

# *Annual Report: Budget Review*



*Board of Governors of the Federal Reserve System*

*1986-87*

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## *Introduction*

This report describes the budgeted expenses of the Federal Reserve System for 1987 and compares them with expenses for 1985 and 1986. It also contains a special analysis of System productivity in providing priced and unpriced services.

The Federal Reserve System comprises the Board of Governors in Washington, D.C., and the 12 Federal Reserve Banks with their 25 Branches. The System was created by the Federal Reserve Act, passed by the Congress in 1913 to establish more effective supervision of banking and a safer and more flexible monetary and banking system.

As the nation's central bank the Federal Reserve, through its ability to influence financial conditions, attempts to ensure sufficient expansion in money and credit to encourage sustained growth in the economy consistent with price stability. And as the nation's lender of last resort, the Federal Reserve has the responsibility of forestalling national liquidity crises.

Because a sound financial structure is essential to an effective monetary policy and a growing and prosperous economy, the Congress has entrusted the Federal Reserve with a variety of bank supervisory and regulatory functions. Among other things, the Federal Reserve administers the laws that regulate all bank holding companies; it supervises state-chartered banks that are members of the Federal Reserve System; it regulates the foreign activities of U.S. banks and the U.S. activities of foreign banks; and it establishes rules to ensure that consumers are adequately informed and treated fairly in certain transactions.

The Federal Reserve System also plays a major role in the nation's payments mechanism. Federal Reserve Banks distribute currency and coin, process 35 percent of all domestic checks, and provide both wire and automated clearinghouse transfers of funds and securities amounting to about \$625 billion daily. In addition, the Federal Reserve System serves as the fiscal agent for the U.S. Treasury and provides a variety of financial services for the Treasury and other government agencies.

To carry out these responsibilities the Federal Reserve System spent an estimated \$1,249 million in 1986 and has budgeted expenses for 1987 of \$1,284 million. These are the gross expenses for the Board of Governors and the Federal Reserve Banks and their Branches and do not reflect revenue from priced services and certain other services or reimbursements expected from the U.S. Treasury and other government agencies. In 1986, estimated net expenses were \$518 million; net expenses are budgeted at \$547 million for 1987.

The budgeted expenditures, which the next several chapters explain in detail, are broken down into the four main operational areas of the Board of Governors and the Reserve Banks: monetary and economic policy; supervision and regulation of financial institutions; services to financial institutions and the public; and services to the U.S. Treasury and other government agencies.

Part I discusses Federal Reserve budgeted expenses for 1987 for the System as a whole and for the Board of Governors and the Reserve Banks

taken separately. Part II contains the special analysis of System productivity in priced and nonpriced services. Appendixes provide additional details on System functions and budgets.

The major source of Federal Reserve income, estimated at \$16.1 billion in 1986, is earnings on the portfolio of U.S. government securities in the System Open Market Account. The System uses purchases and sales from this portfolio to implement monetary policy. In 1986, the Reserve Banks collected an estimated \$630 million in fees for priced services and recorded approximately \$100 million in reimbursements from the Treasury and other government agencies. Gains on foreign exchange transactions approximated \$2.0 billion.

Each year the Federal Reserve returns to the U.S. Treasury its earnings

in excess of expenses, dividends, and surplus—in 1986, an estimated \$17.8 billion. These earnings are treated as receipts in the U.S. budget accounting system; projections of these earnings by the Office of Management and Budget appear in the U.S. budget.

ANNUAL REPORT: BUDGET REVIEW is a complete discussion of the System's budget. It is a companion to the Board's *73rd Annual Report, 1986*. That document is a comprehensive review of the activities and initiatives of the Federal Reserve System that discusses the economy, domestic monetary policy, and international developments; describes supervisory and regulatory actions considered and undertaken during the year; and presents statistical summaries of Federal Reserve activities.

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*Part I*

*The 1987 Budgets*

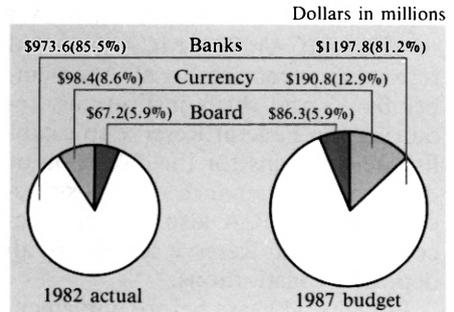
## Chapter 1

# Federal Reserve System

Operating expenses budgeted by the Federal Reserve System for 1987 total \$1,284 million, an increase of 2.8 percent over 1986 estimated expenses (table 1.1). These expenses exclude the cost of currency, which is \$191 million, an increase of 4.8 percent from 1986.<sup>1</sup> The 1987 budget is \$1,198 million for the Reserve Banks, or 81.2 percent of total System expenses (including currency costs); \$86 million for the Board of Governors, or 5.9 percent of the total; and \$191 million for currency costs, or 12.9 percent of the total. Chart 1.1 compares the expenses budgeted in these areas for 1987 with the actual expenses in these areas in 1982.

Chart 1.1

Operating Expenses of the Federal Reserve System and Cost of Currency, 1982 and 1987<sup>1</sup>



1. See text note 1.

1. Currency costs are determined largely by public demand for new currency and by expenses of the Bureau of Engraving and Printing; thus, they are not included in the analyses of System operating expenses.

## Trends in Expenses and Employment

The expenses of the Federal Reserve System have increased from 1977 to

Table 1.1

Operating Expenses of the Federal Reserve System and Cost of Currency, 1985-87<sup>1</sup>

Millions of dollars, except as noted

Entity and type of expense	1985 actual	1986 estimate	1987 budget	Percent change	
				1985-86	1986-87
Reserve Banks <sup>2</sup>	1,117.4	1,164.1	1,197.8	4.2	2.9
Personnel	697.4	730.6	738.8	4.8	1.1
Nonpersonnel	420.0	433.5	459.0	3.2	5.9
Board of Governors <sup>3</sup>	82.0	85.2	86.3	3.9	1.3
Personnel	59.7	60.2	60.1	.8	-.3
Nonpersonnel	22.3	24.9	26.1	11.9	4.8
<b>System operating expenses</b>	<b>1,199.4</b>	<b>1,249.3</b>	<b>1,284.1</b>	<b>4.2</b>	<b>2.8</b>
Personnel	757.2	790.8	798.9	4.4	1.0
Nonpersonnel	442.3	458.4	485.1	3.7	5.8
Currency <sup>4</sup>	171.8	181.2	190.8	6.0	4.7

1. Details may not add to totals because of rounding.

2. For detailed information see chap. 3.

3. For detailed information see chap. 2.

4. See text note 1 and appendix D.

the level budgeted for 1987 an average of 6.7 percent per year in current dollars and 0.9 percent per year when adjusted for inflation (chart 1.2). Over the same period, System employment decreased by 1,132, or 4.4 percent (chart 1.3).

During this period, both expenses and employment were heavily affected by the Monetary Control Act of 1980 (MCA). The MCA extended reserve requirements to all nonmember banks and thrift institutions, requiring the Federal Reserve to establish new systems for the collection of data and maintenance of deposit accounts. The MCA also extended access to Federal Reserve services to all depository institutions.

For several years before implementation of the MCA, System employment and expenses adjusted for inflation had been declining. During the transition to put in place systems to meet the requirements of the MCA, employment and nominal expenses increased significantly, although in real terms expenses increased only about 3 percent.

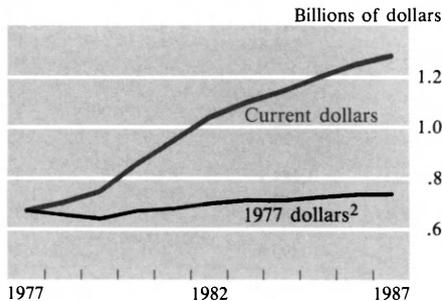
In the period following the transition to the MCA (1982 to the 1987

budget year), System expenses increased an average of 4.3 percent per year in current dollars and 1.0 percent per year in real terms, and System employment declined by 114, or 0.5 percent. Overall employment was cut despite the concentrated effort by the System since 1985 to strengthen examinations of member banks and inspections of bank holding companies by increasing the staff involved in supervision and regulation. The major reductions in employment have been in services provided to financial institutions and the public and in support and overhead.

### Operational Areas

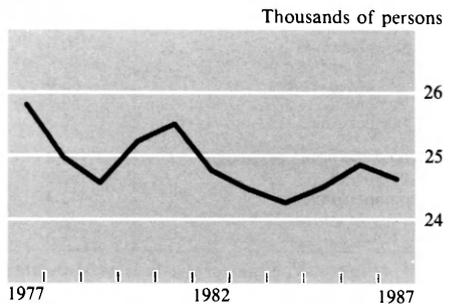
Federal Reserve expenses are classified for budgeting purposes according to the major operational areas of the System: monetary and economic policy, supervision and regulation, services to financial institutions and the public, and services to the U.S. Treasury and other government agencies (table 1.2). Costs for support and overhead are redistributed or allocated to the four operational areas. Only the Banks perform services to

*Chart 1.2*  
Operating Expenses of the Federal Reserve System, 1977-87<sup>1</sup>



1. For 1986, estimate; for 1987, budget.
2. Calculated with the GNP implicit price deflator.

*Chart 1.3*  
Employment in the Federal Reserve System, 1977-87<sup>1</sup>



1. For 1986, estimate; for 1987, budget.

Table 1.2

Operating Expenses of the Federal Reserve System, by Operational Area, 1985-87<sup>1</sup>

Millions of dollars, except as noted

Operational area and entity	1985 actual	1986 estimate	1987 budget	Percent change	
				1985-86	1986-87
Monetary and economic policy . . . . .	146.2	148.0	147.4	1.2	- .4
Reserve Banks . . . . .	90.9	92.0	90.8	1.1	- 1.3
Board of Governors . . . . .	55.3	56.0	56.6	1.3	1.1
Supervision and regulation . . . . .	175.6	190.7	198.9	8.6	4.3
Reserve Banks . . . . .	152.0	164.3	171.7	8.1	4.5
Board of Governors . . . . .	23.6	26.4	27.2	11.9	3.0
Services to financial institutions and the public . . . . .	746.1	773.5	801.9	3.7	3.7
Reserve Banks . . . . .	742.9	770.7	799.4	3.7	3.7
Board of Governors . . . . .	3.2	2.8	2.5	- 12.5	- 10.7
Services to the U.S. Treasury and other government agencies <sup>2</sup> . . . . .	131.5	137.0	135.9	4.2	- .8
<b>Total . . . . .</b>	<b>1,199.4</b>	<b>1,249.3</b>	<b>1,284.1</b>	<b>4.2</b>	<b>2.8</b>
Reserve Banks . . . . .	1,117.4	1,164.1	1,197.8	4.2	2.9
Board of Governors . . . . .	82.0	85.2	86.3	3.9	1.3

1. Operating expenses reflect all allocations for support and overhead and exclude capital outlays. The operational area unique to the Board of Governors, System policy direction and oversight, which is shown separately in chap. 2, has been allocated across the

operational areas shown above. As a result, the numbers in chap. 2 for the operational areas are not the same as the ones listed in this table.

2. Reserve Banks only. The Board of Governors does not operate in this area.

the Treasury and other government agencies. The operational area unique to the Board of Governors, System policy direction and oversight, is considered an overhead expense of the System (see chapter 2).

The operational areas of the System are described more fully in appendix A. Appendix B describes the System's budget process, and appendix C discusses the adjustments made by the System in the 1986 and 1987 budgets as a voluntary response to the Gramm-Rudman-Hollings legislation.

### Net Expense

In 1987, the net cost to the public of operating the Federal Reserve System is expected to be \$547 million, or only 43 percent of total expenses (table 1.3). The following items are deducted from total System expenses to de-

rive the net cost: (1) receipts for payments-mechanism services provided to depository institutions; (2) other income for services on behalf of the U.S. Treasury that are charged to depository institutions using the services; and (3) expenses that are reimbursable by the U.S. Treasury and other government agencies for fiscal-agency services.

As required by the Monetary Control Act, receipts for priced services represent fees that are set to recover the full cost of providing these services to depository institutions, including imputed costs of float and the return on capital that would have been provided and the taxes that would have been paid had the services been furnished by a private business firm. These services and their effect on Federal Reserve budgets are discussed in appendix D; the revenue

Table 1.3

Operating Expenses of the Federal Reserve System, Net of Receipts, 1985-87<sup>1</sup>

Millions of dollars, except as noted

Item	1985 actual	1986 estimate	1987 budget	Percent change	
				1985-86	1986-87
Total System operating expenses . . . . .	1,199	1,249	1,284	4.2	2.8
LESS					
Revenue from priced services . . . . .	614	630	635	2.6	.8
Other income . . . . .	1	1	12 <sup>2</sup>	...	...
Reimbursements . . . . .	97	101	90	3.3	-10.3
<b>EQUALS</b>					
<b>Net System operating expenses . . . . .</b>	<b>487</b>	<b>518</b>	<b>547</b>	<b>6.4</b>	<b>5.5</b>

1. Details may not add to totals because of rounding.

2. Beginning in 1987, about \$10 million charged to depository institutions for Treasury services will be re-

corded as Federal Reserve income rather than transferred directly to the U.S. Treasury and claimed as a reimbursement.

from such services is detailed in table 1.4. All sources and uses of funds are presented in appendix E, and the audits to which the System is subject are discussed in appendix F.

"Other income" includes fees from services such as the transfer of U.S. Treasury book-entry securities in the secondary market, the settlement of such transfers among depository institutions, and the wire transfer of funds between a depository institution and the Treasury.

In October 1986, the Board requested public comment on a proposal to charge for the supervision of Edge act corporations and for processing bank and bank holding company applications. If adopted, the proposal would yield approximately \$23 million in additional receipts in 1987. This amount is not included in 1987 budget data.

### 1987 Budget Initiatives

A major factor in Federal Reserve System budgeted expenses for 1987 was the Board's decision to reduce System expenses in a manner consistent with the intent of the Gramm-Rudman-Hollings legislation, passed in late 1985 (see appendix C).

To facilitate planning for 1987, Federal Reserve budgets were formulated at the outset to conform with the spirit of Gramm-Rudman-Hollings. Many of the resulting cuts are targeted on personnel costs. To the extent possible, the costs of staffing, training, cash awards, and recruiting will be reduced and the lag in filling vacant positions lengthened. Reductions are also planned in public information programs; consumer affairs regulation; and library expenses, thus reducing support to research economists. In other areas, the development of software applications has been scaled back and capital acquisitions have been deferred, requiring

Table 1.4

Revenue from Priced Services, 1985-87<sup>1</sup>

Millions of dollars

Service	1985 actual	1986 estimate	1987 budget
Funds transfer and net settlement . . . . .	65	70	70
Automated clearinghouse . . . . .	23	31	34
Commercial check . . . . .	465	486	486
Book-entry securities . . . . .	24	8	9
Definitive securities . . . . .	7	7	7
Noncash collection . . . . .	14	14	13
Cash services . . . . .	16	14	15
<b>Total . . . . .</b>	<b>614</b>	<b>630</b>	<b>635</b>

1. Details may not add to totals because of rounding.

the extended use and continued depreciation of existing furniture and equipment. In addition, certain building repairs have been deferred.

The System is also studying means through which it can recover more of its expenses by charging fees for some services that are now provided without charge. One proposal, noted earlier, is charging for the supervision of Edge act corporations and for processing bank and bank holding company applications. Some Reserve Banks are also attempting to consolidate operations so that additional space can be leased to outside tenants, and the System is planning to add to the list of publications for which there is a charge.

Also affecting the 1987 budget is the continued emphasis on enhancing the System's supervision and regulation program. The effort involves increasing the frequency and scope of Federal Reserve on-site examinations and strengthening the procedures for reporting deficiencies to bank managements and boards of directors through on-site meetings. These steps are intended to promote early identification of problems in banking organizations and expeditious correction of weaknesses through more frequent and clearer communications between bank supervisors and bank boards of directors. The Board believes this initiative is of such importance that it asked the Reserve Banks to target their Gramm-Rudman-Hollings reductions for 1986 and 1987 on other areas. For 1987, the Board also allowed a higher percentage increase in expenses for the supervision and regulation area at the Board than it allowed for other areas.

Additional expenses will arise from the continued implementation of the Treasury Direct Access Book-Entry System (Treasury Direct). A program

for the safekeeping of marketable Treasury securities for individual investors, Treasury Direct allows more efficient processing of investor accounts and lowers costs to the U.S. Treasury. The system now covers Treasury notes and bonds; Treasury bills are to be added in early 1987. Another initiative in services to the U.S. Treasury is the development of a Public Debt Accounting and Reporting System and the centralization of processing for payroll bonds and book-entry savings bonds.

Automation is another area in which expenses grew more than the average in 1987. At the Board, the development of office automation is continuing with the purchase of personal computers. The full-year effect of depreciation of a new Board mainframe computer and the expiration of warranties on data processing equipment will also contribute to higher incremental automation expenses. At the Reserve Banks, an increase in automation expenses is expected to result from shifts to equipment that is compatible with the System's long-range automation plan; the improvement of check equipment; office automation; encryption of communications links; and the purchase of personal computers used in communication networks with financial institutions. The costs of these programs are partially offset by scaling down efforts to develop common software applications among the Reserve Banks.

As a final matter, when the Board and the Reserve Banks prepared their 1987 budgets, no consideration was given to the effect of a new standard dealing with employers' accounting for pensions (Financial Accounting Standard 87). Implementation of this standard will likely result in a reduction in Federal Reserve System expenses in 1987.

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## *Chapter 2*

# *Board of Governors*

This chapter analyzes the operating and capital budgets of the Board of Governors of the Federal Reserve System and then examines expenses for the major operational areas of the Board: monetary and economic policy, supervision and regulation, services to financial institutions and the public, and System policy direction and oversight. Trend data and a discussion of the Board's budget process appear in the appendixes.

### **An Overview of the Board's 1987 Budget**

The 1987 operating budget of the Board of Governors totals \$86.3 million, an increase of \$1.1 million, or 1.3 percent, over 1986 estimated expenses. The Board's budget accounts for 5.9 percent of the System's budget (including currency costs).

The relatively low rate of growth in Board expenses between 1986 and 1987 is the result of the Program Improvement Project (PIP); measures adopted by the Board to comply voluntarily with the spirit of the Gramm-Rudman-Hollings legislation; and a carefully controlled program of automation. The Board instituted PIP in mid-1984 to reduce expenses by scaling back lower-priority functions and improving productivity. Although the program was systematically implemented over 1985 and 1986, 1987 is the first budget year in which its full annual savings will be realized. The 1987 increase in savings tied to the PIP program amounts to \$2.2 million; the savings from the program

over the 1985-87 period total \$5.6 million.

Measures adopted by the Board in 1986 to comply voluntarily with the spirit of the Gramm-Rudman-Hollings legislation produced \$1.4 million in budget reductions. Rather than eliminate approved programs, the Board decided to reduce their scope and thus the resources they require. Reduction in personnel expenses, made possible by slowing the pace of hiring, accounted for more than 50 percent of the \$1.4 million.

A spirit of restraint imbued the planning for the 1987 budget. After extensive meetings to set priorities and to seek ways to generate income and reduce expenses, the Board developed a guideline authorizing a 2.6 percent limit to growth in the budget. The difference between the guideline and the authorized increase of only 1.3 percent results from several factors: savings of \$550,000 from acquisition of the Board's mainframe computer at a cost lower than anticipated; \$486,000 anticipated from new charges for Board publications; and savings of about \$500,000 from the reduction of 22 positions beyond the PIP-related cuts in the three divisions of Information Resources Management.

Two major goals of the 1987 budget are to strengthen the supervision function and to sustain the effort to automate functions when doing so will reduce staffing needs or permit faster response and more flexibility. Most of the 1987 initiatives in automation are in the monetary and eco-

conomic policy area. The major effort to automate began in 1985 in the supervision and regulation area, which has faced unprecedented growth in workload and in demands for rapid responses to financial problems in the banking industry.

Centrally provided resources for data processing account for 23.3 percent of the expenses of the Board of Governors. With the 1987 budget, the Board changed its procedure for budgeting and accounting for such resources to better ensure that their use is an integral and justified part of each manager's budget. To accomplish this objective, the Board introduced a system of charges that recognize these expenses as direct costs to the users of the resources. Since, for certain objectives, there are alternatives to data processing, both the operating program manager and the data processing manager now have a stronger incentive to be more efficient.

As a result of policy decisions in late 1985, the banking supervision and regulation operational area exhibits the greatest growth in 1987. Increases in staffing, training and development, and automation support needed to strengthen the banking

supervision and surveillance functions are responsible for the increase in this area.

### 1987 Budget by Operational Area

Tables 2.1 and 2.2 display respectively the operating expenses and number of authorized positions in each of the Board's four operational areas for the years 1985-87. In addition to the major influences on all operational areas in 1987—PIP savings, the general pay increase of 3.0 percent, and inclusion of data processing costs as a direct charge to users—each area has experienced a shift in priority.

For example, the increased activity in supervision of financial institutions is producing a 2.8 percent increase in this operational area; closer review of Reserve Bank operations will cause a 1.6 percent increase for System policy direction and Board oversight; a large-scale automation network is an important part of the 1.1 percent increase for the formulation of monetary and economic policy; and completion in 1986 of projects to develop major data processing systems will reduce expenses for services to financial institutions and the public 12.1

Table 2.1

Operating Expenses of the Board of Governors, by Operational Area, 1985-87<sup>1</sup>

Thousands of dollars, except as noted

Operational area	1985 actual	1986 estimate	1987 budget	Percent change	
				1985-86	1986-87
Monetary and economic policy .....	45,136	45,475	45,985	.8	1.1
Supervision and regulation .....	19,259	21,474	22,080	11.5	2.8
Services to financial institutions and the public .....	2,589	2,293	2,015	-11.4	-12.1
System policy direction and oversight .....	15,051	15,955	16,213	6.0	1.6
<b>Total</b> .....	<b>82,035</b>	<b>85,197</b>	<b>86,293</b>	<b>3.9</b>	<b>1.3</b>

1. Operating expenses reflect all allocations for support and overhead, including data processing support. They exclude capital outlays. The operational area,

services to the U.S. Treasury and other government agencies, is unique to the Reserve Banks and is not shown here; see chaps. 1 and 3.

