

# Financial Markets in Transition — or the Decline of Commercial Banking

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The 1980s was the most revolutionary decade in U.S. financial markets since the Great Depression. The thrift industry collapsed, necessitating a massive government bailout; commercial banks suffered an unprecedented loss of market share; households sharply reduced their direct participation in securities markets; pension funds and other institutional investors became financial powerhouses, and for the first time took an active role in the governance of corporations; trading in foreign securities soared to new heights; and there was an explosive growth in derivative markets, both on and off regulated exchanges. These changes, moreover, are just the beginning of a process that will eventually result in an entirely new landscape for the financial service industry. However, precisely what kind of financial structure we will have in the future is still not clear.

The primary objective of this paper is to identify and describe the key trends that underlie the changes in financial markets that have occurred, and to provide an explanation for these trends. In addition, I discuss possible policy implications and alternative policy responses to the changes that have occurred. The rapidly changing financial structure in all countries raises the obvious question of whether we need to respond to what has occurred by adapting our economic and regulatory policies in some way.

## **The changing financial structure: the 1980s in historical perspective**

In the United States, as in most other countries, banks have historically been the dominant financial intermediary. In 1929, prior to the sweeping legislative financial reforms of the early 1930s, commercial banks held assets of \$66 billion, more than twice as much as the second largest financial intermediary (personal trusts), and almost four times as much as those held by life insurance companies. (See Table 1.) Including the personal trust assets held and managed by banks, commercial banks accounted for over 50 percent of all intermediary assets in 1929. (See Table 2.) Banks have held this dominant intermediary role partly for historical reasons and partly because of their favored role as providers of "money" and "liquidity."

During the 1930s and the Great Depression, when banking suffered widespread failures, the market share of banks slipped to about 40 percent of total intermediary assets, where it stayed for the next **thirty** years. In the 1970s the market share of banks again began to slip, but it was during the 1980s that banking suffered its most serious erosion of market share. From 1980 to 1990, banks' market share fell a full 10 percentage points, from 37 percent to 27 percent of total intermediary assets. By 1990 banks had lost more than one-fourth of the market share with which they began the decade. (See Table 2.)

During the 1980s the market share of nonbank depository institutions (or thrifts)—mutual savings banks, savings and loans associations, and credit unions—also experienced a pronounced decline. These institutions lost more than a quarter of their market share—a drop of 7.3 percentage points. Taken together, the market share of banks and thrifts fell by 17.7 percentage points during the 1980s. (See Table 2.)

Non-depository institutions, in contrast, increased their market shares: investment companies (or mutual funds) by 7.2 percent, insurance companies by 1.7 percent, finance companies by 2.6 percent, and pension funds by 6.3 percent. (See Table 2.) Some of this increase was clearly gained at the expense of banks and thrifts, which grew much more slowly during the 1980s than in previous years. (See

Table 3.) From 1980 to 1990 banks captured only 20.5 percent of the growth of total financial intermediary assets, less than any other period with the exception of the 1930s. In comparison, investment companies accounted for 15.3 percent, life insurance companies for 20.1 percent, and finance companies for 9.5 percent of this growth. (See Table 4.)

The relative decline of banks and depository intermediaries can also be seen in the changing composition of household assets. From 1980 to 1991, as a proportion of their total assets, households reduced their holdings of all forms of bank deposits from 23.8 percent to 18.8 percent, while increasing their holdings of mutual fund shares and pension fund assets from 16.3 percent to 32.2 percent. (See Table 5.) In terms of the total net flows of household assets during the 1980s, pension funds captured a larger share than all depository institutions taken together. (See Table 6.)

The only other period during which commercial banks experienced as severe an erosion in market share was during the 1920s and the early 1930s. From 1922 to 1939 their share of financial intermediation fell by almost 15 percentage points. (See Table 2.) This period can be divided into two distinct sub-periods: one of great economic prosperity, from 1922 to 1929; and one of great economic depression, from 1929 to 1939. Even omitting the economically depressed period after 1929, banks' market share fell from 54.9 percent in 1922 to 45.9 percent in 1929.

There are striking similarities between the 1980s and the 1920s. First, both the 1920s and the 1980s were times of great international expansion in financial markets. New York became a world financial center. Money freely flowed between countries in search of more attractive yields, and financial institutions built international networks by establishing overseas branches. Second, both periods were marked by considerable macroeconomic instability and policy experimentation. Third, tremendous product innovation occurred in financial markets. Fourth, increased competition greatly weakened traditional customer relationships. Fifth, there was a sharp growth in the reliance of banks on time deposits. In 1920, time deposits in national banks (generally the large banks) were about one-third the level of demand deposits;

**Table 1**  
**Assets Held by Financial Intermediaries, 1900-1990 (in billions of dollars)**

	1900	1912	1922	1929	1939	1949	1960	1970	1980	1990
Commercial Banks	10	21.8	47.5	66.2	66.3	157.7	228.3	504.9	1386.3	2643.8
Thrifts	2.9	5	9.4	17.3	17.5	36.8	118.8	273.5	870.5	1577.3
Savings & Loans	0.5	1	2.8	7.4	5.4	14.5	71.5	176.2	629.8	1096.8
Mutual Savings	2.4	4	6.6	9.9	11.9	21.5	41	79.3	171.5	263.5
Credit Unions			0	0	0.2	0.8	6.3	18	69.2	217
Insurance Companies	2.2	5.6	11.2	23	35.2	73.6	142	250.8	649.9	1883.8
Life Insurance	1.7	4.4	8.7	17.5	29.2	59.6	115.8	200.9	469.8	1366.8
Other Insurance	0.5	1.2	2.5	5.5	6	14	26.2	49.9	180.1	517
Pension and Trust	3	7	18.3	32	42.2	95.2	57.8	170.7	484.9	1904.9
Personal	3	7	18	30	35	50				
Private			0	0.5	1	6	38.1	110.4	286.8	1161.5
Public	0	0	0.3	1.5	6.2	39.2	19.7	60.3	198.1	743.4
Investment Companies			0.1	3	1.6	3.3	17	49.2	138.1	1078.3
Mutual Fund							17	46.8	63.7	579.9
Money Market								2.4	74.4	498.4
Finance Companies				2.6	3	6.4	27.6	64	198.6	780.7
Total	8.1	17.6	39	77.9	99.5	215.3	363.2	808.2	2342	7225

\*Money Market/Mutual Fund data starts in 1974

Sources: 1900-1949, *Financial Intermediaries in the American Economy Since 1900*; 1960-1990, *Flow of Funds Accounts, Federal Reserve Bulletin*.

**Table 2**  
**Relative Shares of Total Financial Intermediary Assets, 1900-1990**

	1900	1912	1922	1929	1939	1949	1960	1970	1980	1990
Commercial Banks	55.2%	55.3%	54.9%	45.9%	40.0%	42.3%	38.6%	38.5%	37.2%	26.8%
Thrifts -	16.0%	12.7%	10.9%	12.0%	10.6%	9.9%	20.1%	20.8%	23.3%	16.0%
Savings & Loans	2.8%	2.5%	3.2%	5.1%	3.3%	3.9%	12.1%	13.4%	16.9%	11.1%
Mutual Savings	13.3%	10.2%	7.6%	6.9%	7.2%	5.8%	6.9%	6.0%	4.6%	2.7%
Credit Unions	0.0%	0.0%	0.0%	0.0%	0.1%	0.2%	1.1%	1.4%	1.9%	2.2%
Insurance Companies	12.2%	14.2%	12.9%	16.0%	21.2%	19.7%	24.0%	19.1%	17.4%	19.1%
Life Insurance	9.4%	11.2%	10.1%	12.1%	17.6%	16.0%	19.6%	15.3%	12.6%	13.8%
Other Insurance	2.8%	3.0%	2.9%	3.8%	3.6%	3.8%	4.4%	3.8%	4.8%	5.2%
Pension and Trust	16.6%	17.8%	21.2%	22.2%	25.5%	25.5%	9.8%	13.0%	13.0%	19.3%
Personal	16.6%	17.8%	20.8%	20.8%	21.1%	13.4%	0.0%	0.0%	0.0%	0.0%
Private	0.0%	0.0%	0.0%	0.3%	0.6%	1.6%	6.4%	8.4%	7.7%	11.8%
Public	0.0%	0.0%	0.3%	1.0%	3.7%	10.5%	3.3%	4.6%	5.3%	7.5%
Investment Companies	0.0%	0.0%	0.1%	2.1%	1.0%	0.9%	2.9%	3.7%	3.7%	10.9%
Mutual Fund	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.9%	3.6%	1.7%	5.9%
Money Market	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	2.0%	5.1%
Finance Companies	0.0%	0.0%	0.0%	1.8%	1.8%	1.7%	4.7%	4.9%	5.3%	7.9%

\*Money Market data starts in 1974

Sources: 1900-1949: *Financial Intermediaries in the American Economy Since 1900*, 1960-1990, *Flow of Funds Accounts, Federal Reserve Bulletin*

**Table 3**  
**Growth of Financial Intermediaries, 1900-1990, (Percentage Change in Assets Held)**

	1900-1912	1912-1922	1922-1929	1929-1939	1939-1949	1949-1960	1960-1970	1970-1980	1980-1990
Commercial Banks	118%	118%	39%	0%	138%	45%	121%	175%	91%
Thrifts	72%	88%	84%	1%	110%	223%	130%	218%	81%
Savings & Loans	100%	180%	164%	-27%	169%	393%	146%	257%	74%
Mutual Savings	67%	65%	50%	20%	81%	91%	93%	116%	54%
Credit Unions					300%	688%	186%	284%	214%
Insurance Companies	155%	100%	105%	53%	109%	93%	77%	159%	190%
Life Insurance	159%	98%	101%	67%	104%	94%	73%	134%	191%
Other Insurance	140%	108%	120%	9%	133%	87%	90%	261%	187%
Pensions and Trust	133%	161%	75%	32%	126%	-39%	195%	184%	293%
Personal	133%	157%	67%	17%	43%	-100%			
Private				100%	500%	535%	190%	160%	305%
Public			400%	313%	532%	-50%	206%	229%	275%
Investment Companies			2900%	-47%	106%	415%	189%	181%	681%
Mutual Fund							175%	36%	810%
Money Market								3000%	570%
Finance Companies				15%	113%	331%	132%	210%	293%
Total	118%	120%	67%	15%	125%	59%	122%	184%	165%

\*Money Market Mutual Fund data starts in 1974.

Source: 1900-49, *Financial Intermediaries in the American Economy Since 1900*; 1960-1990, *Flow of Funds Accounts, Federal Reserve Bulletin*

**Table 4**  
**Relative Share of Growth of Total Financial Intermediary Assets, 1900-1990**

	1900-1912	1912-1922	1922-1929	1929-1939	1939-1949	1949-1960	1960-1970	1970-1980	1980-1990
Commercial Banks	55.4%	54.6%	32.5%	0.5%	44.1%	32.3%	38.3%	36.5%	20.5%
Thrifts	9.9%	9.3%	13.7%	0.9%	9.3%	37.5%	21.4%	24.7%	11.5%
Savings & Loans									2.3%
Mutual Savings	7.5%	5.5%	5.7%	9.2%	4.6%	8.9%	5.3%	3.8%	1.5%
Credit Unions	0.0%	0.0%	0.0%	0.9%	0.3%	2.5%	1.6%	2.1%	2.4%
Insurance Companies	16.0%	11.9%	20.5%	56.2%	18.5%	31.3%	15.1%	16.5%	20.1%
Life Insurance	12.7%	9.1%	15.3%	53.9%	14.7%	25.7%	11.8%	11.1%	14.6%
Other Insurance									3.3%
Pension and Trust	18.8%	24.0%	23.8%	47.0%	25.6%	-17.1%	15.6%	13.0%	23.1%
Personal	18.8%	23.4%	20.8%	23.0%	7.2%	-22.9%	0.0%	0.0%	0.0%
Private	0.0%	0.0%	0.9%	2.3%	2.4%	14.7%	10.0%	7.3%	14.2%
Public									0.0%
Investment Companies	0.0%	0.2%	5.0%	-6.5%	0.8%	6.3%	4.5%	3.7%	15.3%
Mutual Fund	0.0%	0.0%	0.0%	0.0%	0.0%	7.8%	4.1%	0.7%	8.4%
Money Market	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	3.0%	6.9%
Finance Companies	0.0%	0.0%	4.5%	1.8%	1.6%	9.7%	5.0%	5.6%	9.5%
Growth of Total Assets for all Financial Inter- mediaries (in billions)	\$21.3	\$47.1	\$57.6	\$21.7	\$207.2	\$218.5	\$721.6	\$2,415.2	\$6,140.5

Money Market Mutual Fund data starts in 1974.

