banks from dealing in private securities for their own account, it did not prohibit them from purchasing and selling private securities without recourse upon order of their customers. While some banks offered brokerage services as an accommodation to their customers, few viewed them as a profitable activity. Indeed, in 1936, the Comptroller of the Currency explicitly authorized national banks to offer brokerage services, but only as an accommodation to their customers and not on a profit-making basis. The increase in securities activities and the end of fixed commissions on the New York Stock Exchange in 1975 caused banks to reconsider their interest in brokerage activities. In 1981, BankAmerica Corporation announced its intention to acquire Charles Schwab, the country's largest discount broker. Shortly thereafter, Security Pacific National Bank initiated a cooperative arrangement with the Fidelity Group to broker securities, including mutual funds, to its customers and then organized its own discount broker as a subsidiary of the bank. Both activities were undertaken with the approval of the regulatory agencies. Thus, banks could broker mutual funds either directly through the bank or bank holding company or indirectly through a cooperative agreement with a third-party broker. Some banks began to offer their customers "private-label" mutual funds managed by others. At the same time, some banks also started "proprietary funds" that were managed by the organizing bank but distributed by others. In 1992, the Federal Reserve liberalized its regulations to permit banks and bank holding companies to broker funds that they also managed. Thus, banks could effectively engage in all aspects of mutual fund operations except sponsoring and distributing (underwriting) the shares directly.

Banks have moved relatively slowly into the mutual fund business and were not overly aggressive in lobbying the regulators to lower the barriers. Not until the substantial runoff of time deposits in search of higher yields when market interest rates declined sharply in the early 1990s did many banks awaken to the possibilities of offering money market and other mutual funds to their customers. Nevertheless, by 1992 more than 90 percent of all banks offered mutual funds in some way, more than double the proportion in 1985. Data on bank-managed and proprietary mutual funds since 1983 are presented in table 6. As late as 1987, banks managed less than 5 percent of all mutual fund assets, and by early 1993 this had increased to only 11 percent. Banks made much more substantial gains in money market funds, managing 23 percent of the assets of such funds in 1993, compared with only 6 percent of stock and bond mutual funds. When brokered private-label and other funds are included, banks sold more than one-third of the dollar volume of all mutual funds in the first half of 1992, nearly all of which were money market funds. The ten banking organizations that managed the largest amounts of mutual fund assets in 1993 are shown in table 7.

In recent years, some banks have tried to increase their participation in the mutual fund industry by acquiring large mutual fund investment companies or entering into exclusive joint agreements with them. In 1993, for example, Mellon Bank, the twelfth largest bank in the country, announced its intention to purchase the Dreyfus Funds, the third largest sponsor of money market funds and tenth largest sponsor of other mutual funds. At the same time, NationsBank entered into a partnership that gave Dean Witter Financial exclusive rights to market proprietary NationsBank funds as well as other funds to bank customers from locations in the bank's offices. On the other hand, Chemical Bank and Liberty Financial broke off their attempted joint venture.

TABLE 6

Bank-managed mutual funds: dollar amount, number of funds, and percent of industry
(1983-93)

	Money market				Other funds				Total			
	Assets		Number		Assets		Number		Assets		Number	
	$[a]	%[b]	#	%[b]	$[a]	%[b]	#	%[b]	$[a]	%[b]	#	%[b]
1993	134	23.1	461	39.9	85	6.0	954	20.2	219	11.0	1,415	24.2
1992	111	19.4	382	36.0	47	4.6	502	14.7	158	9.9	884	19.9
1991	95	16.9	316	32.8	27	3.4	359	12.7	122	10.3	675	17.9
1990	67	13.1	256	33.1	13	2.4	271	11.4	80	7.9	527	16.7
1989	50	11.5	191	28.8	10	1.8	213	9.5	60	7.0	404	13.9
1988	38	11.3	154	26.2	6	1.3	166	8.0	44	5.4	320	12.0
1987	31	10.3	109	21.8	4	0.9	104	6.2	35	4.6	213	9.8
1986	28	10.1	80	19.0	4	0.9	65	4.9	32	4.5	145	8.3
1985	19	8.3	56	15.1	2	0.8	52	4.9	21	4.3	108	7.6
1984	17	7.8	48	15.4	1	0.7	39	4.7	18	5.0	87	7.6
1983	14	8.2	42	15.0	1	0.8	24	3.6	15	5.2	66	7.0

[a]Billion dollars.
[b]Percent of industry.
Source: Courtesy of Lipper Analytical Services.