Table 2.2

Positions Authorized at the Board of Governors, by Activity, 1985-87

Number, except as noted

Activity	1985 actual	1986 estimate	1987 budget	Percent change	
				1985-86	1986-87
<i>Operational area</i>					
Monetary and economic policy .....	411	396	396	- 3.6	0
Supervision and regulation .....	242	262	263	8.3	.4
Services to financial institutions and the public .....	22	20	20	- 9.1	0
System policy direction and oversight .....	152	150	151	- 1.3	.7
<i>Support and overhead</i>					
Support and overhead .....	781	736	734	- 5.8	- .3
<b>Total</b> .....	<b>1,608</b>	<b>1,564</b>	<b>1,564</b>	<b>- 2.7</b>	<b>0</b>

percent. Table 2.2 also shows the relatively large decrease between 1985 and 1987 in positions classified as support and overhead.

### Monetary and Economic Policy

Under its monetary and economic policy function, the Board monitors and analyzes developments in the money and credit markets, sets reserve requirements, approves changes in the discount rate, and otherwise manages the nation's monetary policy. The costs of this function are expected to total \$46.0 million in 1987, an increase of \$0.5 million, or 1.1 percent, over the estimate for 1986 (table 2.3). The 1987 budget will allow continued funding of current

programs within this function. The budget also will support initiatives in end-user computing that include the acquisition of 125 workstations and their integration with a departmental computer with an operating cost in 1987 of \$865,000. The microcomputer network will foster more efficient collection and analysis of data at a cost lower than the present Board mainframe configuration allows. It will also free capacity on the mainframe and permit more efficient processing for other users. Equally important is the anticipated gain in job satisfaction for professionals, who increasingly depend on such equipment for research and analysis.

Expenses for program direction rose sharply in 1986 and will rise almost 5

Table 2.3

Expenses of the Board of Governors for Monetary and Economic Policy, 1985-87

Thousands of dollars, except as noted

Category	1985 actual	1986 estimate	1987 budget	Percent change	
				1985-86	1986-87
Development and dissemination of economic information .....	35,303	31,921	31,773	- 9.6	- .5
Program direction .....	9,833	13,554	14,212	37.8	4.9
<b>Total</b> .....	<b>45,136</b>	<b>45,475</b>	<b>45,985</b>	<b>.8</b>	<b>1.1</b>

percent in 1987. The 1986 increase was matched by a decrease in development and dissemination of economic information. That change is related to the decision to centralize computing resources in program direction in 1986; thus the 1986 and 1987 operating costs of the new office automation and departmental computing system are placed in program direction.

During 1986, 15 positions in monetary and economic policy were abolished as part of the Program Improvement Project; the positions directly associated with this operational area therefore will be 2.0 percent fewer on average during 1987. Efficiencies stemming from automation will compensate for part of the decrease; however, some flexibility will be lost in long-term domestic and international research.

### Supervision and Regulation

Supervision and regulation of financial institutions at the Board consists of three activities. Supervision includes reviews of examination and inspection reports from the Reserve Banks, special studies related to international applications, direction of enforcement actions, and regulation of trust activities. Regulation involves writing regulations; overseeing merg-

ers, foreign banking activities, and compliance with consumer regulations; and regulating securities credit. The third activity, program direction, consists of management and administration.

Expenses for supervision and regulation are expected to be \$22.1 million in 1987, 2.8 percent above the 1986 estimate (table 2.4). The condition of the nation's banking industry has called for intensified supervision, surveillance, and enforcement, and meeting these needs continues to be a priority in 1987.

One problem in handling the heavier workload in this operational area is the difficulty in recruiting staff members with specialized training in bank examination and financial analysis. The Board is handling this problem through enhanced training courses to address recent developments in the banking industry and the expanded scope of bank holding company supervision.

Supervision and regulation is prominent in the Board's automation plans for 1987. Implementation in 1985 and 1986 of a major office automation system and communication network has reduced costs and provided the tools for improved analysis. By providing better and more timely data on bank structure, automation has also

Table 2.4

Expenses of the Board of Governors for Supervision and Regulation of Financial Institutions, 1985-87

Thousands of dollars, except as noted

Category	1985 actual	1986 estimate	1987 budget	Percent change	
				1985-86	1986-87
Supervision .....	13,181	13,401	13,825	1.7	3.2
Regulation .....	2,552	2,536	2,731	-.6	7.7
Program direction .....	3,526	5,537	5,524	57.0	-.2
<b>Total .....</b>	<b>19,259</b>	<b>21,474</b>	<b>22,080</b>	<b>11.5</b>	<b>2.8</b>

improved the Board's ability to process complicated applications and to analyze potential mergers more quickly.

In 1986, 20 positions (net) were added to this area in connection with the reorganization and strengthening of the supervision function. Another position is added in 1987, bringing to 263 the number of positions directly associated with this operational area.

Funds for program direction in banking supervision and regulation increased \$2 million from 1985 to 1986; they remain comparatively stable between 1986 and 1987. The 1986 increment resulted from the expansion of the training program to accommodate current needs and objectives, the addition of two functional areas (strategic planning and liaison and information resources management), and a major automation initiative.

### Services to Financial Institutions and the Public

Services to financial institutions and the public involve support and oversight of the payments-mechanism functions of the Federal Reserve Banks. These functions include check payments, electronic payments, and the currency and food coupon operations. The Board's staff provides oversight and control in these areas;

the Reserve Banks provide direct management of operations.

The 1987 budget of \$2 million for services to financial institutions and the public is 12.1 percent less than estimated 1986 expenses (table 2.5). This decrease is made possible by the completion of a portion of a project to minimize risk in the payments mechanism.

The number of positions in this operational area remains at 20 in 1987. If legislation on delayed funds availability is approved in 1987, an additional position may be required to meet the Board's responsibilities.

### System Policy Direction and Oversight

System policy direction and oversight includes resources for the supervision of System and Board programs. The 1987 budget of \$16.2 million is 1.6 percent higher than 1986 estimated expenses (table 2.6). A significant part of this increase lies in oversight of Federal Reserve Bank operations.

System policy direction includes the Office of Board Members and the management and support of Board functions. Expenses in this area will grow 0.6 percent in 1987. The rate of growth would have been lower except for the cost of reinstating the Operations Review Program now that the

Table 2.5

Expenses of the Board of Governors for Services to Financial Institutions and the Public, 1985-87

Thousands of dollars, except as noted

Category	1985 actual	1986 estimate	1987 budget	Percent change	
				1985-86	1986-87
Services to financial institutions and the public .....	2,589	2,293	2,015	- 11.4	- 12.1

Table 2.6

Expenses of the Board of Governors for System Policy Direction and Oversight, 1985-87

Thousands of dollars, except as noted

Category	1985 actual	1986 estimate	1987 budget	Percent change	
				1985-86	1986-87
System policy direction .....	4,600	5,611	5,642	22.0	.6
Oversight .....	10,451	10,344	10,571	-1.0	2.2
<b>Total .....</b>	<b>15,051</b>	<b>15,955</b>	<b>16,213</b>	<b>6.0</b>	<b>1.6</b>

Program Improvement Project has ended.

The System oversight element recognizes the need to reinforce, by improved automation, the ability of the Board to examine the electronic data processing controls at the Federal Reserve Banks. This improvement also helps the Board to comply with the Federal Reserve Act requirement to examine each Bank annually. The incremental costs of enhancing oversight of Bank operations are largely offset by the savings from completing in 1986 part of a project in the System's planning and accounting system. One position (net) is added for this operational area, for a total of 151.

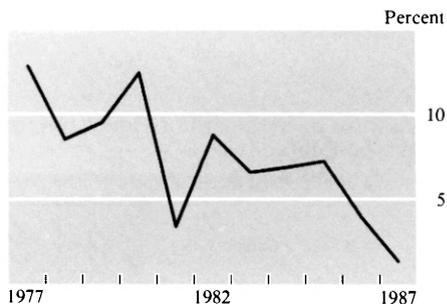
### Trends in Board Expenses and Positions

The 1987 Board budget represents an increase of 1.3 percent over estimated 1986 expenses. As chart 2.1 shows, this rate of increase is markedly lower than those of recent years. Over the past 10 years, the greatest rate of increase occurred in 1977, when a large general pay increase and a large payment to cover retirees' cost-of-living adjustments (COLA) worked to increase the Board's operating expenses 12.8 percent. The 3.3 percent increase in 1981 was attributable to the Board's program to reduce spending

and positions as well as to a dramatic reduction in the COLA for retirees. Without that one-time reduction in COLA expense, the rate of growth rose again in 1982, and it remained relatively stable until 1985. A decrease in the rate of growth for personnel expenses in 1985 was offset by higher costs for automation, including those of the Contingency Processing Center, which was begun in 1984. A further drop in the growth rate of personnel expenses in 1986 and a drop in such expenses in 1987 have offset higher automation costs, yielding a rate of growth in expenses for 1986 and 1987 that is lower than that for any two years in the last ten.

Chart 2.1

Annual Rate of Change in Operating Expenses of the Board of Governors, 1977-87<sup>1</sup>



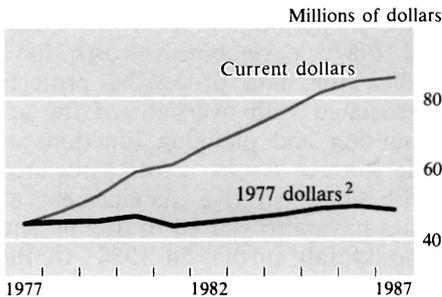
1. For 1986, estimate; 1987, budget.

Chart 2.2 compares the Board's operating expenses in current and constant dollars over the 1977-87 period. Although Board expenses have increased 92.6 percent in current dollars between 1977 and 1987, the increase in terms of 1977 dollars is only 0.9 percent. Note that 1987 is the first year since 1981 to exhibit a decrease, about 2.2 percent, in the constant-dollar measure.

### Five-Year Trend of Expenses

Table 2.7 presents the Board's operating expenses by operational area for

*Chart 2.2*  
Operating Expenses of the Board of Governors, 1977-87<sup>1</sup>



1. For 1986, estimate; 1987, budget.
2. Calculated with the GNP implicit price deflator.

the years 1982 through 1987. The 1986-87 increase of 1.3 percent is substantially lower than the 5.1 percent average annual rate of growth for the 1982-87 period. This reduction in the rate of growth, reflected in each of the operational areas, is tied directly to the Program Improvement Project. The PIP program reduced staffing from the levels that would have prevailed in its absence and thus reduced annual personnel expenses \$5.6 million. In 1977 dollars, the 1987 budget is smaller than estimated expenses for 1986.

Besides the PIP program, factors that have been important in all of the operational areas over the last five years are the general pay increases in October 1982 and January 1984, 1985, and 1987 and the increases in insurance costs associated with medicare and health insurance. This section will focus on unique factors in each operational area.

### *Monetary and Economic Policy*

Expenses in the monetary and economic policy area show an average rise of 4.2 percent per year in the 1982-87 period. This is somewhat under the Board average of 5.1 percent for the period. The annual rate

*Table 2.7*  
Operating Expenses of the Board of Governors, by Operational Area, 1982-87  
Thousands of dollars, except as noted

Operational area	1982	1983	1984	1985	1986 estimate	1987 budget	Percent change	
							1982-87 <sup>1</sup>	1986-87
Monetary and economic policy .....	37,350	38,574	41,916	45,136	45,475	45,985	4.2	1.1
Supervision and regulation of financial institutions .....	17,255	18,721	18,034	19,259	21,474	22,080	5.1	2.8
Services to financial institutions and the public .....	2,062	1,948	2,493	2,589	2,293	2,015	-.5	-12.1
System policy direction and oversight .....	10,764	12,382	14,032	15,051	15,955	16,213	8.5	1.6
<b>Total .....</b>	<b>67,431</b>	<b>71,625</b>	<b>76,475</b>	<b>82,035</b>	<b>85,197</b>	<b>86,293</b>	<b>5.1</b>	<b>1.3</b>

1. Annual average.

of growth from 1985 through 1987 will be less than 1.0 percent and will reflect declines in expenses for staffing that have been partially offset by the expenses for automation. In 1987, those expenses support the installation of a large-scale office automation system begun in 1986. The system will pay for itself through reduced use of more expensive mainframe resources as well as through greater productivity of the streamlined work force.

The position complement has fallen sharply in five years. The reductions are spread over all functions, although management has borne a disproportionate share. No functions have been eliminated as automation has enhanced staff productivity. However, some loss in flexibility has been associated with the lower staffing level, appearing mainly in a decrease in long-term research.

#### *Supervision and Regulation*

Expenses for supervision and regulation rose in 1983, reflecting support for the Neighborhood Reinvestment Corporation and an increase in the volume of data processing for application processing, examinations, and surveillance. Expenses fell in 1984 as these projects were partly completed and as activity in the consumer regulation area declined. From 1985 through 1987, expenses in this area will rise 14.6 percent, while expenses for the remainder of the Board's activities will rise only 2.3 percent. The advance reflects the new positions authorized for supervision in 1986 and the cost of the 1985 automation initiative to meet the tremendous growth in workload.

#### *Services to Financial Institutions and the Public*

The low rate of increase in expenses for services to financial institutions

and the public is associated with the elimination in 1985, as part of the PIP program, of the Service Pricing Program and the completion of a portion of a project designed to reduce risk in the electronic payments mechanism. These actions had a dramatic effect on this operational area, which is the smallest at the Board.

#### *System Policy Direction and Oversight*

The relatively high rate of growth in expenses over the last five years for System policy direction and oversight is tied to the development costs for improved office automation and for management of administrative data, as well as new procedures and resources to strengthen oversight of key Reserve Bank operations. These costs have now started to decline. In the 1985-86 period, and to a lesser extent in 1987, development costs have fallen for data processing projects associated with oversight of the accounting and planning functions at the Reserve Banks. Costs associated with administrative management of data have also started to decline and should fall further in 1988. In the meantime, savings generated by the investment in this area are starting to be reflected in savings in overhead and in improved efficiency within the other operational areas.

#### *10-Year Trend of Expenses and Positions*

This section covers experience in both personnel and nonpersonnel services over the 1977-87 period.

#### *Personnel Services*

Between 1977 and 1987, costs of personnel services rose 74.7 percent in current dollars and declined slightly in

1977 dollars (see appendix chart G.1). Until recently, much of the growth in this area related to general pay increases (GPIs) for Board staff and cost-of-living adjustments for retirees, both of which responded to relatively high inflation rates. For example, a GPI of 5.5 percent in October 1978, followed by a 7.0 percent GPI in October 1979 and an increase in the COLA allowance for annuitants, produced an increase in the costs of personnel services of more than \$4 million, or 12.7 percent, in 1979. GPIs of between 7.0 and 9.0 percent continued to drive costs of personnel services upward until 1983, when the GPI was only 4.0 percent. The rate of growth in personnel expenses began to decline in 1984, as GPIs and COLAs fell and Board managers began holding vacancies open under the PIP program.

#### *Employment and Positions*

There are eight fewer positions budgeted at the Board for 1987 than there were in 1977, even though the Board assimilated a heavier workload (appendix chart G.2).

The Board began to reduce positions in 1979, cutting 36 in that year. In 1980, however, 67 positions were added, most in response to the work generated by the Monetary Control Act. In 1981, 32 of those positions were abolished as the MCA workload was assimilated and lower-priority work was eliminated. A resumption of increases in the workload—much of it associated with further implementation of the MCA—caused a steady rise in positions from 1981 through 1984 (in all, 110 positions, or 7.0 percent). The largest portion of this increase took place in centralized data processing (50 positions); the next largest increases were in oversight in the System policy direction

and oversight operational area (15 positions) and in supervision and regulation (6 positions). The establishment of the Contingency Processing Center, a support function, required an increase of 17 positions in 1984. The remaining 22 positions were added to various functions throughout the Board.

The Program Improvement Project, started in late 1984, is responsible for the sharp decline in positions and employment during 1985 and 1986. During those two years, the program abolished 143 positions. Levels of positions and employment at year-end 1986 are expected to hold steady in 1987.

#### *Nonpersonnel Services*

From 1977 to the level budgeted for 1987, nonpersonnel expenses rose 152 percent in current dollars and 42 percent in 1977 dollars (appendix chart G.3). The current-dollar increase is large compared with that in personnel services. The increase stems largely from automation initiatives, including the purchase of a new mainframe computer and office automation equipment and creation of the Contingency Processing Center. Much of the remaining increase is derived from higher rates for utilities, airfare, postage, and printing.

### **Characteristics of the 1987 Budget**

This section provides detail on the changes in expenses for personnel and nonpersonnel services and for data processing for 1987.

#### **Personnel Services**

The budgeted costs of personnel services for 1987 are down \$157,000 (0.3 percent) from 1986. A major decrease of \$2.2 million is associated with the

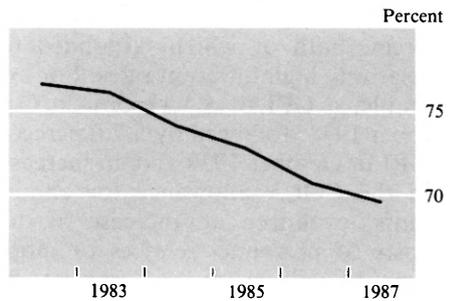
Program Improvement Project: in 1986, that program involved one-time outlays of \$942,000 in severance payments to employees and \$1.3 million in expenses for salaries and lump-sum leave for employees whose positions were abolished. Further savings of \$500,000 resulted from the reduction of 22 positions in centralized data processing; a reduction of \$650,000 came from the increase in the time that vacant positions throughout the Board remain open and from a one-time outlay of back pay in 1986 to senior level managers.

Offsetting these savings are the costs associated with a 3.0 percent general pay increase (\$1.6 million); routine salary actions taken in 1986 and planned for 1987 (\$1.2 million); a net increase of \$49,000 in the retirement plan (1.8 percent); and an increase of \$291,000 in insurance payments (10.2 percent). The last derives partially from a 15 percent increase in the rates for the Board's health insurance plan and partially from expenses stemming from the growing number of retirees that are participants in the Board health plan.

Chart 2.3 depicts the gradual but steady decline in the proportion of the Board's operating budget that is devoted to personnel services. In 1982, more than 76 percent of the Board's total expenses covered salaries, retirement, and insurance, about the same proportion as in the previous five years. In 1987, this proportion is a little less than 70 percent. The PIP program, which constrained personnel costs, and the establishment of the Contingency Processing Center, with its heavy proportion of nonpersonnel expense, are largely responsible for this trend. In addition, automation allows divisions to manage heavier workloads without staff increases.

Chart 2.3

Proportion of Operating Expenses of the Board of Governors Devoted to Personnel Services, 1982-87<sup>1</sup>



1. For 1986, estimate; 1987, budget.

### Nonpersonnel Services

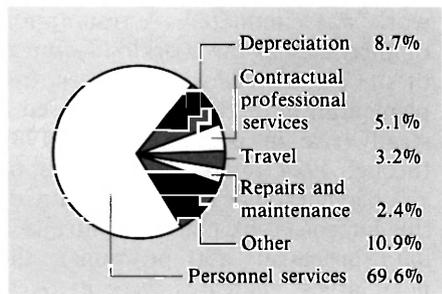
Chart 2.4 depicts the major elements of the Board's 1987 budget by object of expense. About 30 percent of the budget funds nonpersonnel services. The largest categories of nonpersonnel services are discussed below.

#### Depreciation

Depreciation is the largest category of nonpersonnel expense in 1987, as it was in 1986. The \$1.7 million increase between 1986 and 1987 reflects capital investments of approximately \$17.4 million by the Board in 1986, which

Chart 2.4

Operating Budget of the Board of Governors, by Object, 1987



included the costs of the new mainframe computer and disk-access devices. The budget for depreciation for the Division of Hardware and Software Systems will increase 58 percent to \$2.6 million in 1987, reflecting the purchase of this equipment, while its budget for rental of equipment will fall \$900,000. Depreciation for the Contingency Processing Center (CPC) will increase 14 percent to \$1.7 million to accommodate the costs associated with new equipment for contingency processing at the Federal Reserve Banks. The Banks reimburse the Board for a portion of the CPC expense through the Board's CPC income account.

#### *Contractual Professional Services*

Contractual services, the second largest category of nonpersonnel expense, is budgeted to increase \$236,000, or 5.6 percent, over 1986. It consists of four major components: (1) contractual support related to mainframe software, for \$2.7 million (60 percent of the total); (2) legal and consulting fees of \$544,000 (12 percent); (3) custodial fees of \$332,000 (7.5 percent); and (4) outside computing services for on-line data services and ad hoc support, \$179,000 (4.0 percent). Smaller accounts make up the remaining \$702,000. Contractual support for improvements in automation in the monetary and economic policy function accounts for the most growth; it is partially offset by savings in consultant fees in other functions.

#### *Travel*

Travel expenses are budgeted at \$2.8 million in 1987, an increase of \$110,000 (4.1 percent) over 1986 estimated expenses. All but \$12,000 of the increase is accounted for by two new positions for improved financial

examinations of Reserve Banks and by the growing number of trips related to supervision activities.

The oversight portion of System policy direction and oversight accounts for 43 percent of the Board's 1987 travel budget. Most of this travel involves financial examinations. Training and relocation costs account for 10 percent.

#### *Repairs and Maintenance*

The Board's 1987 budget for repairs and maintenance is \$2 million, half again as much as 1986 estimated expenses. The Board's mainframe computer accounts for about half of the 1987 total and the CPC for another quarter. The 1987 increment reflects the transition from warranty service on the new mainframe computer to a maintenance contract.