Sources: 1900-49, *Financial Intermediaries in the American Economy Since 1900*, 1960-1990, *Flow of Funds Accounts, Federal Reserve Bulletin*

**Table 5**  
**Distribution of Household Financial Assets (in billions)**

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Deposits												
Checkable Deposits & Currency	260.4	294.3	316.8	342	357.6	379.6	471.7	479	476.9	495.4	514	568.9
Small Time & Savings Deposits	1140.7	1188.2	1322.5	1532.6	1685.7	1829.6	1945.7	2005.3	2137.2	2225.9	2277.8	2289.1
Large Time Deposits	111.9	126	91.3	70.9	123	97.5	64.2	117.3	145.3	149.5	103.3	5.6
Total Deposits	1513	1608.5	1730.6	1945.5	2166.3	2306.7	2481.6	2601.6	2759.4	2870.8	2895.1	2863.6
Credit Market Instruments												
U.S. Government Securities												
Savings Bonds	72.5	68.2	68.3	71.5	74.5	79.8	93.3	101.1	109.6	117.7	126.2	138.1
Other Treasury Issues	121.6	144.7	184.7	234.9	282.1	277	251.1	254.3	300	313.8	357.4	302.7
Agency Issues	46.6	48.3	38.7	46.2	68.6	90.7	80.1	136.3	212.4	307.6	357.5	360.8
Total U.S. Government Securities	240.7	261.2	291.7	352.6	425.2	447.5	424.5	491.7	622	739.1	841.1	801.6
Tax-exempt Securities												
Corporate & Foreign Bonds	30.8	25	37.6	32.2	26.9	18.9	68.2	90.4	50.9	62.5	185	144.8
Open-market Paper	42.6	32.3	39	61.2	69.3	128.7	142.6	151.3	196	194.9	214.2	174.5
Total Credit Market Instruments	416.5	441.3	521.5	638.5	745.4	900.1	940	1131.2	1333.9	1523.1	1789.5	1675
Corporate Equities	1111.3	1051.2	1184	1334.5	1343.6	1700	1877.1	1750.9	1876.6	2205.1	2007.8	2238.4
Security Credit	16.2	14.7	17.8	20.6	21.6	35.1	44	39.1	40.9	53.2	62.4	87
Miscellaneous Assets	73.5	80.4	87.4	102.9	104.2	132.5	149.4	170.7	187.7	201.9	217.1	226.2
Equity, Bond, & Income Mutual Fund Share	52.1	52.6	66.7	98	117.7	206.9	356.9	406.3	418	480.6	495.9	726.4



**Table 5 (Continued)**

Money Market Mutual Fund Shares	64.9	155.6	189.4	158.4	2M.4	211.1	250.7	278.8	305.8	391.9	438.6	459.2
Total Mutual Fund Share	117	208.2	256.1	256.4	320.1	418	607.6	685.1	723.8	872.5	934.5	1185.6
Total Household Liquid Financial Assets	\$3,2475	<b>\$3,404.3</b>	\$3,797.4	<b>\$4,298.4</b>	<b>\$4,701.2</b>	<b>\$5,492.4</b>	<b>\$6,099.7</b>	\$6,378.6	<b>\$6,922.3</b>	\$7,726.6	\$7,906.4	<b>\$8,275.8</b>
Mutual Fund Assets as a % of Total Household Liquid Financial Assets	3.60%	6.12%	6.74%	5.97%	6.81%	7.61%	9.96%	10.74%	10.46	11.29%	11.82%	14.33%
Other (Non-liquid) Financial Assets												
Mortgages	<b>107</b>	117.3	126.1	127.1	127.8	127.4	141.2	164.9	182.1	212.9	225.5	244
Life Insurance Reserves	216.4	225.6	232.8	240.8	246	256.7	274.2	300.3	325.5	351.8	377.4	409.3
Pension Fund Reserves	916.1	996.9	1155.9	1349.6	1497.9	1794.5	2062.8	2181.8	2450.7	2847.9	2962.6	3710.3
Equity Fund Reserves	1868.3	2015.2	2014.9	2053.4	2017.8	<b>2040.6</b>	2094.2	2213.2	2346.6	2469.6	2506.8	2582.1
Total Non-liquid Financial Assets	3107.8	3355.0	3529.7	3770.9	3889.5	4219.2	4572.4	4860.2	5304.9	5882.2	6072.3	6945.7
Total Household Financial Assets	<b>\$6,355.3</b>	\$6,759.3	<b>\$7,327.1</b>	\$8,069.3	<b>\$8,590.7</b>	\$9,711.6	\$10,672.1	<b>\$11,238.8</b>	\$12,227.2	\$13,608.8	<b>\$13,978.7</b>	<b>\$15,221.5</b>
Mutual Fund Assets as a % of Total Household Financial Assets	1.84%	3.08%	3.50%	3.18%	3.73%	4.30%	5.69%	6.10%	5.92%	6.41%	6.69%	7.79%
Pension and Mutual Fund Assets as a % of Total Household Financial Assets	16.26%	17.83%	19.27%	19.90%	21.16%	22.78%	25.02%	25.51%	25.96%	27.34%	27.88%	32.16%

Source: Federal Reserve Board

**Table 6**  
**Net Flows of Household Financial Assets (in billions)**

Net Flows	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	Total
<b>Deposits</b>													
Checkable Deposits & Currency	6.3	33.9	20.8	25.1	15.8	21.9	92.1	5.5	(0.9)	19.2	18.6	56.4	314.7
Small Time & Savings Deposits	82.5	47.5	134.3	210.1	153.2	143.9	120.4	66.8	115.3	88.3	52.4	4.3	1,219.0
Large Time Deposits	39.4	14.1	(15.1)	(20.4)	52.0	(25.5)	(33.3)	53.1	28.0	4.2	(46.6)	(70.4)	(20.5)
<b>Total Deposits</b>	<b>128.2</b>	<b>95.5</b>	<b>140.0</b>	<b>214.8</b>	<b>221.0</b>	<b>140.3</b>	<b>179.2</b>	<b>125.4</b>	<b>142.4</b>	<b>111.7</b>	<b>24.4</b>	<b>(9.7)</b>	<b>1,513.2</b>
<b>Credit Market Instruments</b>													
<b>U.S.</b> Government Securities	31.6	20.4	33.4	58.1	81.3	31.8	(17.5)	61.5	123.7	124.5	103.0	4.5	656.3
Tax-exempt Securities	0.7	19.8	31.8	39.3	31.5	81.0	(1.2)	93.1	54.1	61.7	22.6	5.0	439.4
Corporate & Foreign Bonds	(13.8)	(1.9)	(9.0)	(3.9)	(6.5)	(16.8)	43.7	6.7	(32.9)	(27.1)	(11.8)	2.6	(70.7)
Open-market Paper	3.8	(10.2)	(15.9)	19.2	8.1	59.4	13.9	7.6	41.6	(1.1)	15.4	(32.0)	109.8
<b>Total Credit Market Instruments</b>	<b>22.3</b>	<b>28.1</b>	<b>40.3</b>	<b>112.7</b>	<b>114.4</b>	<b>155.4</b>	<b>38.9</b>	<b>168.9</b>	<b>186.5</b>	<b>158.0</b>	<b>129.2</b>	<b>(19.9)</b>	<b>1,134.8</b>
Corporate Equities	(12.3)	(43.5)	(23.2)	(28.5)	(78.1)	(119.4)	(135.0)	(99.8)	(122.4)	(131.6)	(49.5)	(25.0)	(868.3)
Security Credit	5.9	(1.5)	3.1	2.7	1.0	13.5	9.0	(5.8)	1.8	12.3	9.2	24.6	(75.8)
Miscellaneous Assets	6.8	6.8	7.1	15.5	1.3	28.3	16.9	21.3	17.0	14.2	15.3	9.1	159.6
Equity, Bond & Inwme Mutual Fund Share	1.7	6.4	7.6	26.1	21.9	73.5	141.5	71.8	2.3	41.9	52.7	126.7	574.1
Money Market Mutual Fund Shares	24.5	90.7	32.8	(31.1)	44.0	8.7	39.6	28.1	27.0	86.1	46.7	20.6	417.7
<b>Total Mutual Fund Shares</b>	<b>26.2</b>	<b>97.1</b>	<b>40.4</b>	<b>(5.0)</b>	<b>65.9</b>	<b>82.2</b>	<b>181.1</b>	<b>99.9</b>	<b>29.3</b>	<b>128.0</b>	<b>99.4</b>	<b>147.3</b>	<b>991.8</b>
<b>Total Household Liquid Financial Assets</b>	<b>\$177.1</b>	<b>\$182.5</b>	<b>\$207.7</b>	<b>\$312.2</b>	<b>\$325.5</b>	<b>\$300.3</b>	<b>\$290.1</b>	<b>\$309.9</b>	<b>\$254.6</b>	<b>\$292.6</b>	<b>\$228.0</b>	<b>\$126.4</b>	<b>\$3,006.9</b>

**Table 6 (Continued)**

Net Acquisition of Mutual Fund Asset, as a % of Household Net Acquisition of Liquid Financial Asset.	14.79%	53.21%	19.45%	(1.6%)	20.25%	27.37%	62.43%	32.24%	11.51%	43.75%	43.60%	116.53%	32.98%
<b>Other (Non-liquid) Financial Assets</b>													
Mortgages	17.9	10.9	9.7	0.7	1.5	3.4	18.6	21.0	25.4	19.1	20.5	18.1	166.8
Life Insurance Reserves	9.7	9.2	7.2	8.0	5.2	10.7	17.5	26.0	25.3	26.2	25.7	29	199.7
Pension Fund Reserves	108.8	108.7	146.3	134.5	167.7	212.6	213.8	87.6	186.5	206.1	182.2	256.8	2,011.6
Equity Fund Reserves	(72.1)	(42.6)	(81.5)	(79.8)	(74.9)	(54.7)	(25.4)	(61.9)	(42.2)	(74.1)	(43.9)	(18.4)	(671.5)
Total Non-liquid Financial Assets	64.3	86.2	81.7	63.4	99.5	172.0	224.5	72.7	195.0	177.3	184.5	285.5	1,706.6
Total Household Net Acquisition of Financial Assets	241.4	268.7	289.4	375.6	425.0	472.3	514.6	382.6	449.6	469.9	412.5	411.9	4,713.5
Net Acquisition of Mutual Fund Assets as a % of Household Net Acquisition of Total Financial Assets	10.85%	36.14%	13.96%	(1.33%)	15.51%	17.40%	35.19%	26.11%	6.52%	27.24%	24.10%	35.76%	21.04%
Net Acquisition of Pension and Mutual Fund Assets as a % of Household Net Acquisition of Total Financial Assets	55.92%	76.59%	64.51%	34.48%	54.96%	62.42%	76.74%	49.01%	48.00%	71.10%	68.27%	98.11%	63.72%

Source: Federal Reserve Board

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by 1929 time deposits had become three-fourths as large as demand deposits. Banks turned to the more expensive time deposits in order to retain funds, just as they did in the 1970s and 1980s. Sixth, in both periods commercial loans became a less important part of banks' portfolios. In 1920, loans to business and agriculture, most of which were short-term, accounted for almost half of the total earning assets of large urban banks. By 1929, these loans comprised only one-third of their total earning assets. Large corporations then, as now, were able to obtain financing directly, although in the 1920s the issuance of new equity was the main financing vehicle rather than commercial paper.

During both periods commercial banks also replaced loan income with fee income. In the 1920s they increased their fiduciary services and expanded their investment banking activities. As corporations increasingly went to the equity markets for their financing, large banks captured a piece of this business and retained corporate relationships by enlarging their underwriting functions. By 1929, nearly all large commercial banks had at least one securities affiliate, which performed a complete range of investment banking functions: they originated new security issues, formed and took part in underwriting syndicates, sold new issues to retail banks and to institutional investors, and participated at the retail level in the distribution of securities to individual investors through a network of branch offices. By the late 1920s, it has been estimated that commercial banks and their securities affiliates handled almost half of the total distribution of securities. The growth of personal fortunes in the United States in the 1920s also fueled the growth of banks as active money managers, through trust departments and subsidiaries. A few large banks even began their own mutual funds (or investment trusts as they were then called).

In the 1920s similar changes in the **banking** structure occurred as well. The number of banks fell substantially. There was a high rate of bank failure, especially among smaller banks whose profitability diminished. There was a sharp increase in bank mergers, especially among city banks. As a result, concentration in urban banking markets grew appreciably. Lastly, there was an upsurge in branch and "chain" or "group" **banking**. All of these changes occurred then as now in response to the increasingly competitive environment faced by banks.

Finally, in the 1920s both pension funds and investment companies grew rapidly, just as in the 1980s. Although these institutions did not become major players until after World War II, their growth in the 1920s was a harbinger of what was to come in the 1980s when open competition replaced protective regulation.

### **The financial structure in the United States: origin and rationale**

The financial structure in the United States is a product of our unique political, cultural, and economic history, all of which came together in the 1930s to create by legislative decree a highly segmented financial system. Reforms enacted in the 1930s were motivated largely by the collapse in the stock market in 1929 and by the depression which followed. While interpretations differ as to what were the causes and effects of these cataclysmic events, they unquestionably occupied center stage in the thinking of financial reformers at the time.

Four significant themes emerge from the legislative reforms adopted during the 1930s. First, commercial banks, as the main providers of money and liquidity to the economy, were seen as key, or unique, financial intermediaries, requiring special protections. The widespread failure of banks and the concurrent economic depression during the 1930s undoubtedly encouraged this view. Second, large size among financial institutions, especially banks, was discouraged. Branch and affiliate operations were restricted and severe restrictions were imposed on banks' activities. Third, banking and securities activities were viewed as particularly incompatible and, if intermingled, a threat to economic stability. Finally, to reduce speculative activity and make security markets more efficient, issuers of public securities were required to disclose more information, and curbs on the provision of credit for speculative purposes were imposed.

The main result of these reforms was to create a rigid and segmented financial structure. Banks were supposed to do certain things, savings institutions other things, and life insurance, pension funds, and investment companies still other things. This segmented structure, it was believed, would assure both the stability of the financial system and its continued contribution to the growth of the nation.

## **Banks and the regulatory system**

Banks have been the centerpiece of the financial systems in all countries. The creation of "liquidity" via demand deposits (or transactions balances) has historically been the province of banks. Consequently, banks have had an integral relationship to the money supply. Further, the stability and integrity of both banks and the banking system has always been considered essential for economic stability. To guarantee this stability, bank deposits in the United States have been government-insured (by the Federal Deposit Insurance Corporation) since the 1930s, and banks have been subjected to extensive regulation to maintain their solvency.

Regulation sought to achieve this objective in two ways. First, it insulated banks from competition. Only banks were **permitted** to provide demand deposits, and they were not permitted to compete with one another by paying interest on these deposits. This assured banks a steady flow of cheap funds—demand deposits. Interest rate ceilings on savings and time deposits (Regulation Q) similarly prevented banks from competing with one another by paying higher interest rates. In addition, geographical restrictions on where banks could have offices prevented competition from banks outside a bank's immediate area. The result of these restrictive regulations was to create a banking system of many thousands of small banks operating in competitively-insulated markets. This system was reinforced by "entry restrictions" that carefully controlled the formation of new banks, even in locales that were "underbanker— where additional competition would not be "destabilizing." By limiting competition, banks in general were made more profitable, and the number of bank failures was kept to a minimum.

Second, regulation limited the freedom of banks to take risks. Banks were required to maintain specified levels of capital, were prohibited either from making certain kinds of loans and from extending more than a certain amount of credit to specified borrowers, were prevented from engaging in securities activities (such as the underwriting of stocks and bonds) or from holding corporate stocks and bonds in their own portfolios, and were prohibited from engaging in other risky activities, like the underwriting of insurance. Thus, by limiting the

ability of banks to take risks and by insulating them from competition, regulation sought to guarantee the soundness of banks and the stability of the financial system, as well as to guarantee the uninterrupted flow of credit to business enterprises.