Although the flow of funds data incorporate the assets of mutual funds managed by banks, they do not attribute those assets to the commercial banking sector. Rather, assets of all mutual funds, regardless of their managers, are listed under a separate mutual funds sector. Adding the data on bank-managed mutual funds from table 6 to banks' total assets for each of the eleven years for which data are available reduces the decline in banks' share of assets over the past decade by nearly 2 percentage points. Taking account of both trust department and bank-managed mutual fund assets would further reduce the downward bias in asset measures of banks' share of financial institutions' output over the past decade.

Unfortunately, because the trust asset data include a large but not precisely determinable portion of the assets of mutual funds managed by banks, the two sets of data cannot be simply added.

In addition to trust, securities, and mutual fund activities, banks also engage in a number of other activities either directly or through nonbank subsidiaries of their parent holding companies that are reported in the "Flow of funds accounts" as part of other financial industries. These subsidiaries include consumer and commercial finance companies, mortgage companies, and savings associations. For example, in September 1993, bank holding companies owned 154 thrift institutions with assets of $107 billion. Citicorp operated Citibank

TABLE 7

Banking organizations with largest managed mutual funds
(1993)

Bank holding company	Assets		
	Money market	Other	Total
	(-------bilion dollars-------)		
PNC (Pittsburgh)	18.0	2.7	**20.7**
NationsBank (Charlotte)	8.3	5.5	**13.7**
BankAmerica (San Francisco)	11.8	1.1	**12.9**
Wells Fargo (San Francisco)	2.5	5.6	**8.1**
Banc One (Columbus)	3.3	4.1	**7.4**
Northern Trust (Chicago)	5.7	1.2	**6.9**
NBD (Detroit)	3.4	2.3	**5.7**
State Street (Boston)	3.3	1.8	**5.1**
Chase Manhattan (New York)	3.0	2.1	**5.0**
Norwest (Minneapolis)	3.9	0.8	**4.7**

Source: Yvette D. Kantrow, "Bank-managed funds grew by 34% in 1993," *American Banker*, February 9, 1994, p. 14.

TABLE 8

Nonbank assets held by large bank holding companies
(1992)

Activity	Billion dollars	Percent
Securities brokerage and underwriting	77	36
Thrift institutions[a]	34	16
Mortgage banking	19	9
Commercial finance	16	8
Consumer finance	12	6
Leasing	6	3
Small business investment companies	4	2
Data processing	2	1
Insurance underwriting and insurance agency	2	1
Other nonbank	41	19
Total[b]	**212**	**100**

[a]Excludes institutions supervised by the Federal Deposit Insurance Corporation, such as state-chartered savings banks

[b]Columns may not total because of rounding.

Source: Board of Governors of the Federal Reserve System.

Savings, which is the eighth largest savings association in the country. Similarly, at year-end 1992, twelve of the fifty largest finance companies were owned by bank holding companies. These include CIT, the ninth largest company, which is owned by Dai-Ichi Kangyo Bank (Japan). The total assets of nonbanking subsidiaries owned by reporting large bank holding companies (which are estimated to be roughly 95 percent of those of all bank holding companies) were $212 billion in 1992.[6] As table 8 shows, over one-third of these are in securities brokerage and underwriting subsidiaries. Despite their absolute importance, the nonbank assets of bank holding companies are dwarfed by the reported assets of banks. If the total assets of the nonbank subsidiaries of bank holding companies are added to reported bank assets, the market share of banks in 1992 increases only from 25.8 percent to 27.5 percent. But even after one adjusts reported assets for assets either owned by subsidiaries of bank holding companies or managed by banks but reported under other institutions in the "Flow of funds" data, there is still a growing volume of bank activities which are unrelated to either owning or managing assets but which generate income for banks, for example, lines of credit, letters of credit, and futures, options, and swaps.