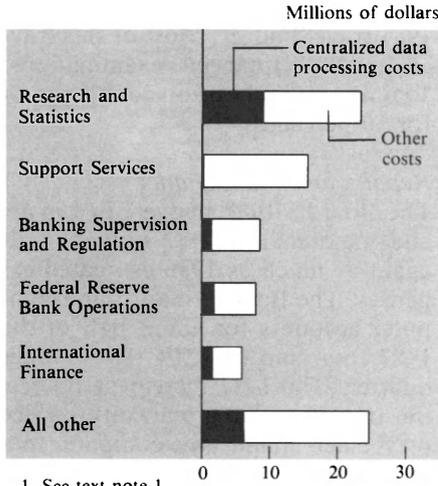
#### **Chargeback and Accountability for Information Resources Management**

In 1987, costs of support from centralized data processing appear explicitly in division budgets. This process ensures that managers plan the most efficient mix of resources necessary to attain their objectives.<sup>1</sup>

The importance of centralized information resources management in the budgets of the Board's largest divisions is shown in chart 2.5. The reductions in positions under the PIP program, the gains in productivity that allowed other reductions in positions, and budgetary restraint by divisions will reduce the cost of these resources in 1987. This decrease reverses

1. Centralized data processing is handled by the three divisions of Information Resources Management: Office of the Executive Director, Applications Development and Statistical Services, and Hardware and Software Systems.

**Chart 2.5**  
 Operating Costs for Centralized  
 Data Processing and Total  
 Operating Costs in the Largest  
 Divisions of the Board of Governors<sup>1</sup>

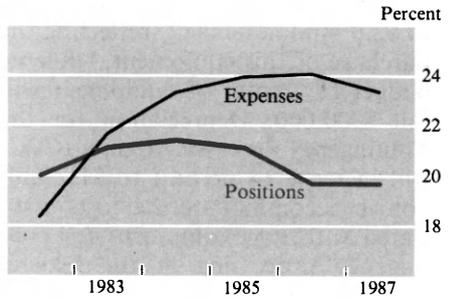


the recent pattern of steady growth, attributable largely to the Monetary Control Act of 1980. Chart 2.6 depicts the proportion of expenses and positions at the Board accounted for by the three divisions of Information Resources Management for 1982-87.

**Positions in the 1987 Budget**

The 1987 budget provides 1,564 positions (table 2.8). It adds positions to some divisions and deletes them from others for a net change of zero from the number authorized at the end of 1986. In that year a net of 44 positions were abolished through the following combination of actions: Board-wide cuts stemming from the PIP program; reductions permitted by automation in the divisions of Information Resources Management; ad-

**Chart 2.6**  
 Proportion of Expenses and Positions at  
 the Board of Governors Devoted to  
 Centralized Data Processing, 1982-87<sup>1</sup>



1. See text note 1. For 1986, estimate; 1987, budget.

ditions to the bank supervision program; and miscellaneous additions and reductions. Here are the changes in the number of positions between year-end 1985 and year-end 1986 resulting from these actions:

PIP program	- 50
IRM reductions	- 22
Bank supervision	+ 29
Miscellaneous (net)	- 1
<b>Total</b>	<b>- 44</b>

Table 2.9 shows staffing levels in 1985 and 1987 by operational area.

The budget includes three new positions. One will support the information resources function in the Division of Banking Supervision and Regulation. The remaining two are in the Division of Federal Reserve Bank Operations: one will work directly on examinations and the other will provide support for the bank examination program for electronic data processing reviews at the Federal Reserve Banks and for training other examiners in EDP techniques. The examination program lost several senior employees in 1986 and needs to com-

Table 2.8

Positions at the Board of Governors, by Division, 1985-87

Division	1985 year-end	1986 year-end	1987 budget	Change	
				1985-86	1986-87
Office of Board Members .....	36	36	35	0	-1
Office of Staff Director for Management .....	12	11	11	-1	0
Office of Staff Director for Monetary and Financial Policy .....	9	7	7	-2	0
Office of Staff Director for Federal Reserve Bank Activities .....	9	5	5	-4	0
Office of the Secretary .....	59	57	56	-2	-1
Legal .....	63	64	64	1	0
Research and Statistics .....	322	310	310	-12	0
International Finance .....	102	100	100	-2	0
Banking Supervision and Regulation .....	138	159	160	21	1
Consumer and Community Affairs .....	43	42	42	-1	0
Federal Reserve Bank Operations .....	107	107	109	0	2
Personnel .....	67	67	67	0	0
Support Services .....	268	259	259	-9	0
Office of the Controller .....	32	32	31	0	-1
Office of the Executive Director for Information Resources Management .....	2	46	46	44	0
Applications Development and Statistical Services .....	229	171	171	-58	0
Hardware and Software Systems .....	91	72	72	-19	0
Contingency Processing Center .....	19	19	19	0	0
<b>Total .....</b>	<b>1,608</b>	<b>1,564</b>	<b>1,564</b>	<b>-44</b>	<b>0</b>

pensate for the reductions in audit staffs at the Federal Reserve Banks resulting from their efforts to follow Gramm-Rudman-Hollings.

Three positions are abolished in the 1987 budget. Two are accounted for by productivity improvements tied to automation projects in the Office of the Secretary and in the Office of the Controller, and the third by a reassessment of staffing in the Office of Board Members.

## Capital Budget

Chart 2.7 depicts the composition of the \$4.6 million budgeted by the Board for capital requirements for 1987. Approximately \$1.9 million (41 percent) will provide office automation support for 13 of the Board's 19 offices and divisions. The largest single initiative in this category is the \$1 million effort in the monetary and

economic policy operational area. Acquisitions planned for 1987 include a network of 125 workstations, which offer desktop computing to one-third of the research economists, and improvements and upgrades to existing equipment and systems in support of professionals and clerical personnel.

Chart 2.7

Capital Budget of the Board of Governors, by Type of Expense, 1987

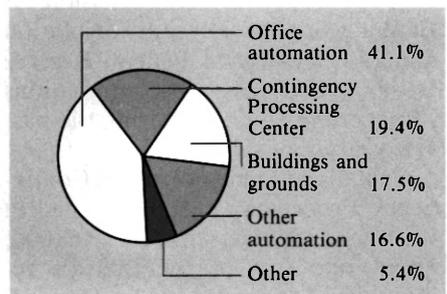


Table 2.9

Distribution of Division Positions at the Board of Governors, by Activity, 1985 and 1987<sup>1</sup>

Number

Division	Monetary and economic policy		Supervision and regulation		Services to financial institutions and the public	
	1985	1987	1985	1987	1985	1987
Office of Board Members .....	0	0	0	0	0	0
Office of Staff Director for Management .....	0	0	0	0	0	0
Office of Staff Director for Monetary and Financial Policy .....	9	7	0	0	0	0
Office of Staff Director for Federal Reserve Bank Activities .....	0	0	0	0	2	0
Office of the Secretary .....	0	0	3	2	0	0
Legal .....	0	0	36	38	0	0
Research and Statistics .....	300	289	22	21	0	0
International Finance .....	102	100	0	0	0	0
Banking Supervision and Regulation .....	0	0	138	160	0	0
Consumer and Community Affairs .....	0	0	43	42	0	0
Federal Reserve Bank Operations .....	0	0	0	0	20	20
Personnel .....	0	0	0	0	0	0
Support Services .....	0	0	0	0	0	0
Office of the Controller .....	0	0	0	0	0	0
Office of the Executive Director for Information Resources Management .....	0	0	0	0	0	0
Applications Development and Statistical Services .....	0	0	0	0	0	0
Hardware and Software Systems .....	0	0	0	0	0	0
Contingency Processing Center .....	0	0	0	0	0	0
<b>Total .....</b>	<b>411</b>	<b>396</b>	<b>242</b>	<b>263</b>	<b>22</b>	<b>20</b>

The three divisions of Information Resources Management plan a joint office automation effort in 1987 costing \$500,000. Other automation efforts are on a smaller scale, and many, such as the equipment acquisitions proposed by the Division of Banking Supervision and Regulation and the Division of Federal Reserve Bank Operations, are continuations of programs initiated during the past few years.

Capital requirements for the Contingency Processing Center included in the Board's budget will cost \$900,000, about one-fifth of the Board's requirement for capital funds. The Fed-

eral Reserve Banks will reimburse the Board for the expense associated with this equipment through payments that equal the annual depreciation charge.

The Division of Support Services has proposed programs of improvement and upkeep of the Board's physical plant costing \$813,000, or 17.4 percent of the 1987 capital request. Of the total, \$560,000 will pay for a new roof for the Eccles Building; \$135,000 for more efficient cooling of Board facilities, thus ensuring lower utility costs; and \$58,000 for an ink-jet printer that will yield more efficient production of press releases and other printed material.

Table 2.9—Continued

Division	System policy direction and oversight		Support and overhead		Total	
	1985	1987	1985	1987	1985	1987
Office of Board Members .....	36	35	0	0	36	35
Office of Staff Director for Management .....	6	7	6	4	12	11
Office of Staff Director for Monetary and Financial Policy .....	0	0	0	0	9	7
Office of Staff Director for Federal Reserve Bank Activities .....	7	5	0	0	9	5
Office of the Secretary .....	10	9	46	45	59	56
Legal .....	0	0	27	26	63	64
Research and Statistics .....	0	0	0	0	322	310
International Finance .....	0	0	0	0	102	100
Banking Supervision and Regulation .....	0	0	0	0	138	160
Consumer and Community Affairs .....	0	0	0	0	43	42
Federal Reserve Bank Operations .....	87	89	0	0	107	109
Personnel .....	6	6	61	61	67	67
Support Services .....	0	0	268	259	268	259
Office of the Controller .....	0	0	32	31	32	31
Office of the Executive Director for Information Resources Management .....	0	0	2	46	2	46
Applications Development and Statistical Services .....	0	0	229	171	229	171
Hardware and Software Systems .....	0	0	91	72	91	72
Contingency Processing Center .....	0	0	19	19	19	19
<b>Total .....</b>	<b>152</b>	<b>151</b>	<b>781</b>	<b>734</b>	<b>1,608</b>	<b>1,564</b>

1. The data for 1985 are as of December 31; the data for 1987 are budgeted numbers.

Computer operations will require capital outlays of approximately \$770,000, or 15.2 percent of the 1987 capital request. Major acquisitions in this category are a laser printer (\$362,000) to meet growing volume and provide a backup to the current printer, and tape drives (\$153,000) to support technological advances in the computer center.

Expenditures for miscellaneous furniture and equipment (\$252,000) account for 5.5 percent of the capital budget.

### 1987 Operating Budget by Division

The final budgets of most of the offices and divisions are within the guideline the Board set. Table 2.10 compares each division's estimated 1986 expenses with its 1987 budget. Table 2.11 shows the cash requirement—which adds capital needs to the operating budget and subtracts depreciation expense—of each division; the cash budget provides data comparable to those used in presentations of the federal budget.

Table 2.10

## Operating Expenses of the Board of Governors, by Division or Account, 1986-87

Dollars, except as noted

Item	1986 estimate	1987 budget	Change, 1986-87	
			Amount	Percent
<i>Division</i>				
Office of Board Members .....	2,283,433	2,395,828	112,395	4.9
Office of Staff Director for Management .....	6,881,651	5,521,334	-1,360,317	-19.8
Office of Staff Director for Monetary and Financial Policy .....	518,464	392,458	-126,006	-24.3
Office of Staff Director for Federal Reserve Bank Activities .....	396,827	273,859	-122,968	-31.0
Office of the Secretary .....	2,335,903	2,384,835	48,932	2.1
Legal .....	3,141,928	3,304,289	162,361	5.2
Research Statistics .....	22,857,997	23,415,137	557,140	2.4
International Finance .....	5,790,366	5,966,944	176,578	3.0
Banking Supervision and Regulation .....	8,086,913	8,588,199	501,286	6.2
Consumer and Community Affairs .....	1,946,511	1,928,086	-18,425	-.9
Federal Reserve Bank Operations .....	8,099,203	8,006,406	-92,797	-1.1
Personnel .....	3,056,537	3,154,039	97,502	3.2
Support Services .....	15,718,937	15,644,370	-74,567	-.5
Office of the Controller .....	1,517,323	1,551,983	34,660	2.3
Office of the Executive Director for Information Resources Management .....	3,175,872	3,007,401	-168,471	-5.3
Applications Development and Statistical Services .....	7,091,306	7,017,744	-73,562	-1.0
Hardware and Software Systems .....	9,456,132	10,053,288	597,156	6.3
Contingency Processing Center (Board cost) .....	2,350,361	2,530,914	180,553	7.7
<i>Account</i>				
Residual retirement and insurance .....	467,338	552,317	84,979	18.2
Special projects .....	680,705	621,296	-59,409	-8.7
Information Resources Management income .....	-20,480,300	-20,122,453	357,847	-1.7
Special salary actions .....	530,000	605,000	75,000	14.2
Savings and reallocations .....	-708,029	-500,000	208,029	-29.4
<b>Total .....</b>	<b>85,195,378</b>	<b>86,293,274</b>	<b>1,097,896</b>	<b>1.3</b>

Table 2.11

Cash Budget of the Board of Governors, by Division or Account, 1987

Dollars

Item	Operating budget	Depreciation	Capital budget	Cash budget
	(1)	(2)	(3)	(1) - (2) + (3)
<i>Division</i>				
Office of Board Members .....	2,395,828	25,194	16,646	2,387,280
Office of Staff Director for Management .....	5,521,334	10,519	16,102	5,526,917
Office of Staff Director for Monetary and Financial Policy .....	392,458	980	0	391,478
Office of Staff Director for Federal Reserve Bank Activities .....	273,859	4,303	3,442	272,998
Office of the Secretary .....	2,384,835	48,457	0	2,336,378
Legal .....	3,304,289	56,252	35,260	3,283,297
Research and Statistics .....	23,415,137	230,230	1,105,750	24,290,657
International Finance .....	5,966,944	87,160	161,031	6,040,815
Banking Supervision and Regulation .....	8,588,199	318,414	58,951	8,328,736
Consumer and Community Affairs .....	1,928,086	28,147	33,600	1,933,539
Federal Reserve Bank Operations .....	8,006,406	119,562	58,062	7,944,906
Personnel .....	3,154,039	27,279	0	3,126,760
Support Services .....	15,644,370	2,091,588	996,610	14,549,392
Office of the Controller .....	1,551,983	28,284	0	1,523,699
Office of the Executive Director for Information Resources Management .....	3,007,401	148,069	388,110	3,247,442
Applications Development and Statistical Services .....	7,017,744	111,180	167,000	7,073,564
Hardware and Software Systems .....	10,053,288	2,637,519	697,507	8,113,276
Contingency Processing Center (Board cost) .....	2,530,914	1,655,848	899,805	1,774,871
<i>Account</i>				
Residual retirement and insurance .....	552,317	0	0	552,317
Special projects .....	621,296	0	0	621,296
Information Resources Management income .....	-20,122,453	0	0	-20,122,453
Special salary actions .....	605,000	0	0	605,000
Savings and reallocations .....	-500,000	0	0	-500,000
<b>Total .....</b>	<b>86,293,274</b>	<b>7,628,985</b>	<b>4,637,876</b>	<b>83,302,165</b>

## Chapter 3

# Federal Reserve Banks

This chapter examines the expenses and budgets of the Federal Reserve Banks. An overview presents 1987 operating expenses for all the Districts, 1987 major initiatives, actions taken to reduce spending, and the 1987 budget objective. This is followed by budgets for the four operational areas and for objects of expense, capital outlays, and long-term trends.

Appendix H gives additional data, including a summary of the budget performance of the Reserve Banks in 1986 and trends in expenses by operational area.

### An Overview of the 1987 Budget Year

For 1987, the Board of Governors has approved \$1,197.8 million in operating expenses for the Federal Reserve Banks, an increase of \$33.7 million, or 2.9 percent, over estimated expenses in 1986 (table 3.1).<sup>1</sup> The increase in expenses over the last five years, from 1982 to the level budgeted for 1987, averages 4.2 percent per year in current dollars and 1.0 percent per year in 1982 dollars.

1. Appendix B describes the budget process for the Reserve Banks.

Personnel expenses, comprising salaries and benefits, account for \$738.9 million, or 62 percent, of the Banks' expenses in 1987, an increase of \$8.3 million, or 1.1 percent, over 1986. The small increase derives mainly from a staff reduction of 219, or almost 1 percent, and a reduction in retirement and other benefit costs due primarily to the elimination for 1987 of contributions to the overfunded retirement plan. Staff reductions are planned in overhead services, System projects, priced and nonpriced services to financial institutions, and monetary and economic policy. Staff increases are budgeted in supervision and regulation and services to the U.S. Treasury. Employment at the Banks is budgeted at 23,162 average number of personnel (ANP).<sup>2</sup>

Nonpersonnel expenses are budget-

2. The term "average number of personnel" describes levels and changes in employment at the Reserve Banks. ANP measures the number of employees in terms of full-time positions for the time period. For instance, a full-time employee who starts work July 1 counts as 0.5 ANP for that year; two half-time employees who start January 1 count as one ANP. The ANP for any given year is the average of the number of full-time employees (measured in this way) in the months of that year.

Table 3.1

Operating Expenses of the Federal Reserve Banks, 1985-87

Thousands of dollars, except as noted

Expense	1985 actual	1986 estimate	1987 budget	Percent change	
				1985-86	1986-87
Personnel .....	697,411	730,589	738,842	4.8	1.1
Nonpersonnel .....	419,966	433,478	458,972	3.2	5.9
<b>Total .....</b>	<b>1,117,377</b>	<b>1,164,068</b>	<b>1,197,813</b>	<b>4.2</b>	<b>2.9</b>

ed at \$459 million, an increase of \$25.5 million, or 5.9 percent, over 1986. The increase can be attributed primarily to the following: depreciation and maintenance of equipment, property depreciation and real estate taxes (primarily at two new Branch buildings, Los Angeles and Jacksonville), and the renovation and addition to the building at Chicago.

### Major Initiatives in 1987

Several major programs account for most of the budgeted increase in Bank expenses: enhanced supervision of banks and bank holding companies, a new computer contingency center, improved payment services, improved physical facilities, and initiatives for the U.S. Treasury. Table 3.2 shows the 1987 budgeted expense for each of these initiatives and the amount by which expenses would have

exceeded those in 1986 in the absence of the initiatives. The following discussion briefly describes each program.

The Board of Governors decided in 1985 to intensify System oversight of state member banks and of bank holding companies and to strengthen the procedures for reporting to bank management. These efforts will cost \$6.7 million more in 1987 than they did in 1986. Employment in the supervision service is budgeted at 1,412 ANP, an increase of 23.1 percent over 1985.

A computer contingency center will provide emergency data processing for the New York Bank's electronic transfers of large-dollar funds and securities. The center cost \$2.1 million in 1986 and will cost \$3.9 million in 1987.

Several Districts are improving their electronic delivery and receipt of payment information and their check-clearing services at a cost of \$3.5 million in 1987.

Building projects will cost \$4.9 million in 1987: \$2.1 million for the renovation and addition at Chicago; \$1.1 million for the move into the new Jacksonville building in 1987 and the increase in taxes, property depreciation, and utilities there in 1987; \$900,000 for the renovation and repair projects at Kansas City and St. Louis; and \$400,000 for the move of a department in Atlanta to temporary rental quarters.

A full year of operations and completion of the Treasury Direct Access Book-Entry System (Treasury Direct) will increase expenses by \$4.4 million in 1987 and increase staff at the central site in Philadelphia by 24 ANP, bringing total staff there to 69 ANP in 1987. The Cleveland Bank is continuing the development of a Public

Table 3.2

Increase in the Operating Expenses of the Reserve Banks, Excluding the Increases from Major Initiatives, 1986-87

Thousands of dollars, except as noted

Expense item	Amount
<i>Operating expenses</i>	
1986 total, estimate .....	1,164,068
1987 total, budget .....	1,197,813
<b>Increase, 1986 to 1987</b>	
Thousands of dollars .....	33,746
Percent .....	2.9
LESS	
<i>Increases from major 1987 initiatives</i>	
Enhanced supervision of banks and bank holding companies .....	6,661
Computer contingency center .....	3,908
Payment services .....	3,507
Physical facilities .....	4,858
Initiatives for the U.S. Treasury .....	4,758
Total .....	23,692
EQUALS	
<i>Increase excluding major 1987 initiatives</i>	
Thousands of dollars .....	10,054
Percent .....	.9

Debt Accounting and Reporting System at a cost of \$285,000 more than in 1986 and is maintaining two savings bonds projects at the Pittsburgh Branch at a 1987 cost of \$97,000.

The total increase in expenses for these special projects is \$24 million in 1987. Excluding this increase, the 1987 budget for the Reserve Banks would be 0.9 percent greater than expenses estimated for 1986 (table 3.2).

### Reductions in Expenses in 1986 and 1987

In the spirit of the Gramm-Rudman-Hollings legislation, the Reserve Banks have made special efforts to limit the growth of expenses in 1986 and 1987.

Reserve Bank expenses for 1986 are estimated to be \$18.1 million less than the amount originally approved. This means the Banks achieved the reduction of \$16.7 million targeted by the Board in early 1986, after the budget was approved, and further reduced expenses by \$1.3 million (table 3.3). Staffing for 1986 is estimated at

23,381 ANP, 150 fewer than the approved level of 23,531.

For 1987, the Reserve Banks have reduced previously planned growth in expenses by \$21.1 million. The reduction made by the Reserve Banks to 1986 and 1987 spending plans thus totals \$39 million. As a result, 1987 expenditures are only \$15.7 million, or 1.3 percent, more than those in the 1986 original budget.

The 1987 reductions were concentrated in overhead, certain System-wide programs, and deferrals in purchases of equipment and software and in building repairs. Recoveries were increased by increasing the space available for rental and raising the rental rates in some Districts and by charging for certain services (table 3.4).