### **Causes of the changing financial structure**

Three factors underlie the recent changes in financial structure. First, the long period of price and interest rate stability that followed the Great Depression and later World War II ended in the 1960s. Greater inflation brought higher interest rates and greater interest rate volatility, which sensitized savers to yield differences and made it worthwhile for them to search out higher yields. As a result financial intermediaries had to pay higher yields either to retain funds or to attract new funds.

Second, improvements in both information and communications technologies began to break down what were heretofore natural barriers to competition. The ability to retrieve, store, process, manipulate, and transmit large masses of data at low cost increased both economies of scale and scope, enabling financial institutions to offer new products and compete in new markets. The increased speed and lower cost of communicating and transmitting data over large geographical areas also eliminated geographical distance as an obstacle to competition. Institutions were able to collect and to service deposits (and other funds) from distant savers as easily as they could from local savers, and could make loans to distant borrowers as easily as to local borrowers.

Third, the growing internationalization or globalization of markets (both financial and nonfinancial) that accompanied the end of capital controls and the institution of flexible exchange rates further increased competition. U.S. financial institutions were forced to compete with foreign financial institutions, often for corporate borrowers who had been their clients for decades. This competition was particularly wrenching because many foreign institutions were governed by different rules and regulations that gave them a competitive advantage. Thus, with globalization came not only head-to-head competition between U.S. and foreign financial institutions but direct competition

between U.S. and foreign regulatory systems.

Internationalization also created a regulatory loophole that prevented the enforcement, or undercut the effectiveness, of key U.S. regulations. With capital free to flow to the highest yields, wherever they may be, the imposition of deposit rate ceilings in the United States became unenforceable and counterproductive. The gigantic Eurodollar market, for example, was largely the creation of unwise and misdirected U.S. regulations during the 1960s—many of which no longer exist.

The chief effect of these changes was to increase competition among financial intermediaries and between financial intermediaries and primary security instruments. Further, as these competitive pressures mounted, it became increasingly clear that regulations designed to segment financial markets and institutions could no longer be maintained. In some cases these regulations had become ineffective; in other cases they threatened to destabilize the financial system. As a result, there has been a steady erosion of the regulatory restrictions that historically separated financial intermediaries from one another.

## **The growth of non-depository intermediaries**

### *Competition for savings and the growth of pension funds and investment companies*

In the competitive struggle to capture the savings and financial assets of households, pension funds and investment companies were the biggest winners during the 1980s.<sup>1</sup> As shown in Table 2, the latter's share of intermediary assets grew from 16.7 percent in 1980 to 30.2 percent in 1990, and this growth shows no sign of abating. By pooling funds from a large number of investors and purchasing a diversified portfolio of assets, pension and mutual funds provide individual investors with a low-cost way of holding highly diversified portfolios of stocks, bonds, and mortgage-backed securities. They also make available to investors, particularly small investors, professional portfolio management.

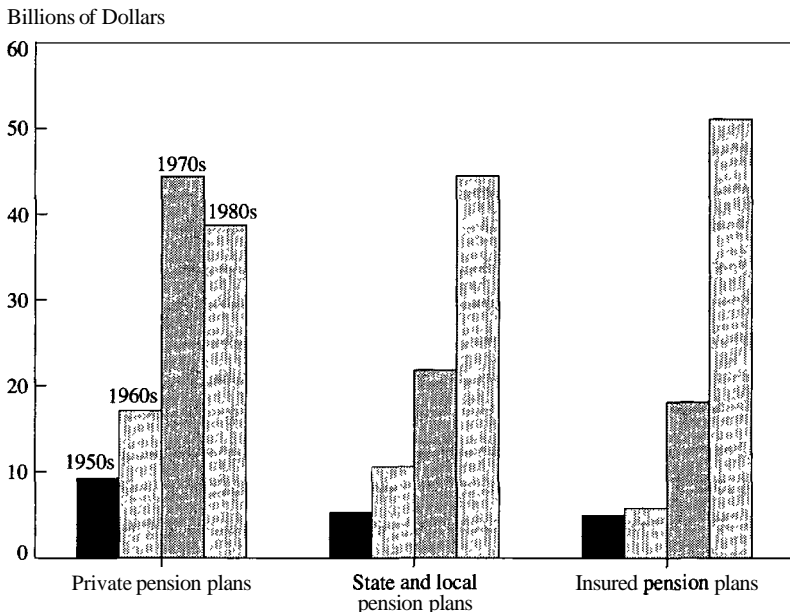
Pension fund growth during the postwar period has been due to



increased pension coverage—both in the private and public sectors—and to the increasing value of the assets held by pension funds. In the 1980s all types of pension funds grew rapidly. (See **Chart 1.**) During this period rising stock values contributed significantly to this growth. In addition, federal tax policy, which permits the deduction of employer contributions and the deferral of taxes on both employee contributions and earnings on pension fund assets, has been a major stimulant to pension fund growth. Pension funds are now the dominant institutional player in the stock market, holding over 25 percent of all corporate stock outstanding.

The early growth of mutual funds, in the 1950s and 1960s, was due almost entirely to savings flowing into equity funds. Mutual funds offered investors diversified, professionally-managed, stock portfolios, and a booming stock market did the rest. In the 1970s, however, disappointing stock market performance caused investors to seek other investments. The mutual fund industry responded by creating

**Chart 1**  
**Growth of Pension Plans**



Note: Mean net acquisition of real financial assets by decade.  
Source: Flow of Funds Accounts. Federal Reserve System.

money market funds and various kinds of bond or fixed-income funds. Consequently, during the 1970s and 1980s the growth of mutual funds came primarily from the expansion of money market funds, and, to a lesser extent, bond funds. (See Chart 2.) These funds offered investors attractive alternatives both to individually held stock portfolios and to savings deposits in banks and thrifts, which until the early 1980s were constrained by interest rate ceilings.

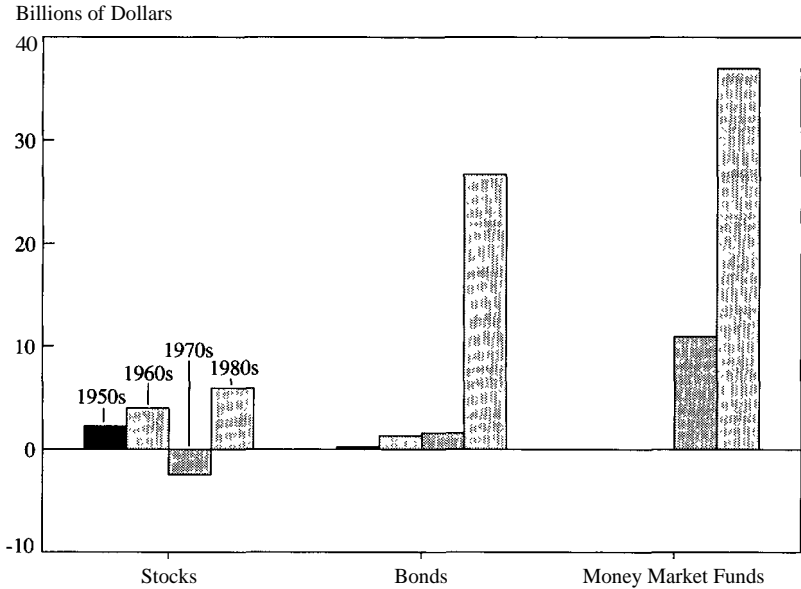
By 1991, money market mutual funds (MMMFs) had grown to \$540 billion, up from \$76 billion in 1980. (See Table 7.) In 1980, MMMF shares constituted only 7.2 percent of total commercial bank deposits; by 1991 this figure had grown to over 23 percent. Further, from 1980 to 1991 MMMF shares as a percentage of commercial bank *checkable* deposits rose from about 25 percent to almost 90 percent. Chart 3 shows the dramatic growth in these assets beginning in the early 1970s.<sup>2</sup>

In the 1980s the types of assets held by MMMFs also changed significantly. Table 7 shows the aggregate balance sheet for MMMFs during this period. MMMFs sharply reduced their holdings of bank time deposits (or certificates of deposit), replacing these assets with government securities and commercial paper.

The sharp growth of both pension and mutual funds can be seen vividly in Tables 5 and 6 as well. In 1980, pension and mutual fund assets amounted to 16.3 percent of total household financial assets; by 1991 this figure had jumped to over 32 percent. (See Table 5.) In contrast, the holdings of household assets in the traditional *intermediaries*—banks, thrifts, and life insurance companies—fell from 27.2 percent in 1980 to 21.15 percent in 1991. Mutual fund assets alone soared from only 3.6 percent of household "liquid assets" in 1989 to over 14 percent in 1991.

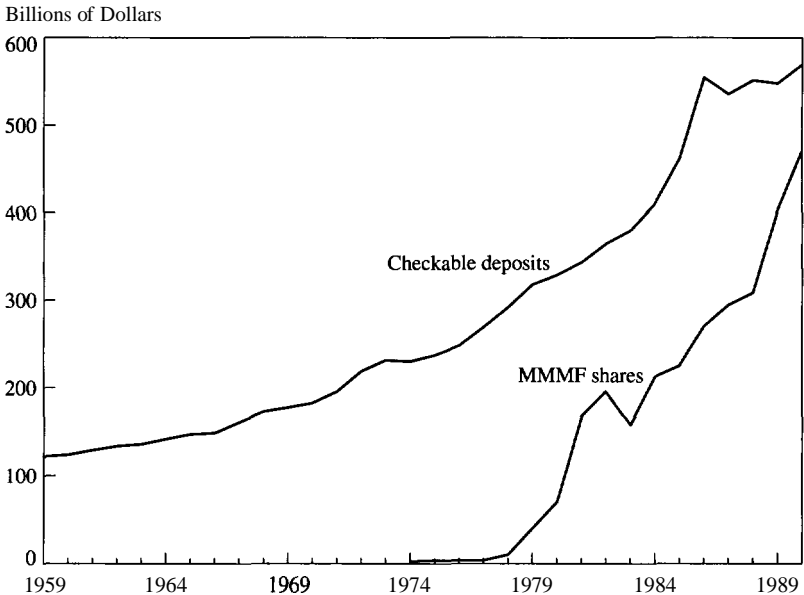
The growth of non-depository intermediaries is even more pronounced when viewed in terms of the annual flows of household assets. During the 1980s pension and mutual fund growth accounted for, on average, more than 63.7 percent of the net growth in the total assets acquired by households. (See Table 6.) In contrast, the traditional intermediaries accounted for only 36.3 percent of this growth.

### Chart 2 Mutual Fund Assets



Note: Mean net acquisition of real financial assets by decade.  
Sources: Flow of Funds Accounts. Federal Reserve System.

### Chart 3 Checkable Deposits and MMMF Shares



Source: Board of Governors of the Federal Reserve System

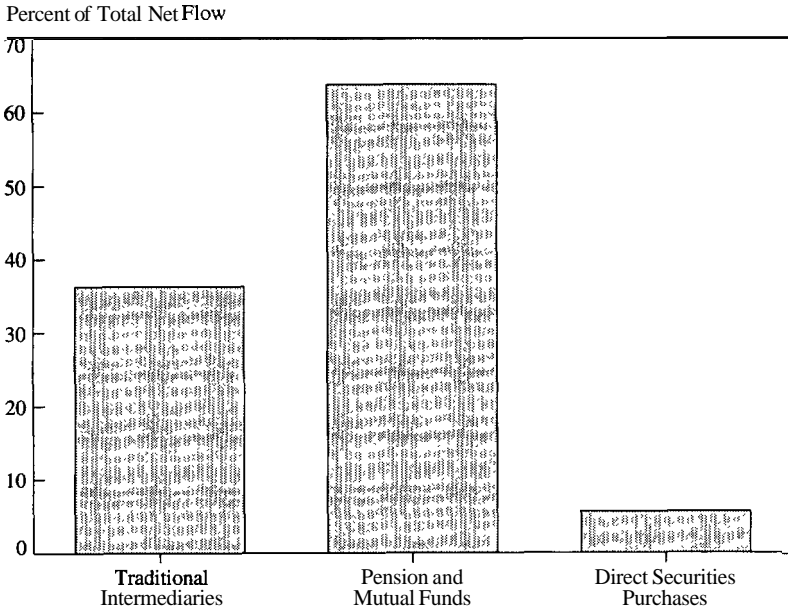
**Table 7**  
**Money Market Mutual Funds' Balance Sheet**

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992:3
Total Financial Assets (\$ billions)	76	186	220	179	234	244	292	316	338	428	498	540	553
Time Deposits (%)	27	24	19	13	10	7	7	11	10	10	4	6	
Security RPs (%)	7	8	7	7	10	11	11	12	12	13	12	13	13
Foreign Deposits (%)	9	10	11	12	9	8	8	7	9	6	5	4	4
U.S. Government Securities	11	17	25	20	18	18	15	13	9	8	17	22	24
Tax-exempt Securities	2	2	6	9	10	15	22	19	19	16	17	17	17
Open-market Paper (%)	41	38	31	37	42	41	36	35	38	44	41	36	34
Other (%)	2	1	1	1	1	2	2	2	3	3	4	3	3
Total Shares Outstanding	76	186	220	179	234	244	292	316	338	428	498	540	553

Source: *Flow of Funds Accounts*, Board of Governors of the Federal Reserve System  
James R. Barth and R. Dan Brumbaugh, Jr., "The Changing World of Banking: Setting the Regulatory Agenda," 1993, unpublished.

### Chart 4

## Net Flows of Household Financial Assets as a Percent of Net Acquisition of All Financial Assets, 1980-1991



Source: Flow of Funds Accounts, Federal Reserve System.

(See Chart 4.) Mutual funds alone accounted for about a third of the growth in households' liquid assets during this decade. (See Table 6.)

These structural changes manifest two major developments in financial markets. First, households have become highly sensitive to the relative returns and risks associated with different financial assets, and now act quickly to place their savings in assets offering the best returns. Second, the segmentation of financial markets is rapidly disappearing. The opportunities available to small savers are now very similar to those available to large savers. Through pension and mutual funds, small savers can hold portfolios of all kinds of fixed-income securities as well as diversified stock portfolios, which in the past were available only to the wealthy. Nor are savers and investors any longer constrained by geography. There are few natural barriers to the flow of savings and investment. Funds flow across national borders as readily as between different areas of the same country.