Noninterest income

Although the growing importance of off-balance-sheet activities is not captured by traditional asset measures, it does show up in the growth of noninterest or fee income. While fee income has received much attention over the past two decades, it is not of recent origin or importance, as figure 5 indicates. When loan demand collapsed and interest rates fell to extremely low levels in the 1930s, commercial banks' ratio of fee income to interest income increased sharply. However, because of the steady rise in interest rates in the post-World War II era, the growing importance of fee income was obscured until the early 1980s.[7]

The trend towards an increase in fee income relative to interest income is present not only in the United States but in nearly all developed countries. The percentages of gross bank income derived from fees in fifteen major countries for selected years from 1980 to 1990 are shown in table 9. (Note that these data are

FIGURE 5

Ratio of noninterest income to interest income at commercial banks

Source: Federal Deposit Insurance Corporation, *Historical Statistics of Banking*, 1992.

TABLE 9

Fee income as a percent of gross income of banks, 15 major countries[a]
(1980-90)

Countries	1980-82	1984-86	1990
United States[b]	30.0	31.4	38.0
Japan[b,c]	20.4	24.6	35.9
Germany[b]	30.6	28.6	34.9
France[b]	14.6	15.3	24.9
Italy	26.0	30.3	26.8
United Kingdom[b]	28.5	36.9	41.1
Canada[c]	21.6[d]	23.7	31.0
Australia[c]	32.1	33.5	34.0
Belgium[c]	19.6	23.4	23.0
Finland	48.8	58.3	46.9
Netherlands	25.0	24.7	29.7
Norway	27.3	35.2	25.9
Spain[b]	15.7	18.1	22.3
Sweden	29.8	33.5	26.2
Switzerland	46.6	47.5	49.1

[a]Share of noninterest income in the gross income of commercial banks; the data are not fully comparable across countries.

[b]Large commercial banks.

[c]Fiscal years.

[d]1982.

Source: Bank for International Settlements, *Annual Report*, 1992, p. 196.

not fully comparable with the data for U.S. banks described above nor across countries.) In all countries except Finland, the importance of fee income increased during this period. Although fee income is relatively more important in the United States than in most other countries, it is considerably less important than in Switzerland or Finland and somewhat less important than in the United Kingdom.

The unbundling and securitization of financial services

The rise in fee income is in part a consequence of another phenomenon. The 1970s witnessed an acceleration of a trend that had been evident for some time, namely the "unbundling" of financial services. Unbundling is the separation of complex banking services, including such fundamental and traditional banking services as real estate and commercial lending, into their component steps or functions and the performance of some of those functions by separate entities. The oldest and most obvious example of unbundling was separating the origination and servicing of residential mortgage loans from the portfolio investment function through the sale of the mortgage from the originator to an institutional investor. Pioncered by mortgage companies decades before, this practice has since been adopted by banks and other mortgage lenders.

A major development in this unbundling was the introduction of the mortgage-backed security by the Federal Home Loan Mortgage Association and the Government National Mortgage Association. This was also the first step in the now familiar process of "securitization," the issuance of securities whose principal and interest payments reflect the behavior of a pool of underlying assets. The 1980s saw an enormous enlargement of the scope of securitization, which now encompasses automobile loans, credit card receivables, and other consumer credit, and is even making inroads into commercial loans, a type of asset that is much more difficult to securitize because of the greater heterogeneity of loan agreements and covenants. The banks receive fees for origination and possibly servicing but frequently do not hold the asset in their portfolios and thus do not receive interest revenue from it.

Sanford Rose, a former associate editor of the *American Banker*, argued vigorously in the early 1980s that costly regulation, inadequate compensation for lending risks, and the futility of trying to outguess the market regarding increasingly volatile interest rate movements were bringing about a fundamental transformation of the banking environment (Rose 1981). He asserted that the most prudent strategy for banks was to reduce their emphasis on portfolio investment, hedge or sell off their interest rate risk, and rely on origination and servicing fees to provide the bulk of their earnings. Indeed, he argued that mortgage companies, which have long operated in this manner, were the model for the financial firm of the future. In the years since this analysis appeared, commercial banking organizations have come more and more to resemble Rose's vision: They originate a large volume of loans—although even here they have lost ground to other institutions—and sell off a growing proportion of them. They also use their financial expertise, reputation, and capital to provide guarantees of financial performance, mostly in the form of standby letters of credit, but increasingly en-

compassing a growing variety of new and exotic instruments.