Administrative expenses are an overhead item that will be reduced by lowering employment levels, curtail-

*Table 3.3*  
Reductions in Expenses of the Federal Reserve Banks, 1986 and 1987<sup>1</sup>

Thousands of dollars

Item	Amount
1986 original budget .....	1,182,137
LESS	
Board-approved reduction .....	16,732
Additional Bank reductions .....	1,337
<b>EQUALS</b>	
<b>1986 estimate .....</b>	<b>1,164,068</b>
1987 budget before reductions .....	1,218,927
LESS	
Bank reductions .....	21,114
<b>EQUALS</b>	
<b>1987 budget .....</b>	<b>1,197,813</b>

1. Reductions include increased recoveries.

*Table 3.4*  
Reductions in Expenses of the Federal Reserve Banks, by Program, 1987

Thousands of dollars

Item	Amount
<i>District program reductions</i>	
Administration .....	1,263
Protection .....	1,642
Public programs .....	1,391
Personnel .....	1,158
Research .....	748
Library .....	728
<i>District deferrals</i>	
Furniture and equipment .....	3,186
Software .....	1,116
Building repairs .....	581
<i>Systemwide reductions</i>	
System automation projects and centrally provided services .....	3,994
Audit .....	1,209
Currency .....	885
Treasury initiatives .....	642
Consumer affairs examinations .....	482
Increased recoveries .....	2,089
<b>Total .....</b>	<b>21,114</b>

ing product development, and reducing travel for System meetings. Protection costs will be reduced through efficiencies in new and renovated buildings and the installation of automated security systems. Public programs will be reduced through curtailments in staff and publications. Personnel costs will be scaled back through reductions in cafeteria service, training, cash awards, and recruitment costs. Also, staff in the research function will be reduced, and the libraries will reduce expenses primarily by providing less support to research economists.

Systemwide reductions in automation projects and centrally provided services were achieved by action of the Conference of First Vice Presidents. Other Systemwide savings were obtained by delaying the replacement of first-generation currency equipment, eliminating several enhancements to the Treasury Direct system, and changing the frequency and scope of internal audits and of consumer affairs examinations.

### Budget Objective for 1987

The 1987 budget objective approved by the Board provides for an increase of 2.7 percent in total expenses for Central Bank and Treasury services

(table 3.5) and zero growth in net expenses for these services.<sup>3</sup> The income with which to achieve the zero net increase is to be obtained by charging fees for certain supervisory functions and for some Treasury services.<sup>4</sup>

Expenses for Central Bank and Treasury services are budgeted to increase 1.6 percent, or \$10.4 million, an amount lower than that allowed by the budget target. Income from Treasury services will rise in 1987, primarily because of an accounting modification to begin properly reflecting fees for the transfer of Treasury book-entry securities as current income to the Federal Reserve System. At present, the Federal Reserve's expenses reflect the cost of this service but its income does not reflect the offsetting fees. Claims are submitted by the Reserve Banks to the Treasury for reimbursement. Crediting the fees to current income will allow the Reserve Banks to lower their claims for reimbursement from the Treasury. This modification is expected to yield income of \$10 million in 1987.

Additional income of \$1 million in 1987 will arise from charges to depository institutions for transfers of funds to and from the Treasury and from charges for converting definitive stripped coupons into book-entry form.

Table 3.5

Comparison of 1987 Increases in Budgeted Expenses of the Federal Reserve Banks with 1987 Budget Objective

Percent increase from 1986 estimated expenses

Expense item	1987 budget	1987 budget objective
Central Bank and Treasury services . . . . .	1.6	2.7
Priced services . . . . .	4.7	3.8
<b>Total</b> . . . . .	<b>2.9</b>	<b>3.1</b>

3. Expenses for Central Bank and Treasury services are the total expenses of the Federal Reserve Banks less those for priced services. Fees for priced services are based on expenses plus the imputed cost of float and the private sector adjustment factor (see appendix D).

4. In October 1986, the Board issued for public comment a proposal to charge for supervising Edge act corporations and for processing bank and bank holding company applications. If adopted, the proposal would yield about \$23 million in annual income to the Federal Reserve System in 1987, but the proposed income is not included in the 1987 budget.

The wide differences between the budget and the targets for both priced and nonpriced services have occurred because the budget objective was developed on the assumption that the 1986 accounting rules would be in place in 1987. The subsequent review of the applicability of 1986 accounting rules in 1987, however, resulted in a shift of about \$6 million of support and overhead from Central Bank and Treasury services to priced services in

order to charge costs to the areas directly benefitting from specific work to be done in 1987. The accounting rule changes appear in appendix H.

### Operational Areas

Tables 3.6 and 3.7 show Reserve Bank expenses and employment by operational area. The following discussion describes major programs in each area.

Table 3.6

Operating Expenses of the Federal Reserve Banks, by Operational Area, 1985-87<sup>1</sup>

Thousands of dollars, except as noted

Operational area	1985 actual	1986 estimate	1987 budget	Percent change	
				1985-86	1986-87
Monetary and economic policy . . . . .	90,945	91,965	90,802	1.1	-1.3
Supervision and regulation . . . . .	151,991	164,331	171,690	8.1	4.5
Services to financial institutions and the public . . . . .	742,896	770,745	799,379	3.7	3.7
Services to the U.S. Treasury and other government agencies . . . . .	131,544	137,027	135,943	4.2	-.8
<b>Total . . . . .</b>	<b>1,117,377</b>	<b>1,164,068</b>	<b>1,197,813</b>	<b>4.2</b>	<b>2.9</b>

1. Including the costs of support and overhead services.

Table 3.7

Employment at the Federal Reserve Banks, by Activity, 1985-87

Average number of personnel, except as noted<sup>1</sup>

Activity	1985 actual	1986 estimate	1987 budget	Percent change	
				1985-86	1986-87
<i>Operational areas</i>					
Monetary and economic policy . . . . .	816	790	780	-3.1	-1.3
Supervision and regulation . . . . .	1,912	2,104	2,181	10.1	3.7
Services to financial institutions and the public . . . . .	8,754	8,833	8,722	.9	-1.3
Services to the U.S. Treasury and other government agencies . . . . .	1,781	1,805	1,841	1.3	2.0
<i>Support and overhead</i>					
Support . . . . .	4,398	4,504	4,511	2.4	.2
Overhead . . . . .	5,323	5,346	5,127	.4	-4.1
<b>Total . . . . .</b>	<b>22,984</b>	<b>23,381</b>	<b>23,162</b>	<b>1.7</b>	<b>-.9</b>

1. See text note 2 for definition of ANP.

### Monetary and Economic Policy

Expenses at the Federal Reserve Banks for monetary and economic policy total \$91 million and account for approximately 8 percent of their 1987 budgets. Expenses are expected to decline by \$1.2 million, or 1.3 percent, from 1986 (table 3.8). Employment is expected to be at 780 ANP, a decline of 10 ANP from 1986.

The drop in expenses results from the following developments: the expected completion in 1987 of a banking statistics project, which will enhance the System's capacity to process and analyze financial data from depository institutions; a reduction in staff for economic policy determination; and the change in accounting rules. These decreases are partially offset by increases for salary adminis-

tration, office automation, and initiatives at New York in securities trading and in the analysis of the financial problems of developing countries.

### Supervision and Regulation

Expenses for supervision and regulation, which total \$172 million, constitute 14 percent of the Banks' 1987 budgets and are budgeted to increase \$7.4 million, or 4.5 percent, over 1986 (table 3.9). A major factor in the increase is the continuation of a program instituted in 1985 to strengthen the supervision of financial institutions and improve communications with bank management and directors. The supervision service, which includes the examination activities, is budgeted to increase \$6.7 million, or

*Table 3.8*

Expenses of the Federal Reserve Banks for Monetary and Economic Policy, 1985-87  
Thousands of dollars, except as noted

Category	1985 actual	1986 estimate	1987 budget	Percent change	
				1985-86	1986-87
Economic policy determination .....	80,933	80,816	78,011	-.1	-3.5
Open market trading .....	10,012	11,149	12,791	11.4	14.7
<b>Total .....</b>	<b>90,945</b>	<b>91,965</b>	<b>90,802</b>	<b>1.1</b>	<b>-1.3</b>

*Table 3.9*

Expenses of the Federal Reserve Banks for Supervision and Regulation, 1985-87  
Thousands of dollars, except as noted

Category	1985 actual	1986 estimate	1987 budget	Percent change	
				1985-86	1986-87
Supervision of District financial institutions .....	79,847	93,082	99,743	16.6	7.2
Administration of laws and regulations related to banking .....	65,738	64,912	65,100	-1.3	.3
Studies of banking and financial market structure .....	6,406	6,337	6,847	-1.1	8.0
<b>Total .....</b>	<b>151,991</b>	<b>164,331</b>	<b>171,690</b>	<b>8.1</b>	<b>4.5</b>

7.2 percent. The enhanced supervisory program will be fully implemented by the end of 1987.

Employment in supervision and regulation is budgeted to increase 77 ANP, or 3.7 percent, almost all in the supervisory activities. Most of the Banks have focused their hiring efforts on candidates with significant experience and advanced degrees to maximize the immediate results of the expanded program. Also, they have designed aggressive training and development programs to develop junior staff more rapidly and to train new staff.

To fund the enhanced supervisory program with the least effect on budgeted resources, the Reserve Banks are shifting resources from other supervisory areas. For example, the Banks will reduce the frequency of examination of smaller banking organizations with satisfactory ratings; they will reduce the frequency of trust examinations and examinations for compliance with consumer regulations; and they will rely more heavily on state examinations. Also, the

Banks are improving productivity through continued use of automation, including the use of portable personal computers in the field, less-intensive inspections for low-risk institutions, and in-house analysis in certain cases.

Even without the enhanced supervisory program, the workload in supervision and regulation would be expanding to handle the normal growth in the formation of new state member banks and bank holding companies. The growing number of mergers in some Districts, the continued expansion of investment banking activities by multinational banking organizations, the number of problem banks, and the Board's payment risk reduction program are all placing demands on resources.

### Services to Financial Institutions and the Public

Expenses for services to financial institutions and the public, which include both priced and nonpriced services, total \$799 million and account

Table 3.10

Expenses of the Federal Reserve Banks for Services to Financial Institutions and the Public, 1985-87

Thousands of dollars, except as noted

Service	1985 actual	1986 estimate	1987 budget	Percent change	
				1985-86	1986-87
Currency and coin services . . . . .	137,516	136,036	137,100	-1.1	.8
Commercial checks . . . . .	358,911	378,381	394,029	5.4	4.1
Funds transfers . . . . .	52,929	58,526	61,237	10.6	4.6
Automated clearinghouse . . . . .	52,531	55,310	60,727	5.3	9.8
Book-entry securities transfers . . . . .	19,257	20,479	23,493	6.3	14.7
Definitive securities safekeeping and noncash collections . . . . .	20,059	19,747	19,204	1.6	-2.7
Loans to members and others . . . . .	12,262	12,555	13,330	2.4	6.2
Bank and public relations . . . . .	33,575	36,748	36,546	9.5	-.5
Other . . . . .	55,857	52,963	53,712	-5.2	1.4
<b>Total . . . . .</b>	<b>742.896</b>	<b>770.745</b>	<b>799.379</b>	<b>3.7</b>	<b>3.7</b>

for almost two-thirds of the Reserve Banks' 1987 budgets. Expenses are increasing \$28.6 million, or 3.7 percent, over 1986 (table 3.10). A greater volume of items to be handled is expected in all major operations, and employment is budgeted at 8,772 ANP, a decline of 111, or 1.3 percent. Declines in the number of staff members are consistent with productivity gains in the processing of checks and currency and with reductions made in the spirit of budgetary restraint conveyed by the Gramm-Rudman-Hollings legislation.

Almost half of the expenses in this operational area are related to commercial check processing. The budget increase of \$15 million, or 4.1 percent, for this service accounts for most of the increase for the area as a whole and results from growth in volume and in equipment expenses. In 1987, the System expects to process 14.8 billion commercial checks, 330 million more than 1986. The staff to handle commercial checks is budgeted to decline 75 ANP, or 1.4 percent, as the result of greater efficiency. System initiatives focus on offering new or improved services such as notification of the return of large-dollar checks; truncation (under which checks are not returned to the writer); and the accelerated availability of funds through the development of new products, the enhancement of existing ones, and the expansion of check-clearing zones.

Expenses for currency processing are expected to increase by \$1.0 million, or 0.9 percent, and constitute 14 percent of this area's 1987 budget. High-speed processing of more than 14 billion notes is expected next year, an increase of 4.7 percent, and 18 billion notes are expected to be put in circulation.

Expenses in the funds transfer service are projected to increase \$2.7 million, or 4.6 percent, largely because of the implementation of new software and the expansion of electronic networks in several Districts. The System expects to process 85 million transfers in 1987, a rise of 6.2 percent over 1986.

An increase of \$5.4 million, or 10 percent, is expected in expenses for the automated clearinghouse service because of the growth in workload (21 percent) and higher costs associated with expanding the electronic networks. Staff reductions of 11 ANP are planned in noncash collection as the growth in volume continues to decline.

### Services to the U.S. Treasury and Other Government Agencies

Expenses for services to the U.S. Treasury and other government agencies are budgeted at \$136 million for 1987 and account for 11 percent of all Bank expenses. Expenses will decline \$1.1 million, or 0.8 percent, from 1986 (table 3.11), primarily because of the effect of accounting changes and the cost efficiencies due to lower workloads. Partially offsetting these declines is the increased expense of \$4.4 million in 1987 for the Treasury Direct system, which is operated by the Philadelphia District. Treasury Direct requires a staff of 69 ANP at the central site in Philadelphia in 1987, an increase of 25 from 1986.

The Cleveland Bank is developing a Public Debt Accounting and Reporting System for the U.S. Treasury at a cost of \$483,000 in 1987, \$285,000 more than in 1986; and the Pittsburgh Branch will serve as the System's central site for processing payroll bonds and book-entry savings bonds at a cost

Table 3.11

Expenses of the Federal Reserve Banks for Services to the U.S. Treasury and Other Government Agencies, 1985-87

Thousands of dollars, except as noted

Service	1985 actual	1986 estimate	1987 budget	Percent change	
				1985-86	1986-87
Savings bonds .....	37,655	39,000	38,427	3.6	-1.5
Other Treasury issues .....	31,234	28,862	24,208	-7.6	-16.1
Centrally provided					
Treasury agency services .....	7,450	13,819	18,576	85.5	34.4
Government accounts .....	19,959	20,848	21,200	4.5	1.7
Food coupons .....	12,119	12,466	12,169	2.9	-2.4
Other .....	23,127	22,034	21,363	-4.7	-3.0
<b>Total .....</b>	<b>131,544</b>	<b>137,027</b>	<b>135,943</b>	<b>4.2</b>	<b>-.8</b>

of \$97,000 in 1987. An increase of 5 ANP is budgeted for these programs.

### Objects of Expense

The expenses of the Federal Reserve Districts by object are shown in table 3.12.

Personnel expenses comprise salaries of officers and employees, other expenses to compensate personnel, and retirement and other benefits. Total personnel expenses account for 62 percent of the 1987 budget and have increased 1.1 percent over 1986. Salaries budgeted for 1987 increased 4.4 percent from 1986, while other personnel expenses (such as cash awards and temporary-employment contracts) declined 27.2 percent; together they total \$619 million, or 52 percent of all Bank expenses. Merit pay increases are partially offset by reductions in staff and overtime expenses. Higher salary costs arose from adjustments in the structure of employee salaries; from promotions; and from reclassifications. These were offset by an increase in turnover (the replacement of a departing employee with one having a lower salary

grade) and an increase in the time a position remains vacant. The decline in other personnel expenses reflects primarily the decline in the use of computer programmers on contract.

Each Federal Reserve Bank bases its structure of employee (non-officer) salaries on annual surveys of major employers in its community. Banks rely on nationwide surveys to adjust the structure of officers' salaries.

Expenses for retirement and other benefits, which account for 10 percent of the Banks' budgeted expenses, are projected to fall \$13.9 million, or 10.3 percent, from 1986. This decrease resulted primarily because no contributions are to be made to the overfunded retirement plan in 1987 and because contributions to group life insurance will decline; these decreases were partially offset by increases in expenses for medical and dental insurance, social security, the thrift plan, workmen's compensation, and unemployment insurance.

Nonpersonnel expenses account for 38 percent of the Banks' expenses in 1987 and are 5.9 percent above those in 1986. Equipment costs account for 14 percent of total expenses and are

Table 3.12  
Operating Expenses of the Federal Reserve Banks, by Object, 1985-87

Thousands of dollars, except as noted

Object	1985 actual	1986 estimate	1987 budget	Percent change	
				1985-86	1986-87
<b>PERSONNEL</b>					
Officers' salaries .....	51,677	56,197	58,954	8.7	4.9
Employees' salaries .....	494,110	526,394	549,536	6.5	4.4
Other personnel .....	17,357	13,839	10,072	-20.3	-27.2
Retirement and benefits .....	134,267	134,159	120,279	-.1	-10.3
Total personnel .....	697,411	730,589	738,842	4.8	1.1
<b>NONPERSONNEL</b>					
<i>Equipment</i>					
Purchases .....	2,572	2,865	2,577	11.4	-10.0
Rentals .....	46,280	41,196	36,171	-11.0	-12.2
Depreciation .....	60,309	67,278	78,843	11.6	17.2
Repairs and maintenance .....	34,261	39,235	44,485	14.5	13.4
Total equipment .....	143,422	150,574	162,077	5.0	7.6
<i>Buildings</i>					
Insurance .....	283	569	729	101.1	28.1
Taxes on real estate .....	21,079	22,936	24,530	8.8	6.9
Depreciation .....	21,088	22,837	26,838	8.3	17.5
Utilities .....	22,946	23,376	24,489	1.9	4.8
Rent .....	13,100	15,185	16,610	15.9	9.4
Other .....	13,536	13,285	16,204	-1.9	22.0
Total buildings .....	92,032	98,188	109,400	6.7	11.4
<i>Shipping</i>					
Postage .....	13,794	13,780	13,569	-.1	-1.5
Other .....	68,975	68,645	71,196	-.5	3.7
Total shipping .....	82,769	82,426	84,765	-.4	2.8
<i>Other</i>					
Supplies .....	45,037	46,263	47,481	2.7	2.6
Travel .....	20,877	20,697	21,919	-.9	5.9
Communications .....	15,396	15,711	13,679	2.0	-12.9
Fees .....	14,330	11,471	10,658	-19.9	-7.1
Other .....	6,103	8,148	8,993	33.5	10.3
Total other .....	101,743	102,290	102,730	.5	.4
Total nonpersonnel .....	419,966	433,478	458,972	3.2	5.9
<b>Total .....</b>	<b>1,117,377</b>	<b>1,164,068</b>	<b>1,197,813</b>	<b>4.2</b>	<b>2.9</b>

budgeted to increase 7.6 percent. The increase results from replacements to ensure compatibility with the System's long-range automation plan and with automation and communications standards; upgrading, replacement, and reconfiguration of check equipment; continued implementation of office automation systems; encryption of communication links; and purchase of personal computers to be used in communication networks with financial institutions.

Building expenses, which constitute 9 percent of total expenses, are expected to increase 11.4 percent, reflecting increases in local tax rates and assessments, increases in utility rates and consumption, renovations and refurbishments, higher rentals in some Districts, and the full-year effect of new buildings in Jacksonville and Los Angeles.

Shipping costs, 7 percent of total expenses, are budgeted to increase 2.8 percent in 1987 because of higher

costs of the interdistrict transportation system and anticipated increases in courier rates.

Other nonpersonnel expenses are expected to increase by \$439,000, or 0.4 percent, reflecting increases in travel; in expenditures for supplies; and in other expenses, primarily for software purchases. These increases are partially offset by decreases in communication costs and fees.

### Capital Outlays

Table 3.13 shows the plans of the Reserve Banks for capital spending in 1987.

Capital outlays are budgeted at \$183.5 million, a decrease of \$5.3 million, or 2.8 percent, from the 1986 level. Outlays for buildings and for data processing and communications equipment continue to dominate the Reserve Banks' capital budgets.

Building outlays total \$74.8 million in 1987, about 40 percent of total outlays. They include \$27.9 million for the renovation and expansion at Chicago; \$13.8 million for construction of a new building for the Charlotte Branch; \$5.4 million for final work on the Los Angeles building; \$4.8 million for renovations at the Federal

Reserve Bank of New York; and \$6.1 million for an addition to the Atlanta Bank and for completion of the Jacksonville building.

Data processing and data communication are budgeted for outlays of \$64.6 million in 1987, about 35 percent of total capital outlays. These include \$10.5 million at Chicago for mainframe processors, a District communications network, disk drives and controllers, encryption devices, and office automation equipment; \$12.1 million at New York for a new mainframe computer, associated mainframe peripherals, an office support system, and various replacements and upgrades for current systems; \$8.5 million at Atlanta for a new mainframe and peripherals, upgrades of Branch-office mainframes, mini-computers and office automation systems, and check-processing equipment for the Branch offices; and \$7.0 million at Richmond, primarily for mainframe peripherals, office automation equipment, and replacement of the District's check processing equipment.

Furniture and other equipment purchases are budgeted at \$18.6 million, of which \$8.1 million is for furniture and other furnishings. Much of the

Table 3.13

Capital Outlays of the Federal Reserve Banks, by Class of Outlay, 1985-87

Thousands of dollars, except as noted

Capital class	1985 actual	1986 estimate	1987 budget	Percent change	
				1985-86	1986-87
Data processing and data communications equipment . . .	71,727	83,825	64,617	16.9	-22.9
Furniture and other equipment . . .	21,378	21,826	18,588	2.1	-14.8
Land and other real estate . . . . .	1,093	1,810	14,437	65.6	697.8
Buildings . . . . .	49,553	72,147	74,785	45.6	3.7
Building machinery and equipment . . . . .	3,766	6,249	7,608	65.9	21.8
Leasehold improvements . . . . .	701	3,005	3,506	328.7	16.7
<b>Total . . . . .</b>	<b>148,217</b>	<b>188,861</b>	<b>183,540</b>	<b>27.4</b>	<b>-2.8</b>

latter is for small items related to renovation projects in the Districts of New York (\$1.7 million), Chicago (\$1.6 million), and Cleveland (\$1.1 million). Of the \$10.5 million for other equipment, the largest expenditures are \$2.5 million at New York, primarily for currency containers and carts; \$1.7 million at San Francisco, mainly for various replacements; and \$1.3 million at Richmond, primarily for a printing press.