The changes that have occurred also are irreversible because they are economically-motivated and technologically-driven. The 1980s were to financial markets what World War II was to our labor markets. World War II and its aftermath made women a major component of the labor force, setting in motion an irreversible trend that resulted in profound changes in society. While not everyone found this to their liking at the time, it was a fact of life. People who believe that the changes in financial markets that occurred during the 1980s can be undone or rolled back are as naive as those who in the late 1940s believed that they could return to a prewar society.

### *Competition for borrowers and the growth of finance companies and the commercial paper market*

In the 1980s finance companies grew rapidly, becoming strong competitors of banks on the lending side of the balance sheet. (See Tables 1, 2, and 3.) Table 8 shows an aggregate balance sheet for all finance companies for the period 1950 to 1991. Two factors stand out. First, during the 1980s finance companies reduced their consumer lending and greatly increased their mortgage lending as a percentage of their total loan portfolio. Although the proportion of business loans did not change, prior to the 1980s these loans were made largely by "captive" finance companies to affiliates and customers of their parent companies. During the last decade, however, finance companies have been able to raise funds in the commercial paper market and use these funds to make general business loans, in direct competition with banks.<sup>3</sup>

Second, finance companies have significantly changed the way in which they raise funds, relying more on the issuance of commercial paper and much less on bank loans. During the last decade the commercial paper market literally exploded, growing to \$528 billion in 1991 from \$121.6 billion in 1980.<sup>4</sup> Finance companies alone accounted for almost two-thirds (or \$322.8 billion) of the newly issued commercial paper in 1991. (See Table 9.)

Most of the commercial paper issued by finance companies was purchased by MMMFs during the 1980s. Newly issued commercial paper fed the voracious appetite of the rapidly growing MMMFs. In

the eleven-year period, 1981 through 1991, 63 percent of the commercial paper issued by finance companies was acquired by money market mutual funds. By 1991 money market mutual funds held almost \$200 billion of commercial paper, constituting 34 percent of their total assets. (See Table 7.)

Taken together, the growth of both finance companies and the commercial paper market came at the expense of bank lending to business. In 1980 banks accounted for 19.1 percent of the total debt owed by nonfinancial businesses; finance companies accounted for only 6 percent. By 1991 the share held by banks had declined to 12.9 percent, while the share held by finance companies had risen to 8.1 percent. (Table 10.) In addition, finance company loans to businesses amounted to only 31 percent of banks' commercial and industrial loans in 1980. By 1991 this figure had jumped to almost 63 percent. (See Table 10.)

During this period large business firms also increasingly bypassed banks (as well as finance companies), borrowing more in primary markets by issuing their own commercial paper. In 1980 commercial paper issued by nonfinancial companies amounted to \$28.0 billion—about 10 percent of banks' commercial and industrial loans. By 1990 this figure had jumped to \$116.9 billion, over 22 percent of banks' commercial and industrial loans.

Banks have themselves facilitated these developments by providing backup lines of credit and guarantees to commercial paper issuers, including finance companies. One consequence of Penn Central Railroad's 1970 default on \$83 billion of its commercial paper is that banks began to provide commercial paper issuers with guarantees and backup lines of credit, on which banks earned a fee. Although it is difficult to know exactly what portion of the commercial paper issued by finance companies is backed by bank guarantees, it has been reported that over 90 percent of the paper issued by the largest fifteen finance companies is backed by banks.<sup>5</sup> These fifteen companies account for about 40 percent of the total commercial paper issued by finance companies. It would also seem reasonable to believe that small finance companies would need a bank guarantee even more than large finance companies. Thus, nearly all commercial paper issued by

**Table 8**  
**Finance Companies' Balance Sheet**

	1950	1960	1970	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992:3
Total Financial Assets (\$ billions)	9	27	63	243	273	292	327	371	440	531	584	646	719	772	794	789
Mortgages (%)	5	6	9	21	22	23	23	24	24	27	24	25	28	29	28	29
Consumer Credit (%)	57	57	52	32	32	32	32	30	30	28	26	24	20	18	16	15
Other Loans (to Businesses) (%)	27	30	34	37	36	34	35	37	36	33	37	38	38	38	37	37
Other (%)	11	6	4	10	10	10	10	9	10	11	13	13	14	15	19	19
Total Liabilities (\$ billions)	5	20	57	217	245	262	294	336	405	492	551	602	664	708	729	720
Corporate Bonds (%)	33	50	40	42	41	43	42	43	37	38	31	24	26	24	27	24
Bank Loans, N.E.C. (%)	50	30	22	11	10	10	9	8	7	7	6	5	5	5	5	5
Open-marketpaper(%)	14	19	38	28	30	28	30	30	35	37	39	45	45	47	46	47
Other (%)	3	1	0	19	19	19	19	19	21	18	25	26	24	24	22	24

Source: *Flow of Funds Accounts*, Board of Governors of the Federal Reserve System  
James R. Barth and R. Dan Brumbaugh, Jr., "The Changing World of Banking: Setting the Regulatory Agenda," 1993, unpublished.



**Table 9**  
**Amount of Outstanding Commercial Paper**

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992:2Q
Amounts Outstanding (in \$billions at yearend)													
All issues	121.6	161.1	161.8	183.5	231.7	293.9	326.1	373.6	451.8	521.9	557.8	528.1	544.7
Financial Companies	86.6	107.6	109.2	125.2	145.5	187.8	225.9	258.6	316.1	351.7	365.6	347.9	355.5
Bank Related	25.9	33.0	34.6	38.0	44.1	46.4	43.1	44.6	44.4	48.8	30.1	24.3	22.5
Finance Companies	60.1	74.1	74.2	86.8	100.8	140.7	181.7	212.6	270.5	301.7	335.0	322.8	332.1
Nonfinancial Companies	28.0	42.7	37.6	36.8	58.5	72.2	62.9	73.8	85.7	107.1	116.9	98.5	111.7
Shares of Total Outstanding (in percent)													
All Issues	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Financial Companies	71.2	66.8	67.5	68.2	62.8	63.9	69.3	69.2	70.0	67.4	65.5	65.9	65.3
Bank Related	21.3	20.5	21.4	20.7	19.0	15.8	13.2	11.9	9.8	9.4	5.4	4.6	4.1
Finance Companies	49.4	46.0	45.9	47.3	43.5	47.9	55.7	56.9	59.9	57.8	60.1	61.1	61.0
Nonfinancial Companies	23.0	26.5	23.2	20.1	25.2	24.6	19.3	19.8	19.0	20.5	21.0	18.7	20.5

Source: Flow of Funds Accounts of the Federal Reserve System  
Jane W. D'Arista and Tom Schlesinger, "The Parallel Banking System," Economic Policy Institute, 1992, unpublished

**Table 10**  
**Outstanding U.S. Credit Market Debt Owed by Households and Nonfinancial Businesses**

(in billions of dollars and percent)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992:2Q
<b>Total Credit Market Debt Owed by:</b>													
Households	\$1405.8	\$1521.7	\$1600.3	\$1766.0	\$1993.3	\$2271.0	\$2584.0	\$2861.3	\$3177.3	\$3508.2	\$3780.6	\$3938.6	\$4010.8
Nonfinancial Businesses*	1484.3	1650.0	1775.4	1946.2	2249.5	2512.2	2806.3	3034.6	3281.6	3512.0	3618.0	3593.2	3602.3
<b>1) Outstanding Finance Company Credit to Consumers</b>													
a) Amount	\$78.9	\$87.8	\$93.2	\$103.7	\$111.7	\$132.4	\$151.0	\$154.0	\$155.3	\$144.6	\$138.7	\$126.7	\$120.8
b) Percent of Total Debt Owed by Households	5.6	5.8	5.8	5.9	5.6	5.8	5.8	5.4	4.9	3.8	3.7	3.2	3.0
<b>2) Outstanding Finance Company Credit to Businesses</b>													
a) Amount	\$88.7	\$99.4	\$100.4	\$113.4	\$137.8	\$158.7	\$177.2	\$213.8	\$245.3	\$270.2	\$293.5	\$292.6	\$293.7
b) Percent of Total Debt Owed by Nonfinancial Businesses	6.0	6.0	5.7	5.8	6.1	6.3	6.3	7.0	7.5	7.7	8.1	8.1	8.2
<b>3) Outstanding Bank Loans to Individuals</b>													
a) Amount	\$181.2	\$186.1	\$191.6	\$217.4	\$258.4	\$299.5	\$321.5	\$334.3	\$361.5	\$382.3	\$384.7	\$369.6	\$358.8
b) Percent of Total Debt Owed by Households	12.9	12.2	12.6	12.3	13.0	13.2	12.4	11.7	11.4	10.9	10.2	9.4	8.9
<b>4) Outstanding Commercial and Industrial Loans of Banks</b>													
a) Amount	\$282.9	\$317.9	\$355.5	\$381.3	\$430.0	\$446.6	\$487.8	\$481.9	\$501.1	\$517.7	\$512.7	\$464.5	\$446.3
b) Percent of Total Debt Owed by Nonfinancial Businesses	19.1	19.3	20.0	19.6	19.1	17.8	17.4	15.9	15.3	14.7	14.2	12.9	12.4

\*Includes farm, nonfarm, noncorporate sectors.

Source: *Flow of Funds* Accounts of the Federal Reserve System. D'Arista and Schlesinger, *Ibid.*

finance companies is probably backed by a bank guarantee.

### **Is the decline of banking a global phenomenon?**

Banking, at least in its traditional form, is in decline in all countries. This decline has been more severe in countries where constraining regulations have created a highly segmented financial structure and prevented banks from responding to the competitive initiatives of nonbank competitors. In all countries, however, technologically driven financial innovation, competition, and deregulation, when they have occurred, have had powerful effects.

Although it is difficult to make cross-country comparisons because of differences in national accounting conventions, the decline of banking appears to have been greater in the United States, the United Kingdom, Australia, and the Scandinavian countries than in continental European countries. Table 11, for example, shows a greater decline in bank profitability in the former countries than in most European countries. In the latter countries banks were better able to respond to the changing market environment by developing new products and diversifying into new activities.

In addition, there has been a rapid growth of non-depository financial intermediaries in all countries. Mutual funds, for example, have experienced significant growth in countries with developed financial markets. (See Table 12.) Further, non-depository intermediaries as a group—life insurance companies, pension funds, and investment companies—have sharply increased their share of household financial assets in all major countries: from an average of 18.9 percent in 1980 to an average of 31.9 percent in 1990. (See Table 13.) In some countries, banks have been able to participate in this growth via ownership of, or a relationship with, non-depository intermediaries.

In countries where banks have come under the most competitive pressure there is evidence to suggest that they have responded by significantly increasing their risk-taking. In particular, the comparative loan-loss provisions shown in Table 14 indicate that in the United States, the United Kingdom, Australia, and the Scandinavian countries, banks have increased their lending to less creditworthy borrow-

**Table 11**  
**Bank Profit Margins<sup>1</sup>**

Countries	1980-82	1984-86	1989-90	1990
United States <sup>2</sup>	0.83	0.83	0.61	0.59
Japan <sup>2,3</sup>	0.40	0.46	0.40	0.33
Germany <sup>2</sup>	0.50	0.97	0.88	0.83
France <sup>2</sup>	0.34	0.21	0.33	0.31
Italy	0.68	0.96	1.19	1.24
United Kingdom <sup>2</sup>	1.04	1.05	0.28	0.59
Canada <sup>3</sup>	0.63	0.74	0.96	1.22
Australia <sup>3</sup>	1.41	1.33	1.20	0.94
Belgium <sup>3</sup>	0.34	0.39	0.26	0.33
Finland	0.49	0.55	0.22	0.21
Netherlands	0.31	0.66	0.59	0.53
Norway	0.63	0.75	-0.43	-1.02
Spain <sup>2</sup>	1.09	0.92	1.75	1.72
Sweden <sup>4</sup>	0.38	0.55	0.34	0.22
Switzerland	0.65	0.71	0.64	0.53

<sup>1</sup>Ratio of pre-tax profit to average total assets of commercial banks; the data are not fully comparable across countries.

<sup>2</sup>Large commercial banks

<sup>3</sup>Fiscal years

<sup>4</sup>A break in series in 1986 considerably raises profit margins in that and subsequent years in comparison with 1980-85.

Sources: For Australia, Reserve Bank of Australia; for the other countries, OECD and BIS estimates.

David Llewellyn, "Secular Pressures on Banking in Developed Financial Systems: Is Traditional Banking and Industry in Secular Decline?" in D.E. Fair and R. Raymond, eds., *The New Europe: Evolving Economic and Financial Systems in East and West*. Netherlands: Kluwer Academic Publishers, 1993.

ers, possibly to maintain profit margins. In contrast, the loan-loss provisions of banks in the continental European countries banks' have increased relatively little if at all.

In all countries banks are changing what they do in response to a more competitive environment. When permitted to do so, they have

Table 12

## Mutual Fund Assets in Selected Countries' (in billions of U.S. dollars)

	1985	1986	1987	1988	1989	1990	1991
United States	495.5	716.3	769.9	810.3	982.0	1,066.9	1,346.7
Long-term	251.7	424.2	453.8	472.3	553.9	568.5	807.1
Short-term	243.8	292.2	316.1	338.0	428.1	498.4	539.6
Japan	99.0	197.1	318.8	433.9	408.2	353.5	349.4 <sup>2</sup>
Germany <sup>3</sup>	42.3	65.7	90.2	109.2	132.2	160.1	174.6 <sup>4</sup>
Public	23.4	35.7	48.9	60.2	70.2	84.9	88.5 <sup>4</sup>
Special	18.9	30.0	41.3	49.0	62.0	75.2	86.1 <sup>4</sup>
France	84.6	153.0	204.0	240.4	268.3	383.2	396.5 <sup>5</sup>
Italy	16.3	47.1	50.8	40.2	45.4	41.9	47.5
United Kingdom	29.4	51.3	67.9	76.7	92.8	91.5	100.8
Canada <sup>6</sup>	7.4	12.6	15.6	17.2	20.2	21.5	43.5
Spain	...	...	...	...	...	24.4	24.8 <sup>2</sup>
Australia	3.3	4.1	6.9	12.2	30.9	29.1	34.5'
Netherlands	9.1	12.9	15.5	...	...	24.4	...
Switzerland	...	...	20.3	24.8	24.6	25.7	23.9
Belgium	2.8	5.3	7.4	4.8	4.3'	4.6	4.7 <sup>2</sup>
Denmark	2.5	4.3	...	...	...	3.6	3.6'
Ireland	...	...	...	...	5.0 <sup>7</sup>	7.9	7.5 <sup>2</sup>
Korea	7.1	10.4	13.6	21.0	27.6	33.8	36.8 <sup>2</sup>
India	...	...	...	17.0	...	12.5	12.7
Luxembourg	...	...	...	...	...	94.6	114.2 <sup>2</sup>
Total	799.3	1,280.1	1,581.0	1,807.6	2,041.5	2,379.0	2,721.7

Source: Investment Company Institute.