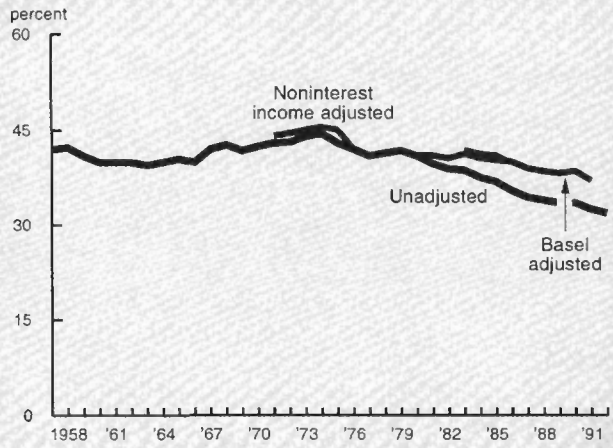
The Boyd-Gertler approach

Two somewhat different approaches to the adjustment of bank assets for off-balance-sheet activities were recently presented by Boyd and Gertler (1994). Both involved developing estimates of the asset equivalents of bank off-balance-sheet and fee-for-service activities. The first approach adjusted for loan commitments and letters of credit, two of the most important types of off-balance-sheet guarantees offered by banks, using the risk weights developed in the Basel risk-weighted capital standards. These weights were used to calculate the level of assets that would represent the same risk exposure to the bank as the off-balance-sheet activities. These asset equivalents were then added to each institution's on-balance-sheet assets to obtain a more complete asset measure of banks' market share. The shortcoming of this approach is that it takes account only of loan commitments and letters of credit and omits such important activities as trust services and mutual funds.

Boyd and Gertler's second procedure was to convert all noninterest income—from loan servicing, asset management, and other services (including trust and securities activities), as well as off-balance-sheet guarantees—into a balance sheet equivalent. Using net interest income (interest income less interest expense and loan losses) as a measure of the return from on-balance-sheet assets, and assuming that the same rate of return is earned in off-balance-sheet activities, the authors capitalized fee income at that rate to generate "imaginary" asset equivalents. They then added the asset equivalents of the noninterest income to on-balance-sheet assets to obtain a more comprehensive measure of bank output for the years since 1971. When they did so, virtually all evidence of a downward trend in banks' share of financial institutions' assets over the period 1957-1990 disappeared, although there was some decline from the 1974 peak. Commercial banks' share of the assets of all financial institutions, both unadjusted and as adjusted by Boyd and Gertler's two alternative methods, is shown in figure 6.

FIGURE 6

Share of commercial bank financial intermediation



Note: Both adjusted series include undercounted off-shore loans, as well as off-balance-sheet credit equivalents.

Source: John H. Boyd and Mark Gertler, "Are banks dead? Or are the reports greatly exaggerated?" unpublished paper, Federal Reserve Bank of Minneapolis, March 1994.

Summary of asset measures

This section has described a number of approaches to adjusting data on bank assets to take account either of assets that are managed by the bank but do not show up on its accounting balance sheet or of activities that are done for a fee and are not associated with assets either owned or managed by the bank. One of the problems with trying to "fix" banks' balance sheets is that the problems associated with them are not limited to banking. For example, life insurance companies also engage in a large volume of off-balance-sheet activities. Thus, to obtain a meaningful measure of banks' relative importance in the financial system, it would be necessary to perform similar adjustments on the balance sheets of other financial industries. Together with the conceptual shortcomings of assets as a measure of output—that is, it is a stock rather than a flow measure, and different levels of output may be associated with the same value of assets of different kinds—this suggests the desirability of also looking at alternative measures of the relative size of the banking industry.

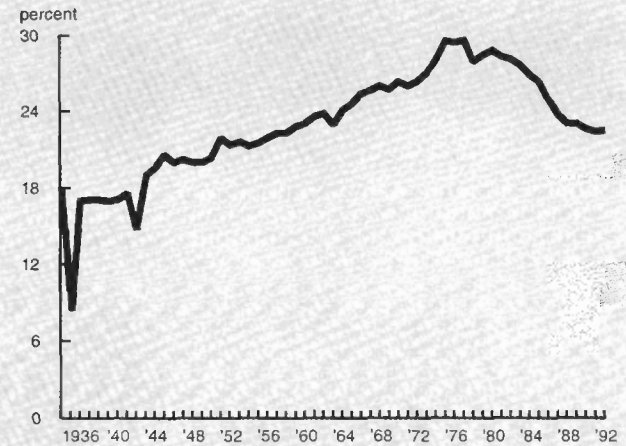
Employment

A second measure of banking's size or importance is the number of employees in the industry. For some purposes, employment may

be the most relevant and useful measure. This is most obviously true in regard to the industry's impact on the economy of a particular city or region. However, because employment is a measure of input rather than output, it is much less appropriate as a measure of the size or competitiveness of an industry relative to other industries producing similar products or services. Moreover, employment does not adjust for differences in productivity between sectors of the economy or changes in productivity over time. Nevertheless, it may serve as a useful check on the accuracy of other measures.