Building machinery and equipment are budgeted at \$7.6 million, mainly for fixed items. The major expenditures are \$2.1 million at Chicago for backup power generators and the replacement of Detroit's heating and cooling system; \$1.9 million at Philadelphia, primarily to replace transformers containing PCBs; \$1.2 million at San Francisco, largely for an uninterruptible power system and emergency generators; and \$1.0 million at Cleveland mainly for the renovation of elevators.

Land and other real estate purchases are budgeted at \$14.4 million, primarily to house a computer contingency center and other operations in the New York District.

Leasehold improvements total \$3.5 million and are primarily at San Francisco (\$2.2 million) and in the Chicago District (\$0.9 million).

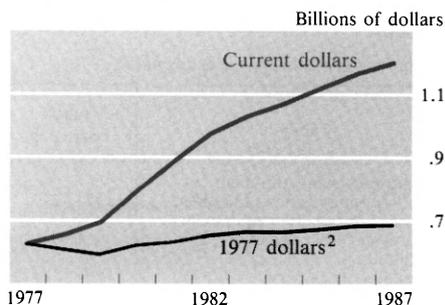
### Trends in Expenses and Employment

For the 10 years ending in 1987, expenses of the Reserve Banks have increased an average of 6.7 percent per year in current dollars and 0.9 percent per year in 1977 dollars (chart 3.1). Increases were largest during the early 1980s, when the Banks began implementing the requirements of the Monetary Control Act (MCA) and

the high rate of inflation drove up wages. During the period 1980 to 1983, nominal expenses increased an average of 9.1 percent per year while the rate of inflation averaged 6.6 percent. The most recent period, 1983 to 1987, shows a return to the pre-MCA trends, with nominal expenses rising an average of 3.9 per year and the rate of inflation averaging 3.1 percent.

Over the last decade the number of employees at the Reserve Banks has declined 1,138 ANP, or 4.7 percent (chart 3.2). In 1974, employment at the Reserve Banks peaked at 26,567 employees; it then declined a total of 3,624, or 13.6 percent, over the next five years under a Systemwide program to increase productivity. Employment increased in 1980 and 1981 because of the MCA; however, over the next three years, employment declined a total of 1,320, or 5.5 percent. It reached 22,669 in 1984, its lowest level in the 1977-87 period. Employment rose again in 1985 and 1986 as bank supervisory examiners were added and actions were taken to handle increasing volume. Employment is

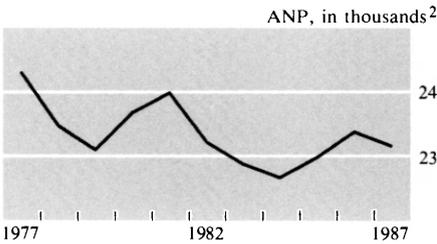
Chart 3.1  
Operating Expenses of the Federal Reserve Banks, 1977-87<sup>1</sup>



1. For 1986, estimate; 1987, budget.
2. Calculated with the GNP implicit price deflator.

Chart 3.2

Employment at the Federal Reserve Banks, 1977-87<sup>1</sup>



1. For 1986, estimate; 1987, budget.

2. See text note 2 for definition of ANP.

budgeted to decline in 1987 by 219 ANP in part because of budget restraint in the spirit of the Gramm-Rudman-Hollings legislation.

Staff increases in bank supervision and regulation of 77, or 3.7 percent, and in fiscal services of 36, or 2.0 percent, are offset by declines in other operational areas. The increase in bank supervision and regulation follows a 1986 staff increase of 192 ANP and brings the two-year growth in this area to 269, or 14.1 percent. The largest staff decline for 1987, 212 ANP, or 2.2 percent, will occur in support and overhead. Staff in the monetary and economic policy operational area will decline in 1987 by 10, or 1.3 percent, following a decline of 26, or 3.1 percent, in 1986. And employment in services to financial institutions and the public will decline in 1987 by 111, or 1.3 percent.

## Volumes and Unit Costs

Table 3.14 shows the changes in volumes and unit costs in the major services of the Reserve Banks between 1986 and 1987. Total volume for all measured services is budgeted to increase 3.0 percent over 1986. The decline in unit costs, expected to be 0.7 percent, is concentrated in check collection, the automated clearinghouse, cash, and securities services. The rise in unit costs in fiscal services is due to declining volumes. Over the five years from 1982 to the level budgeted for 1987, volume increased an average of 4.4 percent per year, while unit costs in current dollars increased 0.4 percent.

Table 3.14

Changes from 1986 to 1987 in Volumes and Unit Costs of Federal Reserve Bank Services

Percent

Service	Volume	Unit cost
<i>Payments</i>		
Commercial checks .....	2.2	-1.8
Automated clearinghouse .....	20.7	-7.4
Funds transfers .....	6.2	8.5
Other .....	1.0	3.8
<i>Cash</i>		
Currency .....	5.3	-1.8
Coin .....	2.3	2.1
<i>Fiscal agency</i>		
Savings bonds .....	4.9	-1.8
Other Treasury issues .....	-29.3	16.6
Other .....	-.7	4.5
Securities and noncash services ..	4.3	-3.0
<b>All .....</b>	<b>3.0</b>	<b>-.7</b>

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*Part II.*

*Special Analysis*

## Chapter 4

# *Productivity at the Federal Reserve Banks*

An important and continuing objective of the Federal Reserve System is to provide efficient, high-quality services to the public. To achieve this objective, the System uses several tools, the foremost of which is the Board's review of the Reserve Banks' annual budgets. In addition, a variety of statistical measures are used to evaluate the performance of each Reserve Bank. These statistical measures also provide the basis for competition among the Reserve Banks. Finally, the staff of the Board of Governors conducts on-site reviews of the Reserve Banks to evaluate their performance and to recommend approaches for improving operating techniques.

### Overview

Since the implementation of the Monetary Control Act of 1980 (MCA), the Reserve Banks' payment services have had to compete with private-sector check clearing, electronic funds transfer, and securities services. The Federal Reserve's successful competition in the marketplace is one of the best measures of its operating effectiveness. In addition to being subject to the test of the marketplace, the Federal Reserve monitors the efficiency of its services through several measures of productivity.

### Factors Affecting Productivity

Several factors influence an organization's productivity, broadly defined as output per unit of input. One of the principal sources of productivity gains is improvement in management.

Better management can make the use of both labor and capital more efficient. Productivity can also be improved through employee training and more efficient operating procedures. A larger scale or scope of activities may also raise productivity if it intensifies the use of fixed assets, such as buildings and computer equipment. Further, improvements in technology—like the recent advances in the computer industry that have increased equipment capacity, speed, and efficiency—raise the productivity of the users of the technology and reduce operating costs. In general, whenever any supplier of inputs reduces prices or improves quality, these gains may lead to improvements in productivity for the users of those inputs.

### Issues in Measuring Productivity

All the techniques available to measure productivity have limitations. One critical problem is that changes in the quality of output, or workload, generally cannot be captured in workload measures. For example, a reduction in the time taken to clear checks permits collecting institutions to obtain and use funds for other purposes sooner. Such a change is clearly an improvement in quality, but it is not reflected in workload measures, such as the number of checks processed. Because resources must be expended to achieve faster collection times, performance statistics may show little change despite the better quality.

Similarly, a bigger staff may be needed to comply with new laws or

regulations. In such cases, costs may rise initially and measured productivity may appear to decline because the benefits of implementing procedures to comply with the new laws or regulations cannot be measured. For the Federal Reserve, implementing the MCA required the addition of staff members to administer reserve requirements for all depository institutions, to make Federal Reserve services available to a new group of institutions that previously had not been able to use them, to establish fees for services, and to develop and implement billing systems. Thus, while the requirements of the MCA were being implemented, operating costs rose. However, the benefits of increased competition and economies of scale in the provision of payment services are long-term benefits that are now being realized.

Finally, productivity measures can fluctuate widely in the short term because of the ebb and flow of volume, which may be beyond the control of an organization. For example, when the Reserve Banks began assessing fees for services, volume fell and measures of output efficiency declined. Over time, resources were adjusted to improve performance. Thus, measures of performance over the short term can be misleading; long-term trends are more reliable.

### Measuring Productivity at the Reserve Banks

The focus of productivity measures at the Reserve Banks has been the six major Reserve Bank activities with quantifiable outputs—check collection, wire transfer of funds, automated clearinghouse (ACH), securities and noncash collection, currency and coin, and certain fiscal agency ser-

vices. These activities account for about 70 percent of all Reserve Bank expenses. Expenses for support functions, such as data processing, and for overhead activities, such as Reserve Bank management, accounting, and auditing, are allocated to output activities to ensure that the full cost of providing these services is included in productivity measures.

The Federal Reserve uses the following definitions in measuring Reserve Bank performance:

(1) *Employment* is the average number of personnel (ANP), which is the average annual number of full-time employees assigned to a specific activity. Under this definition, two half-time employees who work for a full year count as 1 ANP; one full-time employee who works for one-half of the year counts as 0.5 ANP.

(2) *Manhours* are the actual hours employees work on a defined output and exclude lunch time, annual leave, and sick leave.

(3) *Workloads* are the physical units of the work performed in a specific activity, such as the number of checks processed or the number of savings bonds issued, also called volume.

(4) *Units per manhour*, the measure of labor efficiency or productivity, is the workload measure for an activity divided by the manhours devoted to the activity.

(5) *Real unit cost*, a measure of cost efficiency, is the total cost of production, including equipment, building space, and personnel for a specific activity, divided by the workload for the activity. The GNP implicit price deflator is used to adjust costs for inflation.

(6) *Composite labor productivity and unit cost* are measured using composite workloads. Total costs for

the six major activities and several minor ones are divided by the composite workload to calculate the composite unit cost, and the composite workload is divided by total man-hours to arrive at the composite measure of labor productivity. Composite workloads are developed by assigning the greatest weight to the workloads that have the largest effect on total cost. As a result, trends in costs and workloads in the larger operating areas have the greatest influence on the composite performance measures.

The supervisors and managers of Reserve Banks use the first four measures to evaluate the specific activities that they oversee. The fifth measure, which includes both direct and allocated costs, is used by senior officials to measure the overall effectiveness of an activity and to compare each Bank's performance with that of other Reserve Banks. The Federal Reserve uses the composite measures to assess the overall performance of the Reserve Banks.

Unit costs, a convenient measure of an organization's efficiency, can serve as a proxy for productivity; hence, that measure is charted here for the major Reserve Bank services, along with data on employment and the volume of output. The tables display the annual changes in both unit cost and labor productivity for each service. Improvements in the trend of unit costs can arise from the factors affecting productivity, mentioned above, as well as from changes in the relative prices of inputs. On one hand, the improvements are understated to the extent that an improved or higher-quality product is produced. On the other hand, some of the reduction in unit costs may have come from lower prices or improvements in the quality of inputs produced by others; thus,

not all of the improved efficiency can be claimed by the organization producing the final output. Nonetheless, to the extent that management takes advantage of changes in relative price movements to lower the structure of input costs, an organization's profitability—or, in the case of the Federal Reserve, its cost efficiency—has improved.

The following discussion presents composite measures of the Federal Reserve Banks' performance from 1977 through 1986.<sup>1</sup> It then considers productivity developments in each of the six major activities with measurable outputs.

### Reserve Bank Performance

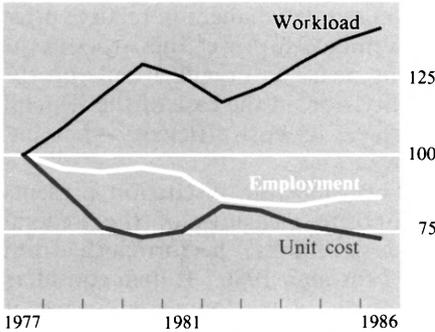
Reserve Bank operations changed significantly in the nine years from 1977 through 1986. On average, employment declined 1.6 percent per year, composite volume rose 3.9 percent per year, and the composite unit cost of all functions declined, after adjustment for inflation, 3.5 percent per year. Labor productivity increased 5.6 percent (chart 4.1 and tables 4.1 and 4.2).

Although the average performance during the past nine years was positive, there have been significant fluctuations. From 1977 through 1979, real unit cost declined at an average annual rate of 12.6 percent. This result was achieved through strict budget controls and spirited competition among the Reserve Banks. On average, employment declined at an annual rate of 2.8 percent, while composite volume rose at a 9.2 percent rate.

1. Data for 1986 are based on estimates submitted to the Board of Governors in November 1986.

Chart 4.1

Trends in Federal Reserve Bank Services, Composite Measures, 1977-86<sup>1</sup>  
1977 = 100



1. The composite workload is derived by weighting the workload, or physical units produced, in each component service according to that activity's share of total costs. See table 4.1 for the component services and their weights.

The composite unit cost is the total cost of the activities divided by the composite workload. Costs are adjusted with the 1977 GNP implicit price deflator.

Employment is the average number of personnel. See chap. 3, note 2, for definition of ANP.

Data for 1986 are estimates.

Staffing levels rose about 1.3 percent in 1980 as the Reserve Banks prepared for the requirements of the MCA. In 1981, the Reserve Banks began assessing fees for services. Although staffing levels were reduced, the nearly 4 percent drop in volume that year contributed to higher unit cost. Volume continued to decline in 1982 and, despite further staff reductions, unit cost again rose. While lower volume, especially in the check collection services, was contributing to the deterioration in unit cost, the Reserve Banks were making technological changes that also raised costs. In 1982, they implemented a sophisticated, distributed, packet-switching network for the communication of data. Called the Federal Reserve Communications System for the Eighties (FRCS-80), the network contributed

Table 4.1

Average Annual Change in Unit Cost and Labor Productivity of Federal Reserve Banks, by Service, 1977-86<sup>1</sup>

Percent

Service	Unit cost	Labor productivity	MEMO: Percent of composite
Commercial checks . . . . .	-1.3	2.3	47.0
Funds transfer . . . . .	-7.1	17.9	6.9
Automated clearinghouse . . . . .	-5.7	10.6	6.9
Securities and noncash collection . . . . .	-7.0	13.1	5.2
Currency and coin . . . . .	-7.9	9.6	18.0
Fiscal agency . . . . .	-2.1	3.9	13.7
Composite measure <sup>2</sup> . . . . .	-3.5	5.6	100

1. Unit cost is total cost divided by workload, or physical units produced; costs are adjusted with 1977 GNP implicit price deflator. Labor productivity is workload divided by manhours. Data for 1986 are estimates.

2. Composite measures are based on composite workloads, derived by weighting the workload in each component service according to that activity's share of total costs. Weights here are based on cost of function in 1985. Several smaller operations, not listed, make up about 2 percent of composite.

Table 4.2

Composite Measure of Unit Cost and Labor Productivity, Federal Reserve Bank Services, 1977-86<sup>1</sup>

Year	Unit cost		Labor productivity	
	Index	Percent change	Index	Percent change
1977 . . . . .	100	...	100	...
1978 . . . . .	88.55	-11.5	113.88	13.9
1979 . . . . .	76.32	-13.8	126.34	10.9
1980 . . . . .	73.13	-4.2	135.14	7.0
1981 . . . . .	75.05	2.6	133.71	-1.1
1982 . . . . .	83.23	10.9	136.73	2.3
1983 . . . . .	81.79	-1.7	144.95	6.1
1984 . . . . .	77.04	-5.8	155.70	7.4
1985 . . . . .	75.02	-2.6	159.55	2.5
1986 . . . . .	72.73	-3.1	163.74	2.6
Annual average . . . . .	...	-3.5	...	5.6

1. See table 4.1 for list of services and definition of terms.

to greater speed and reliability in all electronic payment services. The Banks also began to implement a

common automation environment and to develop common, or standard, operating systems for all major functions. These efforts would result in enhanced, standard services across all Reserve Banks. The costs associated with acquiring and installing equipment and developing software were substantial during the early 1980s.

In 1982 and 1983, the Reserve Banks began improving services to meet the demands of depository institutions. From 1983 through 1986, volume increased at an average annual rate of 5.1 percent. Employment remained fairly steady, and real unit cost fell at an average annual rate of 3.9 percent.

### Check Collection Service

The Federal Reserve Act authorizes the Federal Reserve Banks to collect and clear checks for depository institutions nationwide. The MCA reaffirmed the intent of the Congress that the Federal Reserve should provide payment services to depository institutions. Although the Federal Reserve is the only national organization that clears checks, it does not handle the majority of them; most checks are cleared through regional clearinghouses and networks operated by correspondent banks.

The Federal Reserve operates 48 check clearing centers, which are located at the Reserve Banks, their branches, and 11 other offices, called regional check processing centers. Together, these clearing centers process approximately 60 million checks each business day. Each Federal Reserve office receives deposits of checks from depository institutions and from other Federal Reserve offices; most are sorted using high-speed, computerized equipment. After accounting

entries are generated, the checks are dispatched to the payor institution or to the Reserve office serving the payor institution.

About 1 percent of all checks written are dishonored by payor institutions and must be returned to the institutions where they were originally deposited. Processing these return-items is highly labor intensive, and both the Federal Reserve and the banking industry are seeking ways to automate and expedite the process.

The volume of checks collected through the Federal Reserve grew at an average annual rate of about 1 percent from 1977 through 1986. Volume growth averaged about 7 percent per year from 1977 through 1980. When fees were implemented for check services in 1981, volume declined as depository institutions sought less costly means of clearing checks. For example, local clearing arrangements developed that permitted depository institutions within a geographic region to exchange checks among themselves to avoid Federal Reserve processing fees. In addition, many depository institutions found it efficient to sort their check deposits by payor bank and submit the sorted deposits to the Federal Reserve for collection. This resulted in a change in the mix of work processed by the Reserve Banks—fewer checks were sorted and more checks were handled in packages. Following these adjustments and related pricing changes, the Federal Reserve's check volume began to grow in 1983, and it has grown at an average annual rate of 1.3 percent since then.

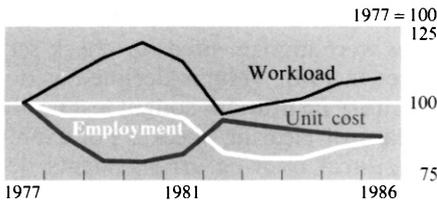
During the 1977–86 period, employment in check collection activities declined at an average annual rate of 1.3 percent and labor productivity increased at an average annual rate of 2.3 percent (chart 4.2 and table 4.3).

In fact, employment declined steadily until 1985, when staff was added to handle newly required notifications of the return of large-dollar checks. While this requirement benefits depository institutions by providing timely information on return items, the volume of notifications is not included in volume measures and thus is not reflected in productivity measures.

The average annual decrease in unit cost of 1.3 percent from 1977 through

1986 indicates that the Reserve Banks have realized some efficiencies in check operations. Fluctuations in unit cost reflect changes in volume. However, the unit cost measure does not fully reflect the improvements that have been made in the quality of Federal Reserve check services. One key indicator of the quality of check clearing is the amount of float it generates (float measures the dollar value of checks credited to depositing institutions and not yet charged against payor institutions). In 1979, Federal Reserve check float reached a daily average peak of \$6.3 billion; in 1982, it was \$2.3 billion, and in 1986 it was \$570 million. Moreover, the 1983 improvements made by the Reserve Banks to their interdistrict transportation system allowed them to offer later deposit deadlines to depository institutions and to collect an estimated \$3 billion of checks one day earlier than previously. Because these changes resulted in somewhat later presentments, the Reserve Banks introduced new services to payor banks that, among other things, assisted the banks in providing cash management services to their corporate customers. The Reserve Banks now provide payor bank services to more than 225 institutions.

Chart 4.2  
Trends in Check Collection Service, 1977-86<sup>1</sup>



1. Workload is physical units produced. Employment is average number of personnel; see chap. 3, note 2, for definition of ANP. Unit cost is total cost divided by workload; costs are adjusted with the 1977 GNP implicit price deflator. Data for 1986 are estimates.

Table 4.3  
Check Collection Service, Unit Cost and Labor Productivity, 1977-86<sup>1</sup>

Year	Unit cost		Labor productivity	
	Index	Percent change	Index	Percent change
1977	100	...	100	...
1978	89.13	-10.9	111.81	11.8
1979	81.14	-9.0	119.43	6.8
1980	80.83	-.4	122.25	2.4
1981	83.37	3.1	119.42	-2.3
1982	94.27	13.1	114.84	-3.8
1983	92.60	-1.8	120.95	5.3
1984	90.98	-1.7	123.51	2.1
1985	89.55	-1.6	124.15	.5
1986	89.06	-.5	123.07	-.9
Annual average	...	-1.3	...	2.3

1. See table 4.1, note 1.

In 1984, the Federal Reserve took steps to accelerate the collection of large-dollar checks drawn on certain institutions located outside Federal Reserve cities. This program, called the high-dollar group sort, is a relatively high-cost initiative because it requires special transportation arrangements for distant payor institutions. It has expedited the collection of approximately 290,000 items each day, valued at about \$2 billion.

In summary, the Federal Reserve has achieved moderate gains in the

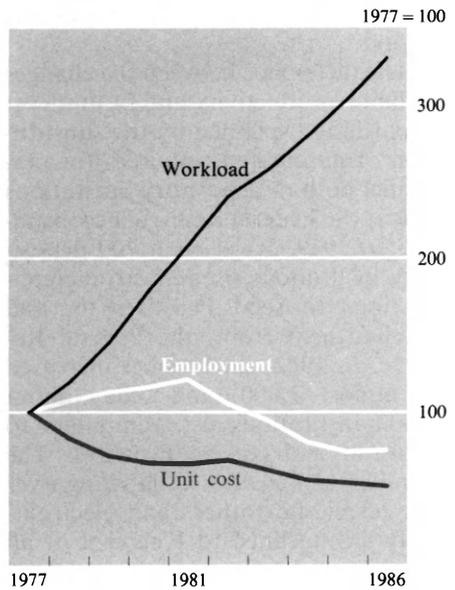
productivity of its check collection operations over the past nine years in terms of unit cost. When measured by improvements in collection times and reductions in float, however, the productivity of check collection has increased dramatically.