<sup>1</sup>Open-end funds only.<sup>2</sup>As of September.<sup>3</sup>Includes real estate funds.<sup>4</sup>As of November.

<sup>5</sup>Includes *sociétés d'investissement à capital variable* (investment companies with variable share capital) of \$297.7 billion as of September and *fonds commun de placement* (unit trusts) of \$98.8 billion as of December.

<sup>6</sup>Prior to 1991, only 75 percent of the companies reported to the Investment Funds Institute of Canada.

<sup>7</sup>As of June.

**Table 13**  
**The Growth of Institutional Investors**

Countries	Pension Funds and Life Assurance Companies			Collective Investment Institutions			Total		
	1980	1985	1990 <sup>3</sup>	1980	1985	1990 <sup>3</sup>	1980	1985	1990 <sup>3</sup>
	Financial Assets as a Percentage of Household Financial Assets								
United States	17.8	21.1	23.5	2.2	5.0	7.7	20.0	26.0	31.2
Japan	13.8	16.6	20.8	1.8	3.6	5.6	15.6	20.2	26.4
<b>Germany</b>	19.4	24.2	27.1	3.2	4.8	8.1	22.6	29.0	35.1
France	8.0	11.2	14.7	2.7	12.4	21.7	10.6	23.6	36.3
<b>Italy</b> <sup>1,2</sup>	1.6	0.9	3.2	n.a.	2.1	2.9	n.a.	2.9	6.1
<b>United Kingdom</b> <sup>1</sup>	39.9	49.9	53.7	1.6	3.1	4.9	41.5	53.1	58.6
Canada	19.4	23.3	26.7	1.0	1.6	3.0	20.4	24.9	29.7

<sup>1</sup>Total asset?.

<sup>2</sup>At book value.

<sup>3</sup>For Italy and United Kingdom, 1989 figures.

Source: BIS, Annual Report, 1992.

pursued off-balance sheet activities as a way of increasing fee income to replace lower income from traditional banking activities. They have expanded securities, insurance, and trading activities, "securitized" more of their loan portfolios, provided more loan commitments and standby letters of credit, and increased derivative-market services. Table 15 shows the sharp growth in banks' non-interest income (relative to bank gross income) that has occurred in all major countries. This income, for example, has increased by **36** percent in the United States and by 47 percent in the United Kingdom since 1980.

## **Two views of the decline of banking**

There are two theses about why banking is in decline in the United States as well as in other countries. These can be characterized as the "excess capacity" and the "regulatory burden" views.

### *The "excess capacity" thesis*

The "excess capacity" thesis contends that the banking industry has excess capacity that must be eliminated before a new industry equilibrium can be obtained. **Banking** has historically been a protected industry. In the past, regulation has consciously been used to restrict competition by erecting high entry barriers and by curbing price competition in the industry. Restrictions on de novo bank formation and on branching geared to prevent "overbanking" made entry into local banking markets difficult, and price-ceiling regulations (such as Regulation Q) prevented "ruinous" price competition. By limiting competition, therefore, an abnormally high rate of return could be earned on capital invested in the banking industry. The inevitable result was that more capital was attracted to the banking industry than would have been the case if only a competitive (or "normal") rate of return could have been earned.

Changes in technology, the internationalization of **banking** markets, and deregulation have subjected banks to increased competition by reducing the barriers to entry into traditional banking markets. For example, liquidity services in the form of transactions balances can now be provided by money market mutual funds operating from a single location and providing services to individuals widely dispersed

**Table 14**  
**Net Loan-Loss Provisions of Banks in Selected Industrial Countries' (in Percent of Gross Income)**

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
United States: Commercial Banks	6.56	9.57	11.06	12.80	14.30	16.34	26.30	11.14	18.90	18.53
Large Commercial Banks	7.23	10.37	12.16	14.02	14.12	15.78	32.31	11.01	22.51	21.36
Japan: Commercial Banks	0.83	3.33	2.17	2.26	1.24	2.42	2.16	3.34	3.36	2.37
Large Commercial Banks	1.02	4.73	2.37	2.65	1.07	2.33	2.23	10.37	4.61	3.18
Germany: Commercial Banks	15.62	21.89	22.59	15.29	13.44	15.05	13.26	7.77	13.07	16.45
Large Commercial Banks	14.53	20.56	16.26	12.44	8.01	9.53	10.15	3.32	6.13	13.52
France: Commercial Banks and Credit Cooperatives	18.10	20.89	21.58	20.40	19.33	21.30	18.67	18.80	20.87	20.93
Large Commercial Banks	20.64	23.73	24.23	22.81	22.81	25.15	21.02	22.39	23.31	21.78
Italy: Commercial Banks	...	...	...	13.16	12.52	12.18	11.12	12.41	11.49	11.65
Large Commercial Banks			...	11.35	13.60	11.89	10.25	13.89	12.97	13.05
United Kingdom: Commercial Banks	...	...	...	14.49	11.68	10.95	30.99	6.19	32.74	20.07
Large Commercial Banks	4.20	10.23	12.34	14.50	10.24	9.32	30.32	3.94	33.07	21.00
Canada: Commercial Banks	...	14.61	15.24	17.36	17.69	20.57	17.49	13.68	25.56	8.28
Netherlands: Commercial Banks	27.37	27.39	19.69	20.45	12.25	10.68	6.13	13.26	12.19	11.78
Sweden: Commercial Banks	24.74	19.08	29.91	23.90	26.89	20.94	23.45	27.20	28.64	14.10
Switzerland: All Banks	14.75	17.75	18.73	18.72	19.64	19.00	19.06	17.82	18.90	20.70
Large Commercial Banks	13.30	16.70	17.68	18.31	19.44	19.23	18.32	17.78	17.89	17.40
Belgium: Commercial Banks	10.40	14.26	14.32	14.29	14.95	14.18	13.93	20.46	23.61	11.54
Luxembourg: Commercial Banks	39.09	52.28	56.51	49.90	49.38	46.05	39.66	29.54	32.37	44.06

<sup>1</sup>Owing to differences in national accounting practices, the figures in this table should be interpreted with caution. In particular, cross-country comparisons may be less relevant than developments over time within a single country.

Sources: Bank of England; and Organization for Economic Cooperation and Development (1992).

International Monetary Fund, "International Capital Markets: Development, Prospects and Public Issues," World Economic and Financial Survey, Sept., 1992.



**Table 15**  
**Non-Interest Income of Banks in Selected Industrial Countries' (in Percent of Gross Income)**

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
United States: Commercial Banks	23.98	24.61	26.54	24.71	26.57	29.76	30.20	30.08	31.77	32.79
Large Commercial Banks	30.97	30.99	32.96	29.20	30.93	<b>34.13</b>	35.13	34.75	36.80	37.99
Japan: Commercial Banks	17.78	13.94	14.68	17.68	21.06	19.69	25.12	25.83	23.84	24.12
Large Commercial Banks	23.79	19.11	18.95	22.77	26.59	24.53	32.23	40.05	37.20	35.94
Germany: Commercial Banks	29.11	26.85	24.82	25.94	30.05	29.55	29.83	30.39	<b>36.02</b>	35.68
Large Commercial Banks	28.89	30.29	26.68	27.16	31.15	27.54	30.14	31.43	33.62	34.92
France: Commercial Banks and Credit Cooperatives	16.00	16.18	16.77	13.19	14.08	14.45	17.03	17.01	21.18	20.07
Large Commercial Banks	15.21	15.76	17.02	12.96	15.69	17.20	20.74	20.98	23.84	24.92
Italy: Commercial Banks	...	...	..	29.18	31.51	31.88	27.98	27.58	25.74	26.78
Large Commercial Banks	...	...	...	34.56	39.27	38.67	32.79	34.34	29.99	30.13
United Kingdom: Commercial Banks	...	...	...	35.60	34.51	36.33	38.17	37.58	39.10	40.09
Large Commercial Banks	27.07	29.35	31.94	33.38	32.48	33.88	35.86	36.33	38.12	39.86
Canada: Commercial Banks	...	21.61	21.07	22.68	23.71	24.73	28.35	27.39	29.18	30.95
Netherlands: Commercial Banks	25.85	23.25	23.51	24.66	25.65	23.92	25.95	27.25	29.37	28.65
Sweden: Commercial Banks	29.17	31.11	28.68	30.25	34.95	35.27	28.25	28.77	28.58	26.21
Switzerland: All Banks	47.69	44.22	46.49	45.67	47.38	49.35	51.58	47.10	50.87	49.05
Large Commercial Banks	52.57	47.28	47.91	46.65	48.16	49.75	51.34	47.38	50.29	50.93
Belgium: Commercial Banks	17.35	21.17	24.48	20.76	23.65	25.82	26.89	29.96	27.42	23.04
Luxembourg: Commercial Banks	23.73	18.38	17.49	13.24	19.67	21.37	19.99	24.28	28.23	35.00

<sup>1</sup>Owing to differences in national accounting practices, the figures in this table should be interpreted with caution. In particular, cross-country comparisons may be less relevant than developments over time within a single country.

Sources: Bank of England; and Organization for Economic Cooperation and Development (1992).

International Monetary Fund, "International Capital Markets: Development, Prospects and Public Issues," World Economic and Financial Survey, Sept., 1992.

throughout the United States (as well as foreign countries). In addition, banks can attract funds from distant locations by using certificates of deposits. Stock and bond mutual funds also offer small-denomination shares in diversified portfolios as an alternative to traditional time and savings deposits. Similarly, technological changes and accompanying market innovations have facilitated new entry into business lending. The "unbundling" of traditional **banking** products (such as occurs with the "securitization" of loans) has also lowered entry barriers by decomposing traditional bank products into separate products and services that are more easily duplicated by competitors. Finally, market developments have forced the elimination of regulations that previously insulated banks from "excessive" competition—restrictive price ceilings have been removed and geographical restrictions have been eased, **either directly** or indirectly. The result has been a sharp increase in competition in **banking**.

The "excess capacity" thesis argues that with greater competition the rate of return on capital invested in **banking** must decline, resulting in an excess of capital in the industry. As a consequence, capital must leave the industry until a competitive rate of return is restored.

According to this thesis, therefore, we should expect to see falling profitability in banking, possibly greater risk-taking by banks as they seek to maintain former levels of profitability, and a **shrinking** market share for banks, as **nonbanking** financial intermediaries succeed in penetrating traditional banking markets and new capital markets instruments are developed to bypass banks entirely. Further, we should expect to see an increased failure rate in **banking** and an intensified effort by banks to diversify into nontraditional activities, such as those carried on by investment banks, **broker/dealers**, and insurance companies. Finally, more competitive markets should intensify pressure to cut costs and to restructure along more efficient lines. Thus, the number of small banks should decline, either because of increased failures or because of widespread industry consolidation, and fewer but larger and more diversified banks should emerge. **Once** the required industry "shakeout" is completed, however, the **banking** industry should settle into a new equilibrium, as a smaller and more efficient industry relative to other financial intermediaries.

### ***The regulatory burden thesis***

An alternative view is that banks are in decline because of burdensome regulations that disadvantage them vis-à-vis their nonbank competitors. In this view regulation has locked banks into a diminishing role by not permitting them to adapt to the changes in technology and competition that have occurred by diversifying their activities.

Institutions competing with banks for funds, such as MMMFs, are not subject to prudential regulation. Unlike banks, they are not subject to Federal Reserve requirements and deposit insurance premiums, both of which raise the cost of funds for banks relative to nonbank competitors. High capital requirements and burdensome regulatory supervision, banks argue, also increase their costs. In addition, banks are subject to costs as a result of their "community obligations," such as those imposed by the Community Reinvestment Act, which their nonbank competitors do not have to bear.

On the lending side, finance companies, which make the same kinds of loans as do banks, are virtually unregulated. They do not have reserve or capital requirements, are not subject to loan limits, can operate freely anywhere in the country, and transactions with their parents and affiliates are unrestricted. Finance companies also are not subject either to community demands under the Community Reinvestment Act or to restrictions imposed by the Glass-Steagall Act.

Thus, adherents to the "regulatory burden" thesis argue that the combination of the regulatory advantages enjoyed by both MMMFs and finance companies is causing banks to lose market share. Specifically, MMMFs have a cost advantage over banks in raising funds, and this advantage is passed on to finance companies by MMMFs purchasing the commercial paper issued by finance companies. As a result, finance companies gain a competitive advantage over banks in making loans, which may explain the inroads finance companies have made in both mortgage and business lending during the 1980s.

This thesis is difficult to evaluate. Because of their public charters, banks also are the recipient of regulatory benefits. In particular, deposit insurance, implicit government guarantees, and access to the

discount window have arguably reduced their cost of funds. Indeed, it is partly because of these governmentally bestowed benefits that banks have been burdened with greater regulation. The question is: have banks been subject on net to a tax or a subsidy?

Recent experience suggests that banks and other depository institutions have on net benefited from a subsidy. The widespread failure of thrifts and banks during the 1980s resulted in huge costs being imposed on general taxpayers when government insurance funds backing deposits in these institutions proved to be **inadequate**.<sup>6</sup> The government bailout, in effect, is a measure of the accumulated subsidy extended to these institutions in the past. Had either deposit insurance premiums been high enough to accumulate the necessary funds to pay for the bailout or regulation been sufficient to prevent or reduce the losses to taxpayers that occurred, there may not have been a subsidy.