FIGURE 7

Commercial bank employees as a percent of total for financial, insurance, and real estate sector



Sources: U.S. Department of Labor, Bureau of Labor Statistics, *Employment, Hours, and Earnings, United States, 1909-90*, Bulletin 2370, Vol. 2, March 1991 and *1981-93*, Bulletin 2429, August 1993; and Federal Deposit Insurance Corporation, *Historical Statistics on Banking*, 1992.

As figure 7 indicates, between 1934 and 1977, employment in the commercial banking industry more than kept pace with that in the entire financial, insurance, and real estate sector. Thereafter it declined by roughly one-fourth through 1992. As a percentage of total employment in the private nonfarm economy, employment in commercial banking continued to rise through 1983, when it peaked at 1.67 percent. Since then, that number has fallen as well. The absolute level of employment in the industry continued to rise through 1986, peaking at 1.56 million. By 1992, it had fallen to 1.48 million.

The decline in employment in the banking industry in recent years is not surprising given the large number of bank closings and consolidations in the 1980s and the acceleration of consolidation in the early 1990s. However, the rise over the preceding decades suggests two possibilities: either commercial bank productivity was falling continuously over that period, as the declining ratio of bank assets to employment would suggest,[8] or total assets is an inadequate measure of financial institution output. Although a decline in the productivity of banking extending over five decades cannot be dismissed as a logical possibility, it seems inconsistent with the increased use of computers and other advanced technology by banks and with the continued rise of productivity in the economy as a whole. Moreover, the great expansion of off-balance-sheet activities in banking described in detail in the preceding sections casts further doubt on the hypothesis that productivity in banking has declined over any extended period in recent years.

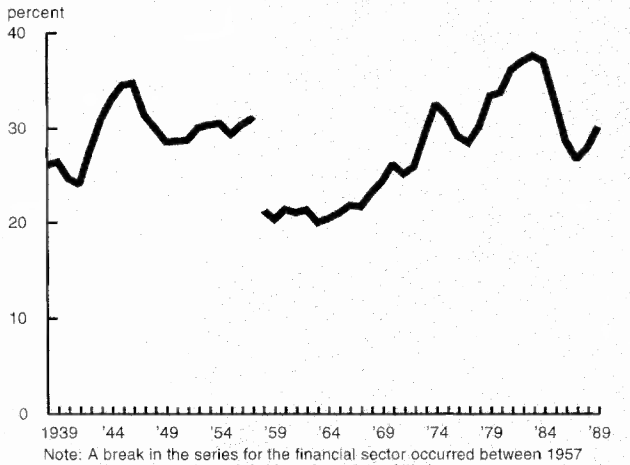
Revenues, earnings, and value added

A third set of measures of the importance of banking is based on revenue and earnings data that reflect the full range of services offered. Such measures have the advantage of being flow rather than stock measures of output. Indeed, in most industries, market share is typically measured by revenues, sales, or value added rather than assets. These measures are also used by the Department of Justice in antitrust actions. Revenue and value added measures are available for banks and other depository institutions from data reported to the bank regulatory agencies in their periodic *Reports of Income and Dividends* or from data reported on a regular basis to the Internal Revenue Service (IRS). Virtually since the IRS was established in 1916, it has published annual compilations of income and expenses of corporations and individuals. For the earliest years, these reports were based on the universe of federal income tax returns; more recently, they have been based on a sample. The advantage of the IRS data is that they can be obtained on a relatively uniform basis for all categories of financial institutions.

A measure of the size of the banking industry based on IRS data that takes account of both lending and off-balance-sheet activities is

FIGURE 8

Banks' share of total receipts of the financial sector



Note: A break in the series for the financial sector occurred between 1957 and 1958 because of a redefinition of receipts of life insurance companies to include premiums and other income as well as investment income.