### Wire Transfer of Funds Service

The system for wire transfer of funds, called Fedwire, was developed to permit depository institutions to make use of funds held in their reserve accounts at the Federal Reserve Banks. When a Reserve Bank receives a request to transfer funds between institutions, the Bank checks the message for validity and then debits the reserve or clearing account of the sending institution. The Reserve Bank then delivers the message almost instantaneously to the receiving institution and credits its account. When the receiving institution is located in a Federal Reserve District different from that of the sender, the message to the receiving District is transmitted over FRCs-80. In 1986, the Reserve Banks processed about 49.5 million Fedwires with a total value of about \$123.8 trillion and an average value of \$2.5 million per transfer.

The volume of transfers processed by the Federal Reserve has grown at an average annual rate of 14.2 percent from 1977 through 1986 (chart 4.3). Although the implementation of fees for the transfer of funds did not reduce volume, the rate of growth of volume has declined over the last nine years. For example, from 1977 through 1979, volume grew at an average annual rate of 20.3 percent. From 1980 through 1982, the growth rate declined to 16.0 percent; from 1983 through 1986, it fell again, to 8.7 percent. Assessing fees for this service

Chart 4.3  
Trends in Funds Transfer Service, 1977-86<sup>1</sup>



1. See chart 4.2, note 1.

may have induced some institutions to economize in their use of Fedwires. The rate of growth for funds transfers, however, appears to be influenced by many other factors, including the level of interest rates, economic activity, innovations in financial instruments, and changes in banking structure.

Scale economies have been realized in the Fedwire service. The staff assigned to Fedwire has declined at an average annual rate of 3.1 percent during the last nine years. As volume grew rapidly from 1977 through 1980, staffing levels rose about 4 percent a year. Since 1982, however, employment has declined at an average annual rate of 9 percent. Despite rising staff levels in the first three years of the period, the rapid volume growth

resulted in an average annual increase in labor productivity of almost 18 percent since 1977 (table 4.4). Real unit cost declined 7.1 percent over the period.

The difference between the changes in labor productivity and in unit cost is partially explained by the substitution of automated resources for personnel both at depository institutions and at the Federal Reserve. For example, in 1979, fewer than 700 depository institutions used electronic connections to send Fedwires to, and receive them from, the Federal Reserve. In 1982, the number increased to almost 3,000, and today about 7,000 institutions use computers to transmit and receive Fedwires. The number of Fedwires originating over the telephone rather than electronically has declined to 1 percent of all Fedwires.

The Federal Reserve has taken several steps to improve the efficiency of its operations. FRCS-80 was implemented in 1983. In addition, the Reserve Banks have developed and are implementing an improved, standard operating system for funds transfers.

Table 4.4

Funds Transfer Service, Unit Cost and Labor Productivity, 1977-86<sup>1</sup>

Year	Unit cost		Labor productivity	
	Index	Percent change	Index	Percent change
1977	100	...	100	...
1978	82.95	-17.1	111.35	11.4
1979	71.54	-13.8	128.69	15.6
1980	66.99	-6.4	154.16	19.8
1981	66.20	-1.2	172.29	11.8
1982	68.69	3.8	228.34	32.5
1983	62.16	-9.5	272.33	19.3
1984	55.49	-10.7	348.65	28.0
1985	53.68	-3.3	408.96	17.3
1986	51.50	-4.1	440.12	7.6
Annual average	...	-7.1	...	17.9

1. See table 4.1, note 1.

Further, the Banks are encrypting all connections for data communications with depository institutions to improve security. Finally, the Reserve Banks are developing contingency systems to avoid interrupting service in the event of a breakdown.

In sum, the Reserve Banks have greatly increased the productivity of their funds transfer operations through automation while at the same time making those operations more secure and reliable.

### Automated Clearinghouse Service

The automated clearinghouse (ACH) is an electronic payment mechanism designed to handle recurring payments that traditionally had been made by paper check. The Federal Reserve has been involved with the ACH since its inception in the early 1970s. Today, the Federal Reserve provides ACH services nationwide both to depository institutions and to the U.S. government.

The ACH is a semiautomated payment service. ACH transactions are deposited with a Federal Reserve Bank in machine-readable form via electronic transmission or on magnetic tapes. The Bank edits, sorts, and accounts for the transactions in batches. The Bank then delivers the payment messages to receiving depository institutions via electronic transmissions, on magnetic tapes or diskettes, or on paper. If the payments are destined for a depository institution located in another Federal Reserve District, they are transmitted over FRCS-80.

In 1986, the Reserve Banks processed about 703 million ACH transactions; 48 percent of these transactions were government payments. The volume of ACH transactions

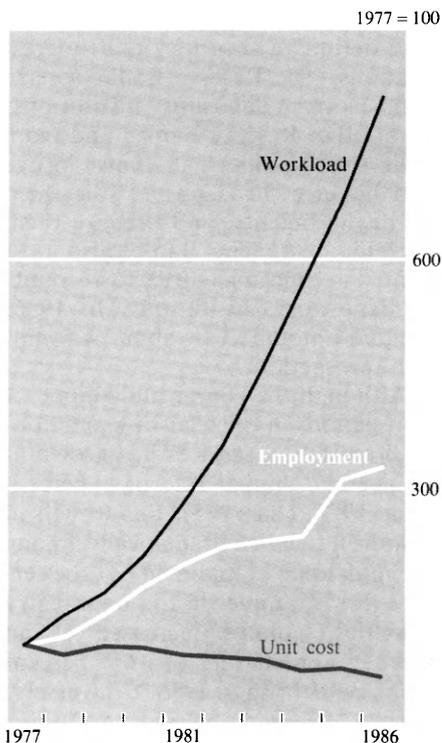
processed by the Reserve Banks has grown at an average annual rate of 26 percent from 1977 through 1986 (chart 4.4). During that period, ACH employment increased at an average annual rate of 14 percent. Since 1982, the growth in employment has moderated somewhat to a rate of about 12 percent. Labor productivity increased at an average annual rate of 10.6 percent during the nine years (table 4.5). Unit cost, however, declined at an average annual rate of 5.7 percent since 1977, reflecting, in part, an increasing use of capital. The benefits of increased automation are most evi-

dent from 1983 through 1986, when unit cost declined at an average annual rate of 10 percent.

As in the case of the Fedwire service, the Federal Reserve has realized scale economies in its ACH service. In 1977, 41 Federal Reserve offices provided ACH services; offices have since been consolidated, and now only 28 sites are involved. The Banks have also made significant improvements in quality. In 1977, virtually no depository institution transmitted ACH transactions to the Federal Reserve over data communications links; today, about 700 institutions do so. In addition, the Banks have developed and installed a new, more efficient operating system at all Federal Reserve operating sites.

In 1984, the Reserve Banks offered a new ACH product that enabled high-volume ACH users to do some sorting in order to obtain lower processing fees. Later that same year, deposit deadlines were improved significantly to permit more types of payments to flow over the ACH. In 1985, the Reserve Banks began con-

Chart 4.4  
Trends in Automated Clearinghouse Service, 1977-86<sup>1</sup>



1. See chart 4.2, note 1.

Table 4.5  
Automated Clearinghouse Service, Unit Cost and Labor Productivity, 1977-86<sup>1</sup>

Year	Unit cost		Labor productivity	
	Index	Percent change	Index	Percent change
1977 .....	100	...	100	...
1978 .....	87.17	-12.8	124.15	24.2
1979 .....	97.59	12.0	119.02	-4.1
1980 .....	95.85	-1.8	122.21	2.7
1981 .....	86.82	-9.4	138.64	13.4
1982 .....	84.30	-2.9	157.35	13.5
1983 .....	80.81	-4.1	196.49	24.9
1984 .....	66.84	-17.3	237.09	20.7
1985 .....	69.60	4.1	217.87	-8.1
1986 .....	58.74	-15.6	248.36	14.0
Annual average ..	...	-5.7	...	10.6

1. See table 4.1, note 1.

verting all ACH paper return items to automated form. In order to provide this service, the Reserve Banks increased staffing levels substantially. At the same time, this step reduced by two to three days the time taken to deliver return items to originating institutions. Because of the fee charged by the Reserve Banks for paper return items, many institutions began automating their returns, leading to additional improvements in handling.

In summary, the ACH is evolving into a completely automated service. Quality has improved substantially, and resources are being used efficiently so that unit cost has fallen.

### **Securities and Noncash Collection Services**

The Federal Reserve provides three securities-related services to depository institutions: book-entry securities safekeeping, definitive securities safekeeping, and noncash collection. A portion of the book-entry service—the safekeeping and transfer of securities issued by the Treasury Department—is provided by the Reserve Banks as fiscal agents of the United States. The other securities-related services are priced in accordance with the Monetary Control Act.

A variety of securities issued by the U.S. Treasury, other government agencies, and international organizations are held in book-entry form, that is, on computer records, and are transferred by the Reserve Banks for depository institutions. Maintaining securities on computerized records eliminates the need for physical certificates, reduces processing costs, and permits the ownership of securities to be transferred efficiently. The Reserve Banks automatically effect payment of principal and interest by

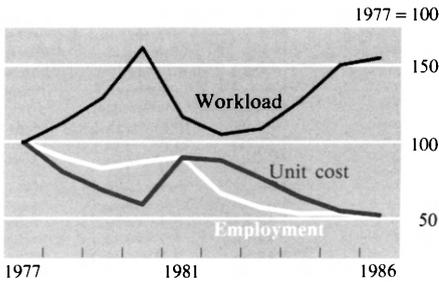
crediting the reserve or clearing accounts of the appropriate depository institutions and charging the issuer of the securities. In 1986, the Federal Reserve processed about 8.5 million securities transfers, with an average value of \$7 million per transfer and a total value of \$59.5 trillion.

The Reserve Banks also keep the physical securities themselves in their vaults for depository institutions (definitive safekeeping). The definitive safekeeping function is a labor-intensive process; the Reserve Banks maintain accounting records, process deposits and withdrawals, and clip and ship maturing interest coupons and securities. In 1986, volume was about 580,000 transactions.

The noncash collection service involves the collection of maturing or matured state, municipal, and corporate definitive securities and interest coupons. The Reserve Banks receive deposits from depository institutions, from other Reserve Banks, and from their own vaults. The Banks prove and balance the deposits, sort them by paying agents, and prepare them for shipment. The Banks also post related accounting entries to accounts of depository institutions. In 1986, volume amounted to about 4.5 million transactions.

Although the composite volume of transactions in the securities and non-cash collection services has grown at an average annual rate of 5 percent since 1977 (chart 4.5), the growth in volume has varied dramatically among the individual components of the service. For example, in the book-entry activities, volume increased at an average annual rate of 16.3 percent from 1981 through 1986. Conversely, during the same period, definitive safekeeping transactions declined at an average annual rate of 4.8 percent,

**Chart 4.5**  
Trends in Securities  
and Noncash Collection Services,  
Composite Measures, 1977-86<sup>1</sup>



1. See chart 4.1, note 1.

and noncash collection transactions declined at an average annual rate of 2.7 percent. The Tax Equity and Fiscal Responsibility Act of 1982, which prohibits the issuance of bearer securities, has contributed to the decline in the processing of definitive securities. In addition, the efforts of commercial securities depositories to immobilize securities and to effect transfers on their books have also reduced the vol-

**Table 4.6**  
Securities and Noncash Collection  
Services, Composite Unit Cost  
and Labor Productivity, 1977-86<sup>1</sup>

Year	Unit cost		Labor productivity	
	Index	Percent change	Index	Percent change
1977	100	...	100	...
1978	80.48	-19.5	125.49	25.5
1979	68.68	-14.7	155.62	24.0
1980	59.42	-13.5	185.22	19.0
1981	90.01	51.5	129.42	-30.1
1982	88.03	-2.2	158.00	22.1
1983	76.55	-13.0	189.03	19.6
1984	64.28	-16.0	237.18	25.5
1985	55.18	-14.2	279.12	17.7
1986	52.22	-5.4	302.72	8.5
Annual average	...	-7.0	...	13.1

1. See notes to table 4.1.

ume of definitive securities handled by the Reserve Banks.

Employment in the securities and noncash collection services declined at an average annual rate of 7.1 percent from 1977 through 1986. Composite labor productivity rose an average of 13.1 percent per year during the period, and composite unit cost declined at a 7 percent rate (table 4.6). These improvements reflect the decline in the volume of definitive securities transactions, which require manual processing, and the relative increase in book-entry securities transactions, which are highly automated.

### Currency and Coin Service

The Federal Reserve Act declares that one of the fundamental purposes of the Federal Reserve System is to provide the nation an elastic supply of currency. In 1986, the Federal Reserve Banks processed 15.8 billion banknotes with a face value of \$200 billion, of which 5.8 billion with a face value of \$51.6 billion were classified as unfit and destroyed. About 20.8 billion coins were processed in 1986.

Depository institutions deliver excess and unfit currency and coin to the Reserve Banks and order currency and coin when inventories decline. Currency deposits are counted on sophisticated, automated equipment, which packages notes for redistribution, identifies counterfeit currency, and destroys currency unfit for circulation. Not only has this equipment improved the productivity of the Reserve Banks; it has enabled the Banks to provide the consistently high-quality currency needed by operators of automated teller machines. Coin deposits are sorted and counted on less-sophisticated equipment.

Since 1977, the volume of currency and coin processed by the Reserve Banks has increased at an average annual rate of about 7 percent (chart 4.6). During the same period, employment has declined at an average annual rate of 2.3 percent. The most significant reductions in staffing levels, averaging 7.3 percent, occurred from 1977 to 1979, when the Reserve Banks stopped counting currency by hand. Over the nine-year period, labor productivity increased at an average annual rate of 9.6 percent, and unit cost declined 7.9 percent, improvements reflecting the benefits of automation (table 4.7).

### Fiscal-Agency Services

As fiscal agents, the Federal Reserve Banks perform a variety of services, primarily for the U.S. Treasury but also for other government agencies and various international organizations. The services to the U.S. Treasury fall into three categories—savings bonds, marketable securities, and government accounting. In addition, the Reserve Banks provide cer-

Table 4.7

Currency and Coin Service, Unit Cost and Labor Productivity, 1977-86<sup>1</sup>

Year	Unit cost		Labor productivity	
	Index	Percent change	Index	Percent change
1977 .....	100	...	100	...
1978 .....	89.98	-10.0	115.61	15.6
1979 .....	63.00	-30.0	134.53	16.4
1980 .....	58.00	-7.9	152.30	13.2
1981 .....	54.31	-6.4	165.44	8.6
1982 .....	58.87	8.4	175.93	6.3
1983 .....	59.88	1.7	184.13	4.7
1984 .....	55.54	-7.2	203.20	10.4
1985 .....	51.38	-7.5	215.85	6.2
1986 .....	47.91	-6.8	227.69	5.5
Annual average ..	...	-7.9	...	9.6

1. See table 4.1, note 1.

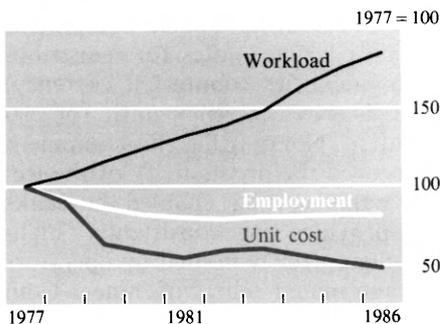
tain banking services to the Treasury, such as check collection, funds transfers, and ACH services; productivity in these services was covered in the preceding discussion.

The Federal Reserve Banks issue, service, and redeem U.S. savings bonds for the general public, and they perform several functions for depository institutions and corporations that act as issuing and paying agents for those bonds. These functions include qualifying agents according to Treasury regulations, maintaining accounting records, shipping blank stock to agents, processing sales reported by agents, collecting the proceeds of sales, and crediting the Treasury's account. The Reserve Banks also process retired (redeemed) bonds for paying agents, credit the agents' accounts, and debit the Treasury's account for the redeemed bonds.

The Reserve Banks sell new issues of marketable Treasury securities (bonds, notes, and bills), service outstanding issues, and redeem maturing issues for the general public and depository institutions. When Treasury offers new issues of marketable secu-

Chart 4.6

Trends in Currency and Coin Service, 1977-86<sup>1</sup>



1. See chart 4.2, note 1.

rities, the Reserve Banks disseminate information regarding the issues, accept tenders from customers, collect payments, credit the Treasury's account for the proceeds, and deliver the securities in book-entry form. Reserve Banks serve the needs of owners of outstanding issues by handling such matters as transfers of ownership and name and address changes; at maturity, the Banks debit the Treasury's account and pay the proceeds to the owners via check, reserve account credit, or ACH direct deposit.

In providing accounting services for the Treasury, the Reserve Banks maintain the Treasury's "checking account," otherwise known as the Treasury's general account, and the accounts for various other government agencies. The Reserve Banks make entries to these accounts, maintain accounting records and controls, and prepare account statements and transcripts.

The Treasury maintains special interest-earning accounts, called Treasury tax and loan accounts, at more than 15,000 depository institutions throughout the country. These institutions accept tax receipts directly from small businesses and corporations. The Reserve Banks receive and process daily tax receipt reports from each depository institution, maintain memoranda Treasury tax and loan accounts, process accounting adjustments for the Internal Revenue Service, and transfer receipts to the Treasury's account.

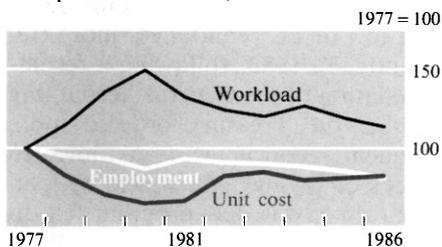
Finally, the Reserve Banks perform certain functions for the Food Coupon Program of the Department of Agriculture: they prepare instructions, process and verify food coupon deposits, dispose of used food coupons, maintain accounting records, and process adjustments.

The composite volume of all fiscal services increased at an average annual rate of 1.5 percent from 1977 to 1986, while employment in fiscal services fell at an average of 3 percent per year (chart 4.7). Growth in the volumes of both the savings bond and marketable securities activities have fluctuated widely over the nine-year period, largely because of changes in interest rates. Since 1981, the composite volume has declined as the Treasury's general-account entries have been consolidated and transactions in food coupons and marketable Treasury securities have declined.

Labor productivity rose an average of 3.9 percent per year over the nine-year period, and unit cost decreased 2.1 percent (chart 4.7 and table 4.8). Unit cost has been volatile since 1981 because of shifts in the mix of workloads as well as declining volumes.

The Banks' handling of Treasury marketable securities has changed dramatically in the transition from manual to automated processing. In 1976, the Treasury began issuing Treasury bills in book-entry form only, reducing the volume of definitive Treasury securities processed by the Reserve Banks. In 1983, the Reserve Banks began developing an

Chart 4.7  
Trends in Fiscal-Agency Services,  
Composite Measures, 1977-86<sup>1</sup>



1. See chart 4.1, note 1.

Table 4.8

Fiscal-Agency Services, Composite Unit Cost and Labor Productivity, 1977-86<sup>1</sup>

Year	Unit cost		Labor productivity	
	Index	Percent change	Index	Percent change
1977 .....	100	...	100	...
1978 .....	82.41	-17.6	121.11	21.1
1979 .....	70.38	-14.6	145.91	20.5
1980 .....	64.52	-8.3	155.06	6.3
1981 .....	65.97	2.2	142.67	-8.0
1982 .....	82.14	24.5	137.27	-3.8
1983 .....	84.74	3.2	134.04	-2.4
1984 .....	79.65	-6.0	144.34	7.7
1985 .....	81.03	1.7	140.19	-2.9
1986 .....	82.43	1.7	141.15	.7
Annual average ..	...	-2.1	...	3.9

1. See table 4.1, note 1.

automated system, called Treasury Direct, so that all Treasury securities issued to individual investors would be in book-entry form. The system was implemented in August 1986.

The handling of savings bonds has also changed. In 1980 and 1981, the Treasury introduced two new series of savings bonds, EE and HH, and required agents to accelerate their remittances to accelerate their remittances of savings bond sales. Introduction of the two series required the Reserve Banks to recall, reconcile, and exchange unissued E and H stock for new EE and HH stock; these actions involved more than 40,000 issuing agents. The acceleration of remittances required the Reserve Banks to increase the level of accounting detail and to process remittances more frequently. In 1982, following a recommendation of the General Accounting Office, the Treasury ordered more frequent reconcilments of unissued stocks of savings bonds held by issuing agents; this new program fell directly to the Reserve Banks. In 1985, the Federal Reserve took over from

the Treasury the responsibility for distributing stock to Reserve Banks and to all issuing agents.

### Comparison with Other Sectors

Observations of one organization's performance over time provide a useful measure of the quality of its management. Comparisons of that organization's performance with other, similar organizations provide another such measure.

The many unique functions of the Federal Reserve make it difficult to find organizations with which to compare it. Table 4.9 compares the changes in labor productivity at the Federal Reserve Banks with those for all commercial banks, for the federal government, and for the nonfarm economy from 1977 to 1984 (the latest year for which all data are available). The relative performance of the Banks is good, but it is important to recognize that the Federal Reserve has been able to substitute capital,

Table 4.9

Labor Productivity of the Federal Reserve Banks and of Selected Economic Sectors, 1978-84

Percent change from previous year, except as noted

Year	Federal Reserve Banks <sup>1</sup>	Economic sector		
		Commercial banks	Federal government	Non-farm
1978 .....	13.9	1.2	1.7	.8
1979 .....	10.9	-1.8	.6	-1.5
1980 .....	7.0	-6.6	2.1	-5
1981 .....	-1.1	-2.4	2.4	1.0
1982 .....	2.3	3.0	1.4	-6
1983 .....	6.1	9.1	1.6	3.2
1984 .....	7.4	2.9	.2	1.9
Annual average	6.5	.7	1.4	.6

1. See table 4.2.

SOURCE. For economic sectors, Department of Commerce, Bureau of Labor Statistics.

especially computers, for labor during the period. Many of the services and products offered by the commercial banking sector, the federal government, and the nonfarm sector

do not lend themselves to automation. Therefore, it is reasonable that labor productivity would not increase as rapidly in those sectors as at the Federal Reserve.