Within the last few years new legislation has attempted to eliminate this recognized subsidy. The Financial Institutions Reform, Recovery, and Enforcement Act (FIRREA) and the Federal Deposit Insurance Corporation Improvement Act (FDICIA) **raised** capital requirements for banks and thrifts, increased insurance premiums, and curtailed the asset and liability powers of thrifts. In addition, these acts required early intervention by regulators to prevent troubled institutions from imposing costs on the deposit insurance fund and therefore, taxpayers.

Whether this legislation successfully eliminates the past subsidy to banks, or, alternatively, by overregulation, imposes a net tax on banks, is a point of current contention. It is clear, however, that the net benefits bestowed on banks have been reduced in the last few years. Whether the remaining balance between government-supplied benefits and regulatory burdens is "right" is not clear. If banks perform a different economic or social role than their **nonbank** competitors, it may be socially optimal to impose a different regulatory structure on them, even though it results in a different cost structure.

The "regulatory burden" view is that the regulatory balance no longer favors banks; and, that, if nothing is done to correct this imbalance, banking will become an ever-shrinking part of financial

intermediation. Banking as a distinct industry, adherents would argue, may come to play the same role in financial intermediation as U.S. savings bonds do in capital markets—as a repository for the funds of small savers who place an exceptionally heavy weight on a government guarantee.

Both the “excess capacity” and the “regulatory burden” theses imply that banking will shrink relative to other financial intermediaries. Depending on which view is accepted, however, the respective policy response is different. The “excess capacity” thesis implies that the diminishing importance of banking is a natural consequence of efficiency-enhancing technological and organizational innovations, and should be allowed to run its course. The “regulatory burden” thesis implies that the decline of banking has been artificially induced—the consequence of misdirected and suboptimal government interference with markets—and should be reversed, either by easing the regulatory burdens on banks or by increasing those imposed on the nonbank competitors of banks. This is the genesis for calls to extend bank-type regulations, such as reserve requirements, deposit insurance premiums, and Community Reinvestment Act responsibilities, to investment companies and pension funds.<sup>7</sup>

### **The theory of bank “uniqueness”: an obsolete concept?**

Banks have long occupied a special niche in the thinking of policy-makers and financial scholars because of their unique joint provision of liquid liabilities (or “money”) and nonmarketable business loans. Because of their unique product mix they have also been singled out for special treatment under our regulatory system. It is clear from the discussion in prior sections of the paper, however, that changes in technology and accompanying deregulation have resulted in the development of new substitutes for the services commonly provided by banks. For example, MMMFs provide similar liquidity services in the form of demandable (or checkable) equity shares, and nonbank lenders such as finance companies serve many of the same borrowers as do banks, including business borrowers. However, while substitute products have developed for all of the services formerly provided only by banks, no nonbank institution provides the identical combination or package of services that banks do. In particular, although nonbank

competitors have successfully separated the provision of liquid liabilities from the provision of nonmarketable, illiquid, business loans, banks are still unique in that they alone produce these products jointly. Thus, there remains the question of whether this special feature of banks distinguishes them from nonbank competitors.

Theories of the banking firm attribute the competitive edge enjoyed by banks to their ability to overcome informational problems more efficiently than other financial institutions. Informational problems arise when borrowers' projects (particularly those of business enterprises) cannot be easily evaluated and communicated to capital markets, when a borrower's behavior must be monitored during the life of the loan in order to protect the lender's investment, and when for competitive reasons borrowers do not wish to make information publicly available, even though such information could in principle be successfully communicated to the public at large. These problems are often identified as those of "asymmetric information," "moral hazard" (that is, borrowers changing their behavior during the life of the loan), and "inside" information.

The comparative advantage of banks in managing these informational problems, however, seems considerably less today than in the past. First, advances in computer technologies have greatly reduced the costs of retrieving, processing, and disseminating information. Thus, lenders and investors can more easily access information about borrowers. This has undoubtedly facilitated the growth of the commercial paper market and the securitization of loans, and has resulted in more and more borrowers bypassing banks. Information asymmetries, of course, still exist—one reason that financial intermediaries exist at all. But do banks, as opposed to, say, finance companies and insurance companies, possess any special advantage in managing these information asymmetries?

The same question applies to the ability of banks to monitor borrowers (or to manage the moral hazard problem), and to their ability to exploit the "inside" information that borrowers make available. Why should banks be more efficient than other financial intermediaries in managing these informational problems?

It has been argued that banks enjoy a comparative advantage because of their large scale (economies of scale), because of their superior diversification, and because they provide many different products (economies of scope). In today's markets, none of these arguments is persuasive. First, many nonbank financial institutions are as large or larger than banks, so it is doubtful that they do not enjoy the same economies of scale as banks. For example, the average size of the largest twelve finance companies in 1991 was \$30 billion. (See Table 16.) By comparison, most banks are small. Second, many nonbank financial institutions are as well or better diversified than banks, providing many different services to many different customers located in many different regions of the country (for example, insurance companies and mutual funds).

If banks have any comparative advantage it may stem from their ability to exploit information produced as a byproduct of the particular services they provide. In specific, as a byproduct of their providing liquidity services (checkable deposits) to both existing and potential borrowers banks may gain a unique informational advantage in lending to these borrowers.<sup>8</sup> If there is such an advantage, however, it would seem to exist primarily for business borrowers, where asymmetric information problems are more severe.

I am doubtful that this advantage still exists to any significant extent. First, as we have seen, banks have substantially reduced their lending to businesses in favor of consumer and mortgage lending, which suggests that they do not have a comparative advantage in making business loans. Until 1980 banks made more business loans than any other kind of loan. But by 1991 their combined mortgage and consumer loans were more than double their commercial and industrial loans.<sup>9</sup> (See Table 17.) Further, in 1980, 49 percent of the funds raised by nonfinancial companies was from bank loans; today that figure is less than 17 percent. (See Table 18.) Banks are shifting toward making loans that require less extensive (and less costly) evaluation and monitoring—loans that can be standardized, packaged, and sold in secondary markets. Second, banks have drastically reduced their reliance on checkable deposits, suggesting that these deposits are not particularly valuable to them. Such deposits, once the major source of funds for banks, currently account for less than 17

**Table 16**  
**Top 12 Nonbank Finance Companies Ranked by Assets**

	1991		1990		1989	
	Amount (billions of dollars)	Percent of Total for All Finance Cos.	Amount (billions of dollars)	Percent of Total for All Finance Cos.	Amount (billions of dollars)	Percent of Total for All Finance Cos.
General Motors Acceptance Corp.	\$102.9	12.8%	\$105.2	13.6%	\$103.6	14.4%
General Electric Capital Corp.	80.5	10.0	70.4	9.1	58.7	8.2
Ford Motor Credit Co.	56.9	7.1	59.0	7.6	54.9	7.6
Associates Corp. of North America*	21.6	2.7	16.9	2.2	14.8	2.1
<b>Chrysler</b> Finance Corp.	21.3	2.7	24.9	3.2	30.1	4.2
Household Financial Corp.	17.3	2.2	16.9	2.2	15.1	2.1
Sears Roebuck Acceptance Corp.	14.7	1.8	15.4	2.0	14.4	2.0
American Express Credit Corp.	14.1	1.8	14.2	1.8	12.6	1.8
ITT Financial Corp.	12.6	1.6	11.7	1.5	10.6	1.5
IBM Credit Corp.	11.3	1.4	11.1	1.4	9.7	1.3
Westinghouse Credit Corp.	8.6	1.1	10.3	1.3	9.3	1.3
Beneficial Corp.	10.0	1.2	9.3	1.2	7.9	1.1
Total	\$371.8	46.3	\$365.1	47.3	\$341.7	47.5

\*A subsidiary of Ford Motor Company.

Sources: Annual Reports: American Banker, November 8, 1990, p. 14; December 11, 1991, p. 11. Jane W. D'Arista and Tom Schlesinger, "The Parallel Banking System," Economic Policy Institute, 1992, unpublished.

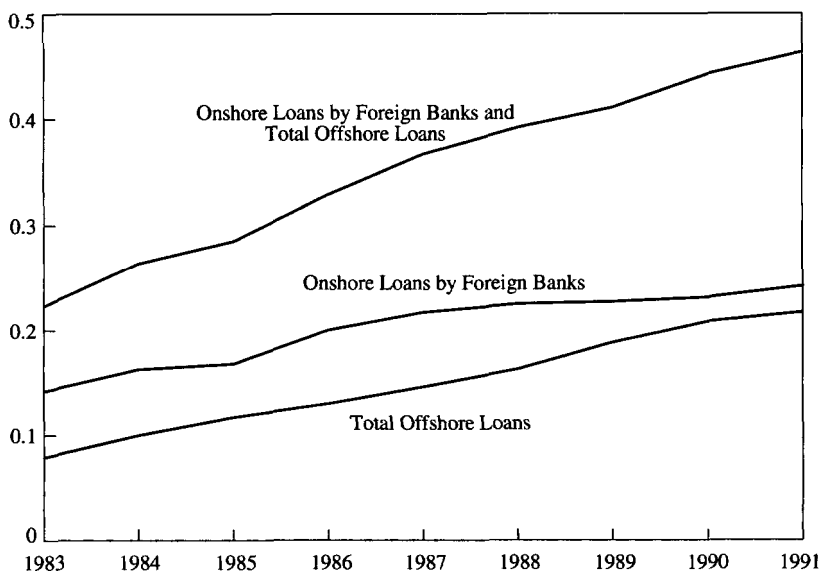
percent of bank funding. (See Table 19.) Third, finance companies have sharply increased their role as providers of credit to the business sector, despite their not providing any checking facilities to these borrowers. At yearend 1991, finance company loans to businesses totaled more than 50 percent of banks' commercial and industrial loans, and about 35 percent of total commercial and industrial lending. (See Table 10.) If banks have an information advantage over finance companies, therefore, it seems to have eroded in recent years.<sup>10</sup> Lastly, foreign banks have become aggressive lenders to U.S. businesses, even though they often do not provide liquidity services to



these borrowers. Lending by foreign banks, both on-shore and off-shore, as a percentage of total commercial and industrial loans by U.S. banks rose from about 18 percent in 1983 to over 40 percent in 1991. (See Chart 5.)

The results of academic research on the question of bank uniqueness, while mixed, tend to confirm the conclusion that banks have lost much of the advantage they once had.<sup>11</sup> For example, after examining bank loan growth in two periods, 1959 to 1976 and 1977 to 1991, Becketti and Morris conclude that in recent years bank loans have lost much of the "specialness" that distinguished them in the past.<sup>12</sup> Hook and Opler look at the characteristics of firms which borrow from banks, and find that there is little support for the "... view that banks provide loans to firms where problems of monitoring and verification ... are greatest."<sup>13</sup>

**Chart 5**  
**Foreign Share of U.S. C&I Loans**



Note: Fractions of total C&I loans. Total C&I loans include all loans (both onshore and offshore) to U.S. addresses by both foreign and domestic banks. (Flow of funds data on C&I loans excludes foreign offshore loans.)

Source: "U.S. Commercial Banks: Trends, Cycles and Policy," unpublished, 1993.

**Table 17**  
**Selected Financial Data for Commercial Banks**

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992:3
Number of Institutions	14,435	14,415	14,454	14,467	14,472	14,393	14,188	13,694	13,120	12,705	12,388	11,927	11,590
Total Assets (\$ Billions)	1,856	2,029	2,194	2,342	2,508	2,731	2,941	2,999	3,131	3,299	3,389	3,510	3,481
Capital (\$ Billions)	108	118	129	140	154	169	182	181	197	205	219	232	257
Net After-Tax Income (\$ Millions)	13,974	14,737	14,881	14,932	15,499	17,981	17,412	2,806	24,817	15,647	16,626	18,568	24,205
Net Operating Income (\$ Millions)	14,443	15,542	15,475	14,867	15,414	16,182	13,194	1,176	23,722	14,541	15,503	14,823	31,515
Taxes (\$ Millions)	4,657	3,873	2,980	4,017	4,721	5,643	5,304	5,424	9,991	9,658	7,885	8,404	10,856
Real Estate Loans to Total Assets (%)	14.5	14.4	14	14.4	15.4	16.1	17.5	20	21.6	23.1	24.5	24.8	24.8
Commercial and Industrial Loans to Total Assets (%)	21.1	22.4	23	22.4	22.5	21.2	20.4	19.7	19.2	18.8	18.2	16.3	15.5
Agricultural Production Loans to Total Assets (%)	1.7	1.7	1.7	1.7	1.6	1.3	1.1	1	1	0.9	1	1	1.1
Loans to Individuals to Total Assets (%)	10.1	9.5	9.1	9.6	10.6	11.3	11.4	11.7	12.1	12.1	11.9	11.4	11
Number of Problem Banks	NA	NA	NA	NA	NA	1,098	1,457	1,559	1,394	1,092	1,012	997	909
Assets of Problem Banks (\$ Billions)	NA	NA	NA	NA	NA	NA	NA	329	305	188	342	528	488
Resolutions-Commercial and Savings Banks													
Number	10	10	42	48	79	120	145	203	221	207	169	127	80
Total Assets (\$ Millions)	236	4,859	11,632	7,037	3,274	8,337	6,830	9,198	52,623	29,538	16,265	63,300	22,373
Estimated Present-Value Cost (\$ Millions)	NA	NA	NA	NA	NA	850	1,732	2,017	5,530	5,998	3,767	7,400	3,499

Source: Congressional Budget Office

James R. Barth and R. Dan Brumbaugh, Jr., "The Changing World of Banking: Setting the Regulatory Agenda," 1993, unpublished.