Source: U.S. Treasury Department, Internal Revenue Service, *Statistics of Income, Part 2, Corporation Income Tax Returns*, 1938-89.

simply total receipts or revenues. Figure 8 shows the ratio of total receipts for banks to those for the entire financial sector, including insurance, for the years 1938-82. Unfortunately, this measure is strongly influenced by movements in the general level of interest rates, and its volatility tends to obscure the basic trend in the data. Moreover, as was suggested in the earlier discussion of the conceptual problems in measuring the importance of banking in the financial services industry, there is much to be said for using a measure of value added—the value of the products sold by an industry less the value of intermediate goods and raw materials purchased by it.

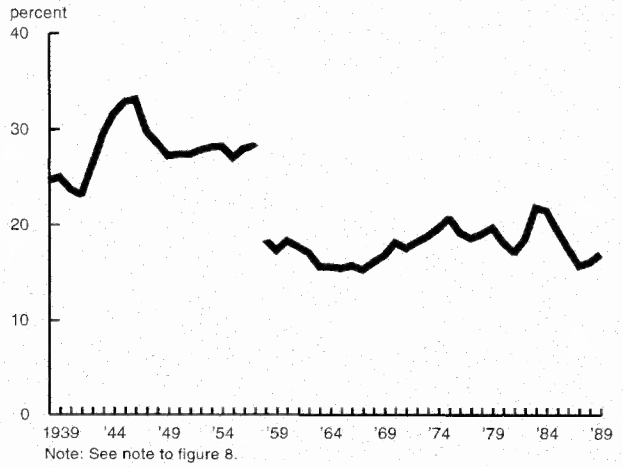
The IRS data permit the calculation of commercial banks' share of a variable that closely approximates a measure of value added for total financial institutions proposed by Donald Hodgman (see box). This is the difference between total receipts, including interest received, and interest paid. The netting of interest received and paid greatly reduces but does not eliminate the enormous variation in bank revenues stemming from changes in the level of market interest rates. Unfortunately, because of changes in definitions and reporting categories and the amount of detailed information published by the IRS, the measure is available only from 1938 on.

As figure 9 shows, this measure of commercial banks' share of the total output of the financial sector gives a considerably different picture than reported asset measures. Rather than declining monotonically over the entire period like the asset measure, it averages around 25 percent in the late 1930s, rises to the low 30 percent range in the 1940s and early 1950s, declines to just over 15 percent in the 1960s, rises above 20 percent in the mid-1970s and again in the early 1980s, and declines to about 16 or 17 percent by the late 1980s. There was clearly a decline in the banking industry's share of the output of all financial institutions through the mid-1960s, although the greater part of the apparent sharp decline between 1957 and 1958 was spurious, reflecting a change in the reporting of revenues of life insurance companies. However, there has been no obvious trend since then.[9]

Relative to the entire economy, the output of both banks and the entire financial sector has increased over the past half-century. As

FIGURE 9

Banks' share of value added of the financial sector

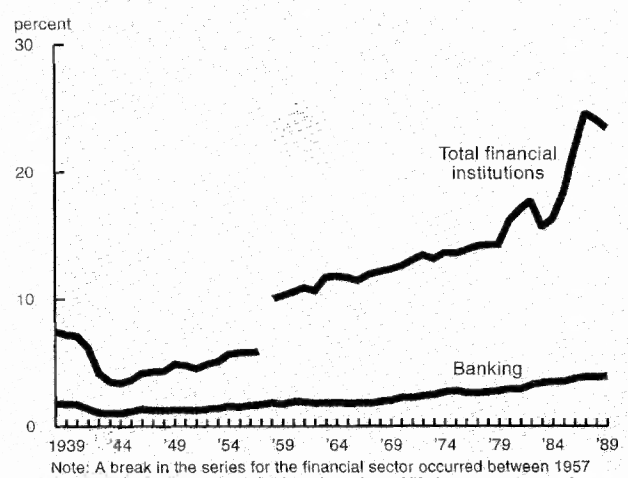


Note: See note to figure 8.

Source: U.S. Treasury Department.

FIGURE 10

Value added of banks and the financial sector as a percent of gross domestic product*



Note: A break in the series for the financial sector occurred between 1957 and 1958 because of a redefinition of receipts of life insurance companies to include premiums and other income as well as investment income.
*1938-1958 is gross national product. 1959-1989 is gross domestic product.
Source: U.S. Treasury Department.

figure 10 shows, the value added of the financial sector as a proportion of GDP rose from 7.5 percent in 1938 to 23.5 percent in 1989, while that for commercial banks increased from 1.9 percent to 4.0 percent.