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# *Appendixes*

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*Appendix A**Mission and Operational Areas  
of the Federal Reserve System*

For budgeting purposes the activities of the Federal Reserve Banks and the Board of Governors are divided into four operational areas: monetary and economic policy, supervision and regulation of financial institutions, services to financial institutions and the public, and services to the U.S. Treasury and other government agencies.<sup>1</sup> This appendix describes each of these operational areas to provide a detailed discussion of the functions performed by the Federal Reserve System.

**Monetary and Economic Policy**

The monetary and economic policy function comprises the activities of the Board and the Reserve Banks that support the formulation and implementation of monetary policy. The System has several tools to affect the availability and cost of money and credit. The Federal Open Market Committee (FOMC), which consists of the seven Board members and five Reserve Banks presidents, meets twice each business quarter in Washington to set policies for System open market operations. The Board acts on requests from the Federal Reserve Banks to adjust discount rates and is respon-

sible for making changes in reserve requirements.

The Federal Reserve collects and publishes a vast amount of banking and financial data that are used internally and by market participants to help analyze conditions in the banking, money, and capital markets. This information flows through the Reserve Banks to the Board, where it is compiled and made available to the public in weekly and monthly statistical releases on subjects such as the monetary aggregates, interest rates, bank credit, and exchange rates. The research staffs at the Board and the Reserve Banks regularly use this information, as well as other data collected by federal agencies and private institutions, to assess the state of the economy and the relationships between the financial markets and economic activity. To provide background for each meeting of the FOMC, staff members prepare detailed economic and financial analyses and projections for the domestic economy and international markets. In addition, they conduct longer-run economic studies on a broad array of issues.

**Supervision and Regulation**

The Federal Reserve System plays a major role in the supervision and regulation of banks and bank holding companies. This function is accomplished through on-site examinations and inspections of member banks and bank holding companies; off-site sur-

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1. Services to the U.S. Treasury and other government agencies is an operational area unique to the Federal Reserve Banks. The fourth operational area for the Board of Governors, System policy direction and oversight, provides resources for the supervision of Board and System programs and is discussed in chap. 2.

veillance and monitoring of financial institutions; review of applications for mergers, acquisitions, and changes in control; formal supervisory actions; and adoption and enforcement of regulations to carry out statutory directives. In addition, under the Bank Holding Company Act, the Board is responsible for assuring that all activities of bank holding companies are "closely related to banking and a proper incident thereto." Beyond these activities, the supervisory process entails continuous oversight of the banking industry to ensure the safety and soundness of the financial system. This broader responsibility is reflected in the System's presence in financial markets, through open market operations, and in the Federal Reserve's role as lender of last resort. The Monetary Control Act of 1980 expanded that role by extending the privilege of borrowing from the Federal Reserve to all depository institutions whose liabilities are subject to reserve requirements.<sup>2</sup>

Supervisory and regulatory activities are carried out by both the Board of Governors and the Federal Reserve Banks. The Board is responsible for rulemaking and for establishing System supervisory policies; the Reserve Banks conduct on-site examinations and inspections, review various types of applications from banks and bank holding companies, and implement other supervisory programs.

In 1985, the Board and the Banks conducted 744 examinations of state member banks, 1,779 inspections of bank holding companies and their subsidiaries, and 2,270 reviews of

bank holding company applications. In 1986, there were 806 examinations, 2,341 inspections, and 2,176 reviews of applications. The increase in examinations and inspections is due largely to intensified supervision of state member banks and bank holding companies. Such action has been deemed necessary in light of trends within the banking industry over the past several years, including the increase in the number of failing and problem banks.

The Board enforces compliance by state member banks with the federal laws protecting consumers in their use of credit. In 1986, the System conducted examinations for such compliance at about 700 banks.

The Board's supervisory responsibilities also extend to foreign operations of U.S. banks and, under the International Banking Act, to U.S. operations of foreign banks.

### **Services to Financial Institutions and the Public**

The Federal Reserve System is a major participant in the nation's payments mechanism. The payments mechanism consists of many independent systems designed to move funds among financial institutions across the country. The Federal Reserve distributes currency and coin, processes checks for collection, operates electronic funds transfer networks, and provides for securities transfers and coupon collection. The Federal Reserve's automated clearinghouse (ACH) has had the most rapid growth. Chapter 4 discusses the volume and costs of these services and of the Banks' fiscal-agency services for the 1977-86 period.

The Federal Reserve is responsible for ensuring that the economy has sufficient currency and coin to meet

2. Depository institutions are commercial banks, savings banks, savings and loan associations, and credit unions.

the public's demand for cash. The Reserve Banks obtain currency and coin from the Bureau of Engraving and Printing and the Mint and distribute it through depository institutions. Highly sophisticated automated equipment is used to count cash, identify counterfeits, and destroy currency that is unfit for circulation. In 1986, the Reserve Banks paid out \$216.1 billion in currency and \$3.9 billion in coin and destroyed \$49.1 billion of unfit currency, an increase of roughly 80 percent over 1980 in all three activities.

The Federal Reserve Act of 1913 specifically authorizes the Reserve Banks to collect and clear checks. Today the 12 Reserve Banks, their branches, and their regional check-processing centers clear approximately 15 billion checks each year with an average daily value of more than \$40 billion. Most checks deposited with the Federal Reserve are collected on the day they are deposited or on the next business day.

The Federal Reserve's electronic wire transfer system, Fedwire, is an essential element of the nation's payments mechanism. Through Fedwire, depository institutions can draw on their reserves or clearing accounts at the Reserve Banks and transfer funds anywhere in the country within minutes. Approximately 6,800 depository institutions use Fedwire through direct electronic connections with Federal Reserve Banks, and another 2,500 institutions have off-line access to the system through the Reserve Banks. During 1986, approximately 50 million transfers valued at about \$124 trillion were sent over Fedwire, an average of \$2.5 million per transfer and \$495 billion per day.

The Federal Reserve allows participants in private clearing arrange-

ments to exchange and settle transactions on a net basis through reserve or clearing-account balances. Users of this net settlement service include local check clearinghouse associations, credit card processors, automated teller machine networks, and national and regional funds transfer networks. In 1986, about 550,000 net settlement entries were processed by the Reserve Banks.

For recurring payments, the automated clearinghouse is an electronic alternative to checks. The information that would appear on a check is placed in electronic form on a computer tape and processed directly bank to bank. ACHs are used primarily to pay salaries and pensions and to make preauthorized bill payments, such as those for insurance premiums and mortgages. Approximately 22,000 depository institutions participate in the Federal Reserve's ACH. About 3,700 of these institutions originate and receive transactions via electronic connections with the Federal Reserve; the others use machine-readable magnetic tapes. In 1986, the Reserve Banks processed about 600 million ACH transactions; about 50 percent were governmental, largely disbursements of social security benefits and civilian and military pay.

The Reserve Banks also provide securities services. The book-entry securities service, begun in 1968, maintains a computer record of government agency securities, mostly Treasury issues, and enables their holders to transfer them to other institutions throughout the country. The Reserve Banks maintained about 44,000 book-entry accounts in 1986 and processed 7.6 million security transfers.

The definitive securities safekeeping service consists of the physical

storage of securities ineligible for maintenance on the Federal Reserve's book-entry system. The Federal Reserve, one of the large holders of definitive securities in the country, held an amount worth approximately \$25 billion at the end of 1986.

The noncash collection service involves the collection of coupons, bonds, and miscellaneous items such as bankers acceptances and certain checks and drafts. Coupon collection accounts for approximately 95 percent of the transactions; the Federal Reserve processed about 4.6 million coupons in 1985 and 4.2 million in 1986.

### **Services to the U.S. Treasury and Other Government Agencies**

The Federal Reserve Act designates the Federal Reserve Banks as fiscal agents for the U.S. government. As the government's bank, the Federal Reserve supplies a wide range of services to the Treasury Department and other agencies, including deposit accounts that are used to pay all government checks, disburse government

payments, and collect government receipts. The Reserve Banks also process wire transfers of funds and automated clearinghouse payments and give the Treasury daily statements of account activity.

The Federal Reserve provides several unique services to the Treasury. For example, in administering the Treasury tax and loan program, the Reserve Banks monitor the tax receipts deposited in the 15,600 tax and loan accounts maintained by depository institutions designated by the Treasury to perform this function; hold collateral that those institutions pledge to support those deposits; and transfer funds to the Treasury's account at its request. The Reserve Banks also assist the Treasury in its financing of the public debt. Both marketable Treasury securities (bills, notes, and bonds) and nonmarketable Treasury securities (savings bonds and retirement plan bonds) are issued, serviced, and redeemed by the Reserve Banks.

The Reserve Banks also redeem and ultimately destroy food coupons for the Department of Agriculture.

## *Appendix B*

# *Budget Processes*

This appendix surveys the budget processes of the Federal Reserve Board and Banks and explains PACS, an accounting system used by the Banks.

### **The Budget and Control Process of the Board of Governors**

The Board involves all levels of its management in a planning, budget, and control process based on the calendar year. The Administrative Governor, under authority delegated by the Chairman, oversees the process to ensure that all elements are coordinated, objectives are achieved, and duplication of effort is avoided.

The Board places expenses and employment in four operational areas: economic and monetary policy, supervision and regulation of financial institutions, services to financial institutions and the public, and System policy direction and oversight. Costs for data processing are distributed to the four major areas according to usage. Expenses for other elements of support and overhead are allocated to the four areas in proportion to the share of direct cost attributable to each area.

### **The Budget Schedule**

In the spring, each division at the Board reviews its current and future needs by obtaining guidance from functional oversight committees made up of Board Members, by participating in System planning sessions, and by conducting division planning sessions. Division management lists

events likely to affect the division's budget and estimates budget changes associated with those events. Simultaneously, the Office of the Controller prepares a budget estimate based on the current level of operation, taking into account known or anticipated factors such as a general pay increase and changes in costs for retirement and for hospital and medical insurance. The controller uses this projection of expenses, along with the estimates from the other divisions and guidelines from the Board's oversight committees, to prepare estimates for a budget guideline. The Chairman and the Administrative Governor review the guideline before it is submitted to the Board in June. The guideline approved by the Board is used by the Board's divisions to develop their budgets.

During the summer, the divisions prepare their objectives and budgets, which are reviewed first by the Board's Controller and Staff Director for Management and then by the appropriate functional oversight committees. These reviews often result in adjustments to division budgets. The Administrative Governor then examines the consolidated budget and discusses it with the Chairman. In early December the budget is presented to the Board of Governors for action at an open meeting.

### **Treatment of Capital Expenditures**

Until 1985, the Board of Governors expensed purchases of all assets in the year of purchase. In 1985, the Board began capitalizing certain assets and

depreciating their value over appropriate time periods in accordance with generally accepted accounting principles. This approach more closely aligns the cost of capital assets with their periods of service and is consistent with the accounting practices followed by the Reserve Banks.

### Financial Monitoring and Control

Board expenses are monitored and reviewed throughout the budget year by all levels of Board management. To facilitate this process, each division constructs quarterly operating plans. Actual performance against budgeted targets is observed monthly by administrative management, and quarterly reports are submitted to the Board.

At midyear the Controller and the Staff Director for Management review current expenses with each division director, estimate expenses for the entire year, and submit the estimate to the Board along with any recommendations for reallocations. The midyear review helps control current expenses and provides a baseline for analyzing budget requests. At the beginning of the next year, the Controller and the Staff Director for Management present a comprehensive report to the Board on the previous year's performance against budget and operating goals.

### Assessments

After the Board adopts its budget, the cash requirement for the first half of the year is estimated. The Administrative Governor reviews and approves this estimate in early January, and as provided by the Federal Reserve Act, the required amount is raised by an assessment on each of

the Reserve Banks in proportion to its capital stock and surplus. The cash requirements for the second half of the year are estimated in June, and the second assessment is made in July. To minimize cash balances held by the Board, funds are transferred quarterly.

### The Budget and Control Process of the Federal Reserve Banks

Like the Board, the Federal Reserve Banks use a calendar-year planning, budget, and control process to identify major goals and strategies, approve resources needed to achieve the goals, and monitor operating results and financial performance.

### The Planning and Control System

In 1977, the Federal Reserve Banks implemented the Planning and Control System (PACS), an accounting and budgeting system that affords a review of expenses, an expense audit "trail," and expense accountability and thus enables the Board of Governors to compare the financial and operating performance of the Reserve Banks.

The PACS offers a detailed analysis of all services and activities. Costs are accumulated by major services (which are grouped in this document under the four primary operational areas previously described and under support and overhead—see the accompanying list). Support and overhead costs are fully allocated to the four operational areas. The PACS includes productivity statistics (primarily unit costs and items per employee-hour), "environmental" statistics (to clarify the differences among the Bank's operating environments), and "quality" statistics (measures of performance.)

The PACS also allows for the separate accounting and reporting of costs for projects outside routine activities and services. It serves as the fundamental cost accounting system for all the services provided by the Federal Reserve Banks, whether priced or nonpriced.

Periodic audits by the Board through on-site reviews have confirmed compliance by the Reserve Banks with the PACS instructions and also with System guidelines set by the Board. Independent examinations—by the General Accounting Office of the Congress and by an outside public accounting firm—have determined that the PACS is an appropriate and effective accounting mechanism for the Federal Reserve.

### The Budget Process

Planning for each year's Bank budgets starts at the outset of the preceding year, when the staff of the Board and the staffs of the Banks develop guidelines based on forecasts of changes in Bank workload and productivity. These guidelines are then approved by the Board in the spring; they are separate from the guidelines, mentioned previously, for the Board's divisions. The annual budget objective follows these guidelines and is used by the Reserve Banks in developing plans and budgets. In addition, each year the Banks update a strategic directional statement for the next three years, prepared for use in planning for priced services. In the spring, the Banks develop their own goals, objectives, and strategies and begin their budget process.

At each of the 12 Reserve Banks, the management of each department is expected to use a zero-base budget procedure whenever possible, espe-

cially for travel and training. During the summer, senior Bank officials review departmental requests, and the President and First Vice President decide which requests to recommend to the Bank's Board of Directors. The Bank's board acts on the budget, and in the fall the Board of Governors acts on fee schedules for priced services and on the Reserve Bank budgets.

### The Capital Budget Process

Capital expenditures at the Banks are managed through the planning, budgeting, and control process. Each year the Banks evaluate their needs for buildings, automation equipment, furnishings, and land. In accordance with generally accepted accounting principles, depreciation of capital assets is included in the expenses of the Banks. All large capital expenditures receive a thorough review separate from the planning, budgeting, and control process. Acquisitions of mainframe computers and peripheral equipment costing more than a certain amount must be specifically approved by the Board of Governors.

Technical staff at the Board review all proposals for capital acquisitions and make recommendations to the Director of the Division of Federal Reserve Bank Operations or to the Board of Governors, depending on the level of approval required.

### Review of Bank Budgets at the Board of Governors

When Reserve Bank budgets are forwarded to the Board in the fall, analysts review them and note System-wide issues to be addressed during the budget review. The executive summaries and the statements of objectives in each budget are analyzed in

light of the Bank's own trends, plans at the other Banks, and compliance with the System budget objective and cost-recovery objectives for priced services. The Reserve Bank budgets for priced services are examined by the Product Directors, the Pricing Policy Committee, and the Board.<sup>3</sup> The various reviews yield issues and questions, the most important of which become the agenda for the meetings held in the fall with each Reserve Bank President by the Board's Committee on Federal Reserve Bank Activities.

### Board Approval

When the Committee on Federal Reserve Bank Activities is satisfied with all Reserve Bank budgets, they are sent to the Board of Governors for action at an open meeting of the Board, which normally occurs in December.

3. The Product Directors are the First Vice Presidents at selected Reserve Banks with responsibility for day-to-day policy guidance over specific Systemwide priced services. The Pricing Policy Committee comprises one Governor, the Board's Staff Director for Federal Reserve Bank Activities, the Presidents of two Reserve Banks, and the First Vice Presidents of two other Reserve Banks.

### Federal Reserve Bank Services, by Activity

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#### OPERATIONAL AREA

##### *Monetary and economic policy*

Economic policy determination  
Open market trading

##### *Supervision and regulation*

Supervision of District financial institutions  
Administration of laws and regulations related to banking  
Studies of banking and financial market structure

##### *Services to financial institutions and the public*

Special cash service  
Currency service  
Coin service  
Transfer of account balances  
Automated clearinghouse  
Commercial check service  
Other check service  
Book-entry securities  
Definitive securities  
Loans to depository institutions  
Noncash programs

##### *Services to the U.S. Treasury and other government agencies*

Savings bonds  
Other Treasury issues  
Centrally provided Treasury and agency services  
Government agency issues  
Other Treasury and government agency services  
Treasury and government agency coupons  
Food coupons  
Government accounts

#### SUPPORT AND OVERHEAD

##### *Support*

Data processing  
Centrally provided support  
Occupancy service  
Printing and supplies  
Centralized planning  
District projects

##### *Overhead*

Administration  
System projects  
Mail  
Legal  
General books and budgets and expense control  
Files and record storage  
Personnel  
Purchasing  
Protection  
Financial services  
Motor vehicles  
Library  
Telephone and telegraph  
Audits

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*Appendix C**Response of the Federal Reserve System  
to the Gramm–Rudman–Hollings  
Legislation*

The Federal Reserve is not covered by the Balanced Budget and Emergency Deficit Control Act of 1985, commonly known as Gramm–Rudman–Hollings. However, the Board of Governors strongly supports the objectives of the legislation, passed by the Congress in late 1985. The Board therefore decided to reduce 1986 System expenses, which had already been budgeted, in a manner consistent with the spirit of the law and, accordingly, directed its staff to propose rules for the System similar to those in the new legislation.

The 1987 budget reflects continued adherence to the spirit of the act.

Gramm–Rudman–Hollings set progressively tighter ceilings on the size of the projected annual federal deficits from 1986 through 1990. The Congress directed that spending for nondefense programs in the already approved 1986 budget be cut by 4.3 percent. The base against which this percentage was applied in each agency was calculated by the Office of Management and Budget and the Congressional Budget Office. The General Accounting Office then reviewed these baselines and resolved any differences, frequently by using the midpoint between the figures.

After thoroughly reviewing the manner in which the legislation affected agencies whose status and mission are comparable to those of the Federal Reserve, the staff prepared four options for the Board. The op-

tions hinged on the procedures to be used in determining the base of expenses against which a reduction of 4.3 percent would be applied; depending on the option selected, the result would be a reduction ranging from \$15.4 million to \$20.7 million. The staff also recommended a method for allocating the reduction among the Board and the 12 Reserve Banks.

At a public meeting on February 24, 1986, the Board reviewed the staff's proposals and took three actions. First, the Board approved a reduction. Second, finding that all four options were plausible given the actions of the Congressional Budget Office and the Office of Management and Budget in assigning an expense base to other agencies, it selected a reduction midway between the largest and smallest—\$18 million for System expenses in 1986. Finally, the Board allocated the reduction among the Board and the 12 Reserve Banks on the basis of both the current size of their budgets and the increases in their budgets over the preceding three years (table C.1). The Board provided guidance on the areas in which cuts were to be avoided if possible, especially bank supervision, and it allowed the managers of each Reserve Bank and of the Board to be flexible in making the targeted reductions.

The Banks submitted their proposed cuts to the Board's Division of Federal Reserve Bank Operations, and the directors of the Board's divisions

Table C.1

Reductions in 1986 Budgeted Expenses of the Federal Reserve System in Voluntary Response to the Gramm-Rudman-Hollings Legislation<sup>1</sup>

Thousands of dollars

Entity	Reduction
Board of Governors .....	1,396
<i>District</i>	
Boston .....	905
New York .....	2,600
Philadelphia .....	1,240
Cleveland .....	1,035
Richmond .....	1,420
Atlanta .....	1,708
Chicago .....	1,616
St. Louis .....	732
Minneapolis .....	800
Kansas City .....	1,065
Dallas .....	1,279
San Francisco .....	2,332
<b>Total .....</b>	<b>18,128</b>

1. The Federal Reserve is not covered by the legislation. See text of appendix C.

submitted their plans to the Board's Office of the Controller. All proposals were then presented to the appropriate Board oversight committees.

As modified by the oversight committees, the reduction proposed for the budget of the Board of Governors was \$1.4 million (table C.2). Because of the constraints placed on growth in the 1986 budget, there was little room for reduction in most division budgets except for cuts in staffing levels, which yielded a savings of \$510,000. The next largest reduction, \$320,000, was in contractual support for surveys, studies, and mainframe software. Several divisions cut automation plans. The travel budget was reduced \$100,000, and plans to improve the Board's facilities were delayed or canceled.

The reductions by the Reserve Banks totaled \$16.7 million, of which \$5.8 million came from holding vacant positions open, reducing over-

Table C.2

Reductions in 1986 Budgeted Expenses of the Board of Governors in Voluntary Response to the Gramm-Rudman-Hollings Legislation, by Object<sup>1</sup>

Thousands of dollars

Object	Reduction
<i>Personnel</i>	
Salary .....	485
Retirement .....	10
Insurance .....	14
Total personnel .....	510
<i>Nonpersonnel</i>	
Fees .....	7
Travel .....	98
Publications committee .....	50
Supplies .....	76
Furniture and equipment .....	16
Rental .....	52
Books and subscriptions .....	3
New projects .....	92
Contracts .....	320
Tuition .....	5
Subsidies and contributions .....	33
Official dinners .....	25
Depreciation .....	31
Other .....	79
Total nonpersonnel .....	886
<b>Total .....</b>	<b>1,396</b>

1. See table C.1, note 1.

time, and cutting back on outside contracting (table C.3). Delaying equipment purchases and extending depreciation schedules on existing equipment yielded \$3.2 million. The reduction in staffing coupled with reductions in training and participation in seminars and conferences lowered the travel budget \$1.5 million. Smaller cuts in other areas produced the balance of the Reserve Banks' reductions.