**Table 18**  
**Nonfinancial Company Borrowing (Percentage of Funds Borrowed)**

Type of Instrument	1965	1970	1980	1983	1984	1985	1986	1987	1988	1989
Bank Loans										
U.S. Banks	57.3	16.8	48.7	32.1	28.9	22.6	24.4	3.2	16.5	16.5
Foreign Banks	0.0	0.0	2.2	4.9	7.7	1.1	5.4	1.3	5.6	5.7
Commercial Paper	1.7	6.2	6.9	1.5	12.8	11.0	4.6	1.6	5.9	10.6
Finance Company Loans	5.2	0.6	3.7	14.1	9.7	9.6	5.5	11.6	8.0	5.7
Bonds and Notes*	25.6	69.4	66.6	46.5	39.3	72.8	54.7	68.0	57.8	57.7
Mortgages	11.7	3.1	-36.2	-8.0	-0.8	-13.5	13.9	10.7	7.1	2.3
Bankers Acceptances and U.S. Government Loans	1.9	3.9	8.1	11.9	2.4	3.6	0.6	3.6	0.9	1.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Memorandum Item:										
Total Funds Raised in Credit Markets (in U.S.\$ Billions)	18.9	28.5	57.8	54.8	169.6	132.4	203.7	145.5	197.5	196.0

\*Includes bonds and notes issued abroad by U.S. corporations and tax-exempt bonds issued for the benefits of nonfinancial corporations.

Sources: L.E. Crabbe, M.H. Pickering, and S.D. Prowse, "Recent Developments in Corporate Finance," *Federal Reserve Bulletin* (August 1990), and other Federal Reserve data (updated).

David T. Llewellyn, "Secular Pressures on Banking in Developed Financial Systems: Is Traditional Banking an Industry in Severe Decline?" 1992, unpublished paper.

**Table 19**  
**Commercial Banks' Balance Sheet**

	1950	1960	1970	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992:3
Total Financial Assets (in Billions)	150	230	518	1,483	1,620	1,732	1,889	2,129	2,377	2,617	2,773	2,952	3,232	3,336	3,441	3,576
U.S. Gov't. Securities (%)	43	28	15	12	11	12	14	12	11	12	12	12	12	14	17	18
Tax-Exempt Securities (%)	NA	NA	NA	10	10	9	9	8	10	8	6	5	4	4	3	3
Corporate and Foreign Bonds (%)		0	1	1	1	1	1	1	1	2	3	3	2	3	3	3
Mortgage Loans (%)	9	13	14	18	18	17	17	18	18	19	21	23	24	26	26	25
Consumer Credit Loans (%)	5	9	10	12	11	11	11	12	12	12	12	13	12	12	11	10
Bank Loans N.E.C. (%)	19	27	31	31	32	31	30	29	28	28	26	26	25	24	23	22
Open-Market Paper (%)	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
Other (%)	22	22	28	16	17	18	17	19	19	19	19	18	20	18	18	20
Total Liabilities (\$ Billions)	140	212	487	1,411	1,562	1,673	1,829	2,021	2,252	2,485	2,658	2,860	3,119	3,220	3,330	3,456
Private Domestic Checkable Deposits (%)	69	59	39	22	21	20	20	19	19	21	19	18	16	16	17	17
Small Time & Saving Deposits (%)	26	34	42	34	33	37	41	40	39	39	37	37	37	40	41	40
Large Time Deposits (%)	0	1	5	19	21	20	15	16	15	13	14	15	14	13	12	10
Fed. Funds & Security RPs (%)	NA	NA	NA	8	8	8	8	8	8	8	8	8	9	8	7	8
Other (%)	5	6	13	17	18	15	16	17	19	19	21	22	23	23	23	25

Source: *Flow of Funds Accounts*, Board of Governors of the Federal Reserve System. James R. Barth and R. Dan Brumbaugh, Jr., 1993, Unpublished.

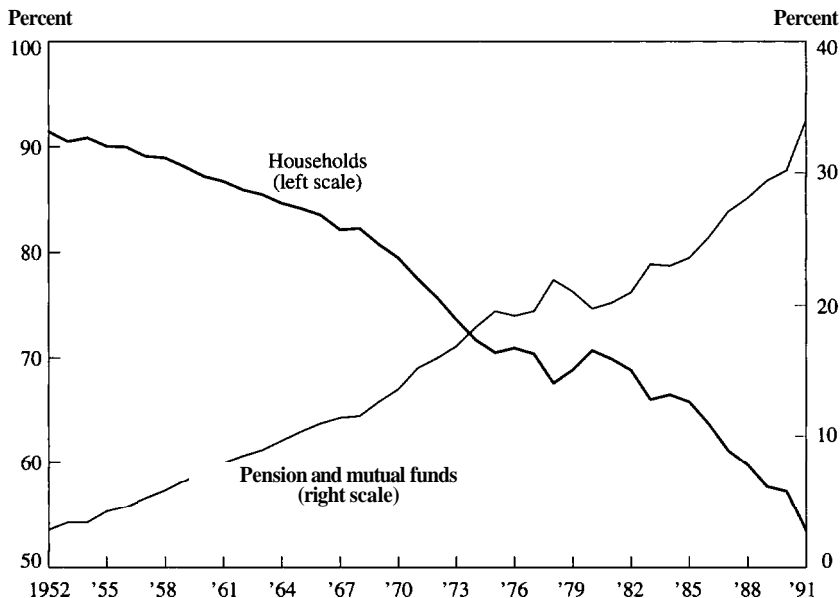
Thus, to the extent that banks have informational advantages resulting from economies of scope, these advantages have shrunk to seeming insignificance. Although banks are still the only joint providers of liquidity services and nonmarketable (or information-intensive) business loans, there are no longer compelling reasons to believe that their unique joint-production technology gives them a competitive advantage. The separable production of liquidity services and nonmarketable business loans by different financial entities (such as MMMFs and finance companies) is obviously feasible, and may even be superior to the joint production of these services. It may, for example, require less government intervention to assure systemic stability because of the built-in matching of liquid liabilities with liquid assets.

An implication of a conclusion that banks have lost much if not all of their **specialness** is that banks no longer bring to the market a superior production technology—that they no longer have a natural competitive advantage. More simply stated, if our financial markets and institutions were being created for the first time in 1990, banks might not be among the surviving institutions. Thus, the recent decline in the competitive position of banks appears to be a natural consequence of evolving financial technology.

### **The rise of nonbank intermediaries and related developments in securities and derivative markets**

The shift in household assets from depository institutions to **non-depository intermediaries** also has resulted in a growing "institutionalization" of equity markets, which has in turn had important effects on other **financial** markets. During the last several decades direct purchases of stocks and bonds by households have fallen sharply. Households have been net sellers of stock in every year but one since 1958. (See Table 6.) In 1952, households' direct holdings of stock as a percent of total household financial assets was 32 percent. By 1991 this figure had fallen to 14.7 percent.<sup>14</sup> Even more telling, in 1952 households held 91 percent of all corporate stock outstanding; in 1991 they held only 53 percent. (See Chart 6.) During this period the share of total outstanding stock held by pension and mutual funds rose from 3 percent to 34 percent. Today, institutional investors, taken together, hold 53.3 percent of the total stock outstanding, up from 38 percent

**Chart 6**  
**Holdings of Corporate Equity**



Source: Flow of Funds Accounts, Federal Reserve System.

since 1981. (See Table 20.)

The institutionalization of equity markets has had significant consequences and has raised a number of important public policy issues. First, trading in securities markets (and probably in other markets as well) has increased substantially, as institutions have sought to outperform one another. In 1975 institutions demanded and obtained a lower institutional commission structure for trades made on equity exchanges. Lower commissions together with a greater emphasis on portfolio performance has in turn resulted in a sharp increase in "annual turnover" in equity markets since 1980. The typical stock is now held for an average of a little over two years, compared to over four years ten years ago, and seven years in 1960. The average holding period for institutional investors is less than two years, compared to almost five years for **individuals**.<sup>15</sup> This has led to a debate about whether institutional trading is responsible for the increased volatility of securities prices, and about the effect of such trading on corporate

**Table 20**  
**Changes in Institutional Equity Ownership: 1981 to 1990**  
(Percent of Total U. S. Market Capitalization)

Institution	1981	1986	1990	Change from 1981 to 1990
Private Pension Funds	15.5%	16.7%	19.9%	4.4%
Bank Trusts	10.1	10.1	9.2	-0.9
Public Pension Funds	3.0	5.1	8.3	5.3
Mutual Funds	2.5	6.8	7.2	4.7
Insurance Companies	5.7	4.8	6.9	1.2
Foundations and Endowments	1.2	1.3	1.8	0.6
Total	38.0%	44.8%	53.3%	15.3%

See C. Brancato and P. Gaughan, "Institutional Investors Capital Markets: 1991 Update," Table 10, Columbia Law School Institutional Investor Project, September 12, 1991. Brancato and Gaughan define "institution" to include pension funds, mutual funds, insurance companies, bank-managed trusts, and foundation and endowment funds. Id. at 2. This definition excludes shares owned by investment banks, bank holding companies, and nonbank, nonpension trusts.

managers. (Has it made them more myopic or short-term oriented?)<sup>16</sup>

Second, the growth of institutional trading has led to the fragmentation of equity markets. Spurred by advances in automation and communications technology, institutional traders have demanded low-cost, standardized, trading services as well as specialized, tailor-made, services. In response, new trading systems have developed (such as Instinet, Posit, and the Wunsch Auction System) and there has been a substantial increase in "upstairs" or off-exchange trading. Similar to what has happened to commercial banks in financial intermediation, the role of the traditional, regulated, exchanges in securities markets has eroded. In 1980 the New York Stock Exchange accounted for 85.4 percent of the number of consolidated-tape trades. By 1990 this figure had fallen to 62.2 percent.<sup>17</sup>

Third, institutional investors have been a major factor in the surge in the trading of foreign securities since 1980, as well as in the increase

in cross-border stock holdings. U.S. purchases and sales of securities abroad grew from \$17.9 billion in 1980 to \$230.3 billion in 1989, a cumulative annual growth rate of 32.8 percent.<sup>18</sup> (See Table 21.) At the end of 1991, U.S. investors held \$148.8 billion in foreign securities, of which approximately 80 percent was held by ERISA pension funds and 13 percent by mutual funds and closed-end country funds.<sup>19</sup> The globalization of securities trading has in turn created a number of new policy issues, such as the disclosure standards that should be applicable to foreign issuers of stock.<sup>20</sup>

Fourth, institutional ownership of securities has fueled the growth of derivative markets—futures, options, and swaps—both on and off exchanges. The biggest successes in derivative markets in the last decade have come on exchange-traded futures and options contracts on financial instruments—U.S. Treasury bonds, Eurodollar time deposits, and stock indexes (such as the S&P 500 index), and on off-exchange interest rate and foreign currency swaps. (See Table 22.) Institutional investors have been heavy users of these instruments in their effort to manage risk and enhance portfolio performance.<sup>21</sup>

Lastly, the increasing importance of institutional investors as stockholders has raised a number of corporate governance issues. Looking at only the largest 100 American corporations, institutions own, on average, 53 percent of the outstanding stock. Their ownership is much greater in some corporations: 82 percent of General Motors Corporation, 74 percent of Mobil Oil, 70 percent of Citicorp, 86 percent of Amoco, and so forth.<sup>22</sup> The large stock ownership by institutions, especially pension funds, has raised questions regarding the appropriate role of institutions on corporate boards and about how active institutional investors should be in monitoring managerial performance and replacing underperforming corporate managers.<sup>23</sup>

### **Should we care about the decline of banking? And why?**

To explore the policy implications of the increased competition between banks and nonbank intermediaries, and the resultant decline in the banking industry, let us construct a hypothetical scenario involving a specific case of competition from a nonbank intermediary: money market mutual funds (MMMFs). Further, to strip away the



**Table 21**  
**Aggregate U.S. Purchases and Sales of Foreign Securities by Geographic Region, 1980-1989**

	(in billions of U.S. dollars)											
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1980-89 CARG <sup>1</sup>	1989 Market Share
Canada	6.7	4.9	2.9	5.0	4.4	6.8	9.8	18.9	9.7	10.9	5.5%	4.7%
Total Europe	6.9	5.7	6.5	13.6	13.3	21.5	55.3	101.4	75.6	128.9	38.5%	56.0%
United Kingdom	2.8	2.9	3.6	6.5	7.8	13.3	32.6	67.9	51.2	80.1	45.3%	34.8%
Switzerland	1.6	0.9	0.7	1.8	1.3	1.6	3.2	6.3	5.3	8.5	20.8%	3.7%
Other Europe	2.5	1.9	2.2	5.4	4.2	6.6	19.5	27.2	19.1	40.3	36.0%	17.5%
Total Asia	3.3	6.5	5.1	9.4	10.7	14.0	30.1	56.7	56.2	75.8	41.8%	32.9%
Japan	2.7	5.4	4.3	8.0	9.0	11.6	25.6	47.8	50.4	65.8	42.4%	28.6%
Other Asia	0.6	1.1	0.8	1.4	1.6	2.5	4.5	8.9	5.8	10.1	38.0%	4.3%
Latin America	0.7	1.1	0.8	1.6	0.9	1.2	3.6	7.1	5.3	9.3	33.3%	4.0%
All Other	0.3	0.4	0.3	0.8	1.1	2.0	2.7	5.8	4.8	5.4	36.4%	2.3%
Total	17.9	18.6	15.7	30.3	30.4	45.6	101.5	189.8	151.4	230.3	32.8%	100%

<sup>1</sup>CARG is the cumulative annual growth rate.

Source: Office of the Secretary, U.S. Department of Treasury, *Treasury Bulletin*, Table CM-V-5, Spring issues.

Joseph A. Grundfest, "Internationalization of This World's Securities Markets: Economic Causes and Regulatory Consequences," *Journal of Financial Services*, vol. 4 (December 1990), pp. 349-78.

chaff of the debate so that we can see the kernel of the key policy issue, let us simplify our hypothetical by making four assumptions. First, assume that, because of a technological change, nonbank financial intermediaries are suddenly able to provide good (but not perfect)

**Table 22**  
**Markets for Selected Derivative Instruments**  
 Notional Principal Amounts Outstanding at Yearend  
 (in Billions of U.S. Dollar Equivalent)

	1986	1990	1991	1992
Exchange-traded Instruments (1)	588	2,291	3,520	4,783
Interest Rate Futures	370	1,454	2,157	3,048
Interest Rate Options (2)	146	600	1,073	1,385
Currency Futures	10	16	18	25
Currency Options (2)	39	56	59	80
Stock Market Index Futures	15	70	77	81
Options on Stock Market Indexes	8	95	136	164
Over-the-counter Instruments (3)	500 (e)	3,451	4,449	n.a.
Interest Rate Swaps (4)	400 (e)	2,312	3,065	n.a.
Currency and Cross-Country Interest Rate Swaps (4), (5)	100 (e)	578	807	n.a.
Other Derivative Instruments (4), (6)		561	577	n.a.
Memorandum Item: Cross-border plus local foreign currency claims of BIS reporting banks	4,031	7,578	7,497	7,352

(e) = estimate

(1) Excludes options on individual shares and derivatives involving commodity contracts.