Conclusion

Is banking a declining industry? There is a widespread perception that the size of the commercial banking industry relative to that of all financial institutions in the United States has been declining rapidly in recent years. Restrictive regulations imposed primarily in earlier years when banking was relatively more important are often blamed as contributing to the decline. Most of the evidence for the belief that banking is declining consists of data on commercial banks' share of reported assets or of specific categories of assets, such as commercial loans. Similar results obtain for banks in countries with greatly different regulatory environments, such as the United Kingdom. However, when one analyzes other measures of the size of the banking industry, such as employment, revenues, and value added, the same conclusion does not always emerge. In part, this is because the nature of bank activities has changed drastically over the past several decades and many of the newer activities are not reflected in balance sheet assets. When asset figures are adjusted to incorporate some measure of the new activities, they show either no decline or a much attenuated rate of decline for banking in recent years.

In summary, the evidence does not clearly support the widespread perception that banking has declined, either absolutely or relative to the financial services industry or the entire economy, since the early 1960s. Nonetheless, this conclusion is consistent with the belief that banking has not grown as rapidly as it might have if banks had not been constrained from providing new products quickly in response to changes in market conditions. Unfortunately, we do not know how rapidly banking would have grown under alternative regulatory regimes, or what the social costs and benefits of those alternatives would have been. Nor do our measures of the relative size of the banking industry shed light on whether the regulations, by preventing individual banks from expanding or opening branches across state boundaries, have restricted the efficiency of banks and thereby increased the cost of banking to consumers. Those, however, are the types of questions that need to be answered in order to improve public policy towards banking.

FOOTNOTES

[1]It has been argued that a major decline in the size of the banking industry, regardless of its cause, would create problems for the implementation and effectiveness of monetary policy. This article does not attempt to address this issue.

[2]The National Bureau of Economic Research has sponsored a number of conferences on this and related issues (National Bureau of Economic Research 1961, 1969).

[3]Board of Governors of the Federal Reserve System, "Flow of funds accounts."

[4]A recent book by Robert E. Litan (1987) also presents data for 1835 (figure 2.2, p. 18). These data were obtained from a Census publication (U.S. Bureau of the Census 1975).

[5]The major difference between an agent and a trustee is that in an agency relationship the principal (customer) retains legal title to the assets, whereas in a trust relationship, legal title passes to the fiduciary. In addition, a trust relationship will involve more duties and responsibilities on the part of the fiduciary even in the absence of specific written authority and, unlike an agency relationship, which terminates on the death of the principal, may continue beyond the death of the grantor of the trust.

[6]The data on nonbank subsidiaries of bank holding companies reported here were obtained from the FR-Y11Q and FR-Y11AS reports, which are filed with the Federal Reserve by all bank holding companies with consolidated assets of more than $1 billion and by those with assets of more than $150 million that have nonbank activities exceeding specified levels. These figures are larger than reported in table 8 because they include FDIC-supervised savings banks that are excluded from the data used to construct the table.

[7]In the early 1960s, many of the larger banks sought to increase the variety and volume of services that they offered on a fee-for-service basis. A series of favorable rulings by then Comptroller of the Currency James Saxon encouraged national banks in their efforts to expand their activities. The services that they, or subsidiaries of their bank holding companies, began to offer included such relatively minor extensions of existing activities as providing investment advice, payroll accounting, data processing, armored car and courier services, and insurance agency services. Because the courts eventually disallowed many of these activities as violating the National Banking Act, the Banking Act of 1933 (Glass-Steagall Act), or the Bank Holding Company Act, the activities did not contribute greatly to banks' fee income.

[8]Bert Ely of Ely Associates, Inc., a financial institutions consulting firm, has argued that, largely as a consequence of regulatory constraints, the efficiency of the entire financial system has declined and that many widely heralded "innovations" in finance represent nothing more than "regulatory arbitrage" (Ely 1992).

[9]This result accords with that of Boyd and Gertler (1994), who also presented data on value added. They found a slight upward trend in the share of value added of bank-related industries relative to that for the entire finance, insurance, and real estate sector over the period 1947 to 1990. However, their "bank-related industries" category contained all depository institutions.

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