On March 25, the Board approved the plans and directed that the restraint they embodied be carried over into the 1987 budget. This decision was fully reflected in the 1987 budget guidelines, presented to the Board in June 1986, and in the 1987 budgets, approved by the Board in December 1986.

Table C.3

Reductions in 1986 Budgeted Expenses  
of the Federal Reserve Banks  
in Voluntary Response to the  
Gramm-Rudman-Hollings Legislation,  
by Object and by Activity<sup>1</sup>

Thousands of dollars

Item	Reduction
OBJECT	
Personnel .....	5,846
Equipment .....	3,089
Travel .....	1,529
Building .....	1,488
Supplies .....	1,052
Fees .....	311
Communications .....	249
Shipping .....	147
Miscellaneous .....	3,020
<b>Total</b> .....	<b>16,732</b>
ACTIVITY	
<i>Operational area</i>	
Nonpriced services to financial institutions and the public .....	1,977
Supervision and regulation .....	1,612
Monetary and economic policy .....	808
Priced services to financial institutions and the public .....	304
Services to the U.S. Treasury and other government agencies .....	33
<i>Support and overhead</i>	
Support .....	6,795
Overhead .....	5,204
<b>Total</b> .....	<b>16,732</b>

1. See table C.1, note 1.

## Appendix D

# *Special Categories of System Expense*

This appendix discusses System expenses for priced services, capital equipment, and currency printing.

### **Federal Reserve Priced Services**

The Monetary Control Act of 1980 (MCA) requires the Federal Reserve to charge all depository institutions explicitly for their use of certain Federal Reserve services that had previously been provided without explicit charge to member banks only. Since the enactment of the MCA, the Federal Reserve has developed an annual pricing process in conjunction with the annual budgeting process of the Reserve Banks. In contrast to the budget process, whose focus is on cost containment, the objective in the pricing process is to establish fees that recover the full costs of providing services. As the MCA requires, these costs include all direct and indirect costs, the interest on items credited before actual collection (float), and the return on capital and the taxes that would have been paid had the services been furnished by a private business firm. The cost of capital and taxes is referred to as the private sector adjustment factor (PSAF).

The determination of prices has resulted in additional review of Reserve Bank expenses. Details on the services provided are needed to establish appropriate prices. Use of the budgets is an integral part of the pricing exercise because most of the recoverable costs of priced services consist of direct and indirect costs as determined by the annual budget process. Generally, prices are changed only once a year,

in the fourth quarter for the next calendar year, so that depository institutions can plan their own correspondent banking services more easily.

Prices for Federal Reserve services must be approved by the Product Director for the respective service, by the System Pricing Policy Committee, and ultimately by the Board of Governors.<sup>1</sup> If prices for any service are set so that the full recovery of costs is not anticipated, the Board announces the rationale for establishing prices at that level.<sup>2</sup>

The cost of float is determined by applying the current federal funds rate to the level of float expected to be generated in the coming year. Income taxes and the return on capital are determined by applying tax and financing rates, derived from a model of the nation's 25 largest bank holding companies, to the assets the Federal Reserve expects to use in its priced services operations in the coming year. Other components of the PSAF are calculated using budget data: the imputed sales tax, based on budgeted outlays for materials, supplies, and capital assets; the assessment for FDIC insurance on expected clearing balances maintained with the Federal Reserve to settle transactions; and the portion of the expenses of the

1. See appendix B, note 3, for a description of the position of Product Director and of the System Pricing Policy Committee.

2. An example is the pricing program announced to encourage use of the automated clearinghouse service, under which prices were established to recover an increasing percentage of full costs each year, reaching 100 percent in 1986.

Board of Governors that is related to the provision of priced services.

The inclusion of all these costs makes the Federal Reserve's priced services competitive with the private market, and the discipline of the market ensures that the prices charged will be no higher than necessary.

### Calculation of the PSAF for 1987

In 1986, the Board approved a 1987 private sector adjustment factor for Federal Reserve priced services of \$70.9 million, an increase of \$2.8 million, or 4.1 percent, from the PSAF of \$68.1 million targeted for 1986.

#### *Asset Base*

The estimated value of Federal Reserve assets to be used in providing priced services in 1987 is \$2,752 million (table D.1). The value of assets assumed to be financed through debt and equity will total \$393.8 million in 1987, which represents an increase of \$43.3 million, or 12 percent, from 1986 (table D.2). The rise is attributable largely to capital expenditures for bank premises, furniture, and equipment.<sup>3</sup>

#### *Cost of Capital and Taxes*

Because of periodically abnormal earnings by bank holding companies included in the model, the Board has approved the use of a three-year average of rates of return on equity for calculating the PSAF. The Board has also approved the use of three-year averages for determining imputed in-

terest costs for long-term debt and for income taxes.

The sample of 25 bank holding companies used to calculate the PSAF for 1987 is the same one used for 1986. One large bank holding company is still excluded from the sample because of its unique experience in recent years. The holding companies with the highest and lowest rates of return on equity before taxes were excluded, and calculations were based on the remaining 23 bank holding companies.

#### *Other Imputed Costs*

Other required PSAF recoveries for 1987—imputed sales taxes, FDIC insurance, and Board expenses—total \$10.6 million, down \$0.4 million from 1986 (table D.2). Most of the decrease is in imputed sales taxes, primarily because of the projected reduction in capital expenditures in 1987. This decline is partially offset by an increase in imputed costs for FDIC insurance resulting from the expected rise in clearing balances (table D.1).

### Capital Outlays

The Federal Reserve System accounts for its operations in accordance with the private sector's generally accepted accounting principles (GAAP). Federal government accounting, controlled by title 2 of the General Accounting Office's *Policy and Procedures Manual for Guidance of Federal Agencies*, is for the most part in agreement with GAAP. One notable exception is in the area of depreciation of fixed assets.

No requirement exists for depreciation accounting throughout the federal government, and the cost of fixed assets is typically recorded as an ex-

3. Short-term assets are assumed to be financed by short-term liabilities; long-term assets are assumed to be financed by a combination of equity and long-term debt.

Table D.1

Pro Forma Balance Sheet for Federal Reserve Priced Services, 1986 and 1987<sup>1</sup>

Millions of dollars

Asset or liability	1986	1987
<b>ASSETS</b>		
<i>Short-term assets</i>		
Imputed reserve requirements on clearing balances . . . . .	204.0	239.2
Investment in marketable securities . . . . .	1,496.0	1,753.8
Receivables <sup>2</sup> . . . . .	25.9	26.8
Materials and supplies <sup>2</sup> . . . . .	4.2	4.4
Prepaid expenses <sup>2</sup> . . . . .	4.2	4.2
Net items in process of collection (float) . . . . .	334.0	363.5
Total short-term assets . . . . .	2,068.3	2,391.9
<i>Long-term assets</i>		
Premises <sup>2,3</sup> . . . . .	191.0	229.6
Furniture and equipment <sup>2</sup> . . . . .	123.4	126.8
Leases . . . . .	.2	1.8
Leasehold improvements <sup>2</sup> . . . . .	1.8	2.0
Total long-term assets . . . . .	316.4	360.2
<b>Total assets</b> . . . . .	<b>2,384.7</b>	<b>2,752.1</b>
<b>LIABILITIES</b>		
<i>Short-term liabilities</i>		
Clearing balances . . . . .	1,700.0	1,993.0
Balances arising from early credit of uncollected items . . . . .	334.0	363.5
Short-term debt <sup>4</sup> . . . . .	34.3	35.4
Total short-term liabilities . . . . .	2,068.3	2,391.9
<i>Long-term liabilities</i>		
Obligations under capital leases . . . . .	.2	1.8
Long-term debt <sup>4</sup> . . . . .	94.9	126.2
Total long-term liabilities . . . . .	95.1	128.0
Total liabilities . . . . .	2,163.4	2,519.9
Equity <sup>4</sup> . . . . .	221.3	232.2
<b>Total liabilities and equity</b> . . . . .	<b>2,384.7</b>	<b>2,752.1</b>

1. Data are averages for the year. Details may not add to totals because of rounding.

2. Financed through the PSAF; other assets are self-financing.

3. Includes allocations of \$500,000 in Board of Governors' assets to priced services for 1986 and \$600,000 for 1987.

4. Imputed figures, representing the source of financing for certain priced-service assets.

pense at the time of purchase. However, title 2 specifies the use of depreciation accounting for business-like operations and for activities that recover costs from reimbursements or user charges. The Federal Reserve meets both these criteria, and the Banks and the Board depreciate the cost of fixed assets over their estimated useful lives.

The Federal Reserve Banks capitalize and depreciate all capital assets that cost \$1,500 or more and, at their option, capitalize or expense capital assets costing less than \$1,500; the capitalization guideline for the Board of Governors is \$1,000. The capitalization and depreciation of assets is consistent with GAAP, which recognize that the cost of acquiring an

Table D.2

Derivation of the Private Sector Adjustment Factor, 1986 and 1987<sup>1</sup>

Millions of dollars, except as noted

Item	1986	1987
<b>PSAF COMPONENTS</b>		
<i>Assets to be financed<sup>2</sup></i>		
Short-term .....	34.3	35.4
Long-term <sup>3</sup> .....	316.2	358.4
Total .....	350.5	393.8
<i>Capital structure (percent)</i>		
Short-term .....	9.8	9.0
Long-term .....	27.1	31.9
Equity .....	63.1	59.1
Total .....	100	100
<i>Cost of capital<sup>4</sup> (percent)</i>		
Short-term debt .....	10.3	8.5
Long-term debt .....	10.3	10.2
Pretax equity <sup>5</sup> .....	19.8	19.1
Weighted average .....	16.3	15.3
Tax rate (percent) <sup>6</sup> .....	37.6	33.9
<b>REQUIRED PSAF RECOVERIES</b>		
<i>Capital costs<sup>6</sup></i>		
Short-term debt .....	3.5	3.0
Long-term debt .....	9.8	12.8
Equity .....	43.8	44.5
Total .....	57.1	60.3
<i>Other costs</i>		
Sales taxes .....	7.9	7.3
Assessment for federal deposit insurance .....	1.4	1.6
Expenses of Board of Governors .....	1.7	1.7
Total .....	11.0	10.6
<b>Total PSAF recoveries</b>		
Millions of dollars .....	<b>68.1</b>	<b>70.9</b>
As a percent of capital .....	<b>19.4</b>	<b>18.0</b>
As a percent of expenses .....	<b>15.7</b>	<b>15.8</b>

1. Details may not add to totals because of rounding.

2. The asset base for priced services is directly determined.

3. Total long-term assets less capital leases that are self-financing.

4. All short-term assets are assumed to be financed by short-term debt. Of the total long-term assets, 35 percent are assumed to be financed by long-term debt and 65 percent by equity in 1987. The data are average rates paid by the bank holding companies included in the sample.

5. The pretax rate of return on equity is based on average aftertax rates of return on equity for the sample of bank holding companies, adjusted by the effective tax rate. The 1987 figures for pretax equity and the tax rate are based on a three-year average of these rates, for 1983-85.

6. The calculations underlying these data use the dollar values of assets to be financed, divided as described in note 4, and the rates for the cost of capital.

asset that is expected to benefit an entity over future periods should be allocated over those periods. Such treatment also provides for a more realistic measurement of the operating performance of an entity.

Capital budgeting by the Reserve

Banks is part of a multiyear process of identifying long-term capital requirements. The Banks are required to budget annually for capital outlays by capital class in order to provide the Board with the estimated effect of total operating and capital spending.

During the budget year, major capital purchases must be submitted to the Board for further review and approval. Capital expenditures for the Board are reviewed by the Board of Governors during the budget process.

Table D.3 displays the pattern of total System outlays in recent years based on the practice followed most often in the federal government. To

obtain total outlays, depreciation costs were subtracted from total expenses for each year and capital outlays (actual or projected) were added. As a result, capital outlays are shown in total in the year of purchase rather than spread over the useful lives of the assets, and thus the amounts and percent changes vary widely from year to year.

Table D.3

Total Expenses of the Federal Reserve System,  
Federal Government Accounting Method, 1982-87<sup>1</sup>

Millions of dollars, except as noted

Year and entity	Total expenses	Depreciation <sup>2</sup>		Capital outlays	Total outlays	Percent change from previous year
		Equipment	Property			
	(1)	(2)		(3)	(1) - (2) + (3)	
<i>1982</i>						
Reserve Banks .....	973.6	32.7	14.8	138.4	1,064.5	...
Board of Governors .....	67.4	1.6	1.6	1.8	66.1	...
Total .....	1,041.0	34.3	16.4	140.2	1,130.6	...
<i>1983</i>						
Reserve Banks .....	1,028.5	39.7	18.9	97.2	1,067.0	.2
Board of Governors .....	71.6	1.8	1.6	.7	68.9	4.2
Total .....	1,100.1	41.5	20.5	97.9	1,135.9	.5
<i>1984</i>						
Reserve Banks .....	1,067.8	51.4	20.6	88.7	1,084.5	1.6
Board of Governors .....	76.5	2.0	1.6	7.9 <sup>3</sup>	81.1	17.3
Total .....	1,144.3	53.5	22.1	96.6	1,165.3	2.6
<i>1985</i>						
Reserve Banks .....	1,117.4	60.3	21.1	148.2	1,184.2	9.2
Board of Governors .....	82.0	3.3	1.6	4.2 <sup>1</sup>	81.3	.6
Total .....	1,199.4	63.6	22.7	152.4	1,265.5	8.6
<i>1986 estimate</i>						
Reserve Banks .....	1,164.1	67.3	22.8	188.9 <sup>4</sup>	1,262.9	6.6
Board of Governors .....	85.2	4.3	1.6	17.4	96.7	18.9
Total .....	1,249.3	71.6	24.4	206.3	1,359.6	7.4
<i>1987 budget</i>						
Reserve Banks .....	1,197.8	78.8	26.8	183.5	1,275.7	1.0
Board of Governors .....	86.3	6.0	1.6	4.6	83.3	-13.9
Total .....	1,284.1	84.8	28.4	188.1	1,359.0	*

\* Less than .05.

1. Details may not add to totals because of rounding.

2. The Board of Governors did not depreciate capital assets before 1985; data for earlier years are estimated and subject to change (see text).

3. The Board's capital expenditures increased sharp-

ly in 1984 as a result of outlays for equipment for the Contingency Processing Center. The establishment of this facility also affected expenditures in 1985.

4. Includes an estimated \$14 million for a new computer system.

Table D.4

Costs to the Federal Reserve of New Currency, 1985-87

Millions of dollars, except as noted

Type of cost	1985 actual	1986 estimate	1987 budget	Percent change, 1986-87
Printing <sup>1</sup> .....	160.4	173.5	183.6	5.8
Shipping from Washington <sup>2</sup> .....	5.0	4.8	5.5	14.6
Reimbursement to the Treasury for issuance and retirement .....	1.5	1.7	1.7	0
System-Treasury programs to deter counterfeiting .....	4.9	2.2	0	-100
<b>Total costs of currency</b> .....	<b>171.8</b>	<b>182.2</b>	<b>190.8</b>	<b>4.7</b>

1. Based on 6.2 billion notes in 1985, 6.5 billion notes in 1986, and 6.9 billion notes in 1987.

2. Includes purchasing pouches and seals for Bureau of Engraving and Printing.

## Currency Printing

Currency is produced by the Bureau of Engraving and Printing and put into or retired from circulation by the Federal Reserve Banks, which use depository institutions as the channel of distribution. New currency is printed to replace worn notes and to accommodate increases in the demand for circulating currency. Notes are also required for increases in Federal Reserve Bank inventories, which are held to meet unanticipated increases in demand. In the past several years the demand for currency has increased because of the proliferation of automatic teller machines and because of the Federal Reserve's effort to improve the quality of currency in circulation. The Federal Reserve Act stipulates that the costs associated with acquiring Federal Reserve notes and issuing and retiring them be assumed by the Federal Reserve System.

The Board controls currency expenditures as much as possible: it consults with the Bureau of Engraving and Printing to ensure that the lowest-cost printing methods are used, it monitors operations at the Reserve Banks to ensure that no currency is destroyed prematurely, and it sees

that System guidelines on the quality of currency are being met. In this way, only the minimum number of new notes is ordered, and printing costs are minimized in total and on average. All related costs, such as those for transportation and packaging, are similarly monitored.

Costs associated with new currency are shown in table D.4. Currency in circulation, new notes issued, and notes destroyed are shown in table D.5.

Table D.5

Currency in Circulation, New Notes Issued, and Notes Destroyed, 1986 Estimate

Millions of pieces

Denomination	Notes in circulation	New notes paid out <sup>1</sup>	Notes destroyed <sup>1</sup>
1 .....	3,572	2,822	2,845
5 .....	988	697	745
10 .....	1,136	716	755
20 .....	2,579	1,412	1,244
50 .....	434	139	102
100 .....	756	149	82
<b>Total</b> .....	<b>9,465</b>	<b>5,935</b>	<b>5,773</b>

1. Based on actual levels through the third quarter and expected levels for the fourth quarter of 1986. Notes paid out do not include additions to inventory at the Reserve Banks.

## Appendix E

### Sources and Uses of Funds

The Federal Reserve Banks follow generally accepted accounting principles, as do commercial financial institutions, accruing income and expenses and capitalizing acquisitions of assets whose useful lives extend over future years. The Banks depart from GAAP only in those cases unique to a central bank.

The income of the Reserve Banks is derived primarily from U.S. government securities that the Federal Reserve has acquired through open market operations, one of the tools of monetary policy. On average these earnings account for approximately 95 percent of current income. Table E.1 shows the sources and estimated amounts of income for 1986.

Current expenses include operating expenses and the cost of earnings credits granted to depository institutions on clearing balances held by the Reserve Banks. A profit and loss account is used by the Reserve Banks to record extraordinary gains or deductions from current net income. The

primary entries are for gains or losses on the sale of U.S. government securities and for gains or losses on assets denominated in foreign currencies that result either from the sale of those assets or from their revaluation at market exchange rates.

The Reserve Banks maintain a surplus account to cushion unexpected losses, much as commercial establishments retain earnings. The surplus account is increased or decreased in order to keep it at an amount equal to the paid-in capital of the member banks, which is the current level of the account stipulated by the Board of Governors.

Table E.2 summarizes the income and expenses for 1985 and the estimates for 1986. Under the policy established by the Board of Governors at the end of 1964, all net income after the statutory dividend to member banks and the amount necessary to equate surplus to paid-in capital is transferred to the Treasury as interest on Federal Reserve notes. Preliminary figures indicate that in 1986, current income before expenses, dividends, additions to surplus, and payments to the Treasury totaled \$17.5 billion. This was somewhat less than in 1985 (\$18.1 billion) because of lower rates of interest on U.S. government securities. Additions to current net income from profit and loss entries totaled \$2.0 billion. In 1986, preliminary figures show statutory dividends to member banks of \$110 million; additions to surplus of \$92 million; and payments to the Treasury of \$17.8 billion.

Table E.1

Income of the Federal Reserve System,  
1985 and 1986<sup>1</sup>

Millions of dollars

Item	1985 actual	1986 estimate
Loans .....	427.9	279.2
U.S. government securities ..	16,843.1	16,141.5
Foreign currencies .....	228.7	393.8
Priced services .....	613.8	629.8
Other .....	18.4	20.4
<b>Total .....</b>	<b>18,132.0</b>	<b>17,464.7</b>

1. Details may not add to totals because of rounding.

Table E.2

Distribution of the Income of the Federal Reserve System, 1985 and 1986<sup>1</sup>

Millions of dollars

Item	1985 actual	1986 estimate
Current income <sup>2</sup> .....	18,132	17,465
LESS		
<i>Current net expenses of Reserve Banks</i> <sup>3</sup>		
Operating expenses .....	1,023	1,051
Earnings credit cost .....	105	105
EQUALS		
Current net income .....	17,004	16,309
PLUS		
Net additions to or deductions from (-) current net income <sup>4</sup> .....	1,301	1,978
LESS		
<i>Assessments by Board</i>		
Board expenses .....	77	97
Cost of currency .....	174	181
<i>Other distributions</i>		
Dividends paid to member banks <sup>5</sup> .....	103	110
Transfers to or from (-) surplus <sup>6</sup> .....	155	92
EQUALS		
<b>Payments to U.S. Treasury</b> .....	<b>17,796</b>	<b>17,807</b>

1. Details may not add to totals because of rounding.

2. Includes income from U.S. government securities, loans, priced services, and foreign currencies.

3. Net of reimbursements from the Treasury and other government agencies.

4. This account is the same as that reported under the same name in table 8 of the Board's *Annual Report* to the Congress and includes gains or losses on foreign exchange transactions due mainly to revaluations at market exchange rates; gains or losses on sales

of U.S. government securities; and miscellaneous gains or losses.

5. The Federal Reserve Act requires the Federal Reserve to pay dividends to member banks at the rate of 6 percent of paid-in capital.

6. Each year the Federal Reserve transfers to its surplus account an amount sufficient to equate surplus to paid-in capital. The purpose of this account is to provide a reserve against losses.

## Appendix F

### Federal Reserve System Audits

The Federal Reserve System is subject to several levels of audit and review. Each Federal Reserve Bank employs a full-time staff of auditors who report directly to its board of directors. The Federal Reserve Board regularly audits the financial operations of the Reserve Banks and conducts periodic reviews of all other operations of the Banks. The Board itself is subject to review by its own internal staff of auditors and operations reviewers, and its financial operations are examined annually by an independent auditor.

Beginning in 1978, most of the operations of the Federal Reserve Sys-

tem became subject to review by the General Accounting Office (GAO) with the passage of Public Law 95-320, the Federal Banking Agency Audit Act. The GAO currently has 19 projects in various stages of completion, and since 1979 it has completed 35 reports dealing with various aspects of Federal Reserve operations. These projects and reports are shown in tables F.1 and F.2 respectively. In addition, the GAO has involved the Federal Reserve in more than 50 other reviews not directly related to the System and has terminated 20 others before completion. Copies of the reports are available directly from the GAO.

Table F.1

Active GAO Projects Related to the Federal