(2) Calls plus puts.

(3) Only data collected by ISDA. Excludes information on contracts such as forward rate agreements, over-the-counter options, forward foreign exchange positions, equity swaps, and warrants on equity.

(4) Contracts between ISDA members reported only once.

(5) Adjusted for reporting of both currencies.

(6) Caps, collars, floors, and swaptions.

Source: BIS

substitutes for certain products and services formerly provided only by banks. Second, assume that, if they wish to, banks can respond to this competitive threat by providing the same products offered by nonbank competitors on exactly the same terms as their nonbank competitors.<sup>24</sup> In other words, banks are not encumbered by regulations that prevent them from responding to this competition. Third, assume, nevertheless, that banks themselves (as opposed to any nonbank subsidiaries they might have) are still at a cost disadvantage relative to nonbank competitors because of certain regulations which are imposed on them but not on nonbank intermediaries.<sup>25</sup> Finally, assume that the additional regulation imposed on banks is necessary to achieve specified (and accepted) social objectives, such as the prevention of bank runs. In other words, we are ruling out "excessive" or "unnecessary" regulation as a cause of the declining fortunes of banks by explicitly recognizing that banks are different from nonbanks and as a consequence require greater regulation.<sup>26</sup>

Using these assumptions, let us take the concrete example of nonbank-sponsored MMMFs. MMMF shares are good but not perfect substitutes for bank checkable deposits—they do not provide a legal promise of par value, are not government-insured, often do not permit unrestricted access, are not supported by a branch network, and so forth. Because we have assumed that banks are subject to greater regulatory costs, MMMFs can pay higher yields on their shares than banks can pay on deposits. Households, therefore, can be expected to shift at least some of their assets from bank deposits to MMMF shares in order to obtain the higher yield. The quantity of assets that will be shifted will depend on the preferences of households. If households are highly risk-averse, and consequently value highly deposit insurance, few assets will be shifted. If, on the other hand, this protection is not highly valued, large numbers of households may shift to MMMF shares.

Confronted with a potential erosion in their customer base, we would expect banks to respond by sponsoring and offering their own money market mutual funds. We have assumed that banks are free to provide MMMF services on terms equal to those of nonbank competitors, and, at least with respect to their mutual funds subsidiaries, are not at any cost disadvantage. They can, consequently, pay the same

rate of interest on MMMF shares as their nonbank competitors. Under this scenario we can expect some households to switch to bank-sponsored MMMFs and others to switch to nonbank-sponsored MMMFs. In either case, however, households' holdings of bank *deposits relative* to their holdings of MMMF shares (both bank and nonbank sponsored) will decline. Thus, measured in terms of *bank deposits*, banks' share of financial intermediation will shrink.

Suppose that for some reason households preferred bank-sponsored MMMFs to others, so that most or all households who moved their deposits to MMMFs ended up holding bank-sponsored MMMFs. In this case, the share of financial intermediary *assets* under management by banks would not decline, or would not decline to the same extent. In other words, when measured in terms of all intermediary assets, as opposed to just bank deposits, banks' share of financial intermediation would decline very little. In the extreme case where bank-sponsored MMMFs captured all of the shifting household assets, there would be no decline at all in banks' share of financial intermediation when measured in terms of assets under management. Further, if banks' share of financial intermediation were measured in terms of, say, gross revenues earned, we might also find little or no decline in banking.

This example, therefore, demonstrates that different measures of financial intermediation can give different impressions about the declining role of commercial banks as financial intermediaries. In this paper I have emphasized *deposits* as the appropriate measure of the declining importance of banking because I believe this measure to be the most relevant to the key policy issues.

In particular, whether we should care about a decline in the banking industry—or a decline in the importance of bank deposits in the economy—should turn on the view that we have about the role of banks and bank deposits in the economy, and of bank regulation. The success of nonbank MMMFs (and the consequent decline in banking) under our hypothetical scenario, after all, stemmed from nonbank MMMFs being able to pay higher yields on MMMF shares because of the additional regulatory burdens imposed on banks. An obvious question, therefore, is: "Should the same regulatory burdens (or costs)

be imposed on MMMFs?" And, if not, why not? The answer to these questions in turn depends on the answer to the following question: "Is it necessary to impose bank-type regulations on MMMFs in order to achieve the social objectives underlying bank regulation?"

Historically, the two primary social objectives of bank regulation have been to facilitate the implementation of monetary policy and to maintain systemic stability by containing or eliminating "bank runs." To achieve the first objective, reserve requirements are imposed on banks. To achieve the second, deposit insurance together with capital requirements, portfolio restrictions, and so forth, are imposed on banks. Subsidiary (in my view) social objectives of bank regulation have been to provide a safe harbor for small depositors (through deposit insurance) and to allocate credit to high-priority sectors of the economy (such as via the Community Reinvestment Act).

Thus, the question of whether we should care about the decline of banking (or of bank deposits) is fundamentally a question about whether this decline jeopardizes the objectives of bank regulation. In particular, does it undercut the effectiveness of monetary policy by, for example, changing (or making less predictable) the relationship between bank reserves and the targeted monetary aggregates, or between the monetary aggregates and aggregate economic activity? Does it increase the risk of systemic collapse by increasing the proportion of household liquid assets that are held in an uninsured (or nondeposit) form? Or, in the context of our hypothetical, are MMMFs as vulnerable to shareholder "runs" as banks are to depositor "runs"?

If the answer to these questions is "yes," the correct policy response is to extend bank-type regulations to nonbank competitors, such as MMMFs. If, on the other hand, the answer is "no," we should not intervene to prevent the **banking** industry from shrinking in response to financial innovations and market conditions. Many once-successful industries have ultimately suffered a decline as a consequence of technological change: the anthracite coal industry was supplanted by the oil industry, and the horsedrawn carriage industry by the automobile industry. Financial service industries are not immune to this kind of market Darwinism.

The questions posed above, I presume, will be the subject of subsequent papers presented at this conference. They will also, undoubtedly, be the subject of much future research by academics. While I hold some preliminary views on these matters, it is not the role of this paper to address these questions. I leave that to subsequent speakers, and I very much look forward to hearing what they have to say.

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## Endnotes

<sup>1</sup>See Gordon H. Sellon, Jr., "Changes in Financial Intermediation: The Role of Pension and Mutual Funds," *Economic Review*, Federal Reserve Bank of Kansas City, (Third Quarter 1992), pp. 53-69.

<sup>2</sup>See Gary Gorton and George Pennacchi, "Financial Innovation and the Provision of Liquidity Services," in James R. Barth and R. Dan Bmmbaugh, Jr., eds., *The Reform of Federal Deposit Insurance*, (Harper Collins Publishers, 1992).

<sup>3</sup>See Eli M. Remolona and Kurt C. Wulfekuhler, "Finance Companies, Bank Competition, and Niche Markets," *Quarterly Review*, Federal Reserve Bank of New York, (Summer 1992) pp. 25-38.

<sup>4</sup>See Mitchell A. Post, "The Evolution of the U.S. Commercial Paper Market Since 1980," *Federal Reserve Bulletin*, (December 1992), pp. 879-91.

<sup>5</sup>Jane W. D'Arista and Tom Schlesinger, "The Parallel Banking System," Economic Policy Institute Briefing Paper, 1993, pp. 14-17.

<sup>6</sup>See, for example, James R. Barth and Philip Bartholomew, "The Thrift Industry Crisis: Revealed Weaknesses in the Federal Deposit Insurance System." in James R. Barth and R. Dan Bmmbaugh, Jr., eds., *The Reform of Federal Deposit Insurance* and James R. Barth, R. Dan Bmmbaugh, Jr., and Robert E. Litan, *The Future of American Banking*, (M.C. Sharpe, Inc., 1992).

<sup>7</sup>See, for example, Jane W. D'Arista and Tom Schlesinger, "The Parallel Banking System," Economic Policy Institute Briefing Paper, 1992; Kenneth H. Bacon, "Banks' Declining Role in the Economy Worries Fed, May Hurt Firms," *Wall Street Journal*, June 9, 1993, p. A1, col. 6; and Paul Starobin, "Make 'Em Pay," *National Tar Journal*, July 24, 1993, pp. 1856-60.

<sup>8</sup>See F. Black, "Bank Funds Management in an Efficient Market." *Journal of Financial Economics*, vol. 2, 1975, pp. 323-39; E.F. Fama, "What's Different About Banks?" *Journal of Monetary Economics*, vol. 15, 1985, pp. 29-39; and M.K. Lewis, "Theory and Practice of the Banking Firm," in C. Green and D.T. Llewellyn, eds., *Survey of Monetary Economics*, (Blackwell Press, 1991).

<sup>9</sup>It should be recognized, however, that commercial mortgage lending has accounted for much of the growth in banks' real estate lending during the 1980s. Even so, there is no reason to believe that banks have a particular informational advantage with respect to commercial mortgage lending. They are only one of several financial intermediaries that make such loans, and they have recently suffered large losses as a consequence of making these loans. If these are the fruits of the comparative advantage banks are purported to enjoy, they are indeed bitter ones.

<sup>10</sup>Unlike banks, finance companies have tended to make loans that are secured by accounts receivables, inventory, equipment, and other property — so-called "asset-based" loans. Banks prefer loans based upon a firm's cash flow projections, which generally means dealing with more credit-worthy borrowers. Which is more "information-intensive?" According to a recent article in the *Wall Street Journal*, asset-based loans are. This article states that making asset-based loans requires a "nuts-and-bolts knowledge of . . . industries" and "requires constant

monitoring. . ." Thus, finance companies may be the ones making the more "information-intensive" loans. See Leslie Scism, "Commercial Finance Firms Have New Rivals in Banks," *Wall Street Journal*, June 24, 1993, p. B4, col. 3.

<sup>11</sup>See Christopher James, "Some Evidence on the Uniqueness of Bank Loans," *Journal of Financial Economics*, vol. 19, 1987, pp. 217-35; and Dale K. Osborne and Tarek S. Zaher, "Reserve Requirements, Bank Share Prices, and the Uniqueness of Bank Loans," *Journal of Banking and Finance*, vol. 16, 1992, pp. 799-812.

<sup>12</sup>Sean Beckett and Charles Moms, "Are Bank Loans Still Special?" *Economic Review*, Federal Reserve Bank of Kansas City, (Third Quarter 1992), pp. 71-84.

<sup>13</sup>Linda Hooks and Tim C. Opler, "The Determinants of Corporate Bank Borrowing," *Financial Industry Studies Working Paper, No. 1-93*. Federal Reserve Bank of Dallas (May 1993).

<sup>14</sup>See Gordon H. Sellon, Jr., "Changes in Financial Intermediation: The Role of Pension and Mutual Funds," *Economic Review*, Federal Reserve Bank of Kansas City, 1992.

<sup>15</sup>See Kenneth A. Froot, Andre F. Perold, and Jeremy Stein, "Shareholder Trading Practices and Corporate Investment Horizons," prepared for the Time Horizons of American Management Project, 1992, Table 1.

<sup>16</sup>See Business Bulletin, *Wall Street Journal*, June 12, 1986, p. 1; and Franklin R. Edwards, "Financial Markets and Managerial Myopia: Making America More Competitive," in G. Kaufman, ed., *Reforming Financial Institutions and Markets in the United States*, (Kluwer Academic Publishers, 1993).

<sup>17</sup>See Hans R. Stoll, "Organization of the Stock Market: Competition or Fragmentation?," *Journal of Applied Corporate Finance*, vol. 5, no. 4 (Winter 1993), pp. 89-93.

<sup>18</sup>See Joseph A. Grundfest, "Internationalization of the World's Security Markets: Economic Causes and Regulatory Consequences," *Journal of Financial Services Research*, vol. 4, no. 4, (December 1990), pp. 99-100.

<sup>19</sup>*Ibid.*

<sup>20</sup>See Franklin R. Edwards, "Listing of Foreign Securities on U.S. Exchanges," *Journal of Applied Corporate Finance*, vol. 5, no. 4 (Winter 1993), pp. 28-36.

<sup>21</sup>See Eli M. Remolona, "The Recent Growth of Financial Derivative Markets," *Quarterly Review*, Federal Reserve Bank of New York (Winter 1992-3), pp. 28-43.

<sup>22</sup>See C. Brancato and P. Gaughan, "Institutional Investors and Capital Markets," Center for Law and Economics, Columbia University, 1991 Update, Table 10.

<sup>23</sup>See Bernard S. Black, "The Value of Institutional Investor Monitoring: The Empirical Evidence," *UCLA Law Review*, vol. 30, no. 4, 1992, pp. 895-939; and Bernard S. Black, "Agents Watching Agents: The Promise of Institutional Investor Voice," *UCLA Law Review*, vol. 39, no. 3, 1992, pp. 813-.

<sup>24</sup>For example, we assume that banks can establish separate subsidiaries that can provide the



identical products on the same terms. This means, among other things, that bank subsidiaries and nonbank competitors have the same production and cost functions, and, in particular, that bank subsidiaries are not at a disadvantage because of regulation. This assumption, therefore, abstracts from potential regulatory complications due to possible conflicts of interest between banks and their subsidiaries.

<sup>25</sup> **Implicitly**, therefore, we assume that the benefits to individual banks from government regulation (or deposit insurance) are less than their costs due to the required regulation. This may occur because of the externalities and incentive problems associated with deposit insurance.

<sup>26</sup> **Arguably**, an example of justifiable bank regulation is the recent regulatory initiative embodied in the Federal Deposit Insurance Corporation Improvement Act of 1991 (FIDICIA). The intent of this act is to assure that the full costs of guaranteeing bank deposits is passed on to banks and their customers. The act requires, among other things, an increase in the capitalization of depositories and that prompt corrective action by regulators be taken against "critically-undercapitalized institutions. In addition, it imposes additional operating restrictions on depositories that are not "well-capitalized and provides for the institution of risk-based deposit-insurance premiums.

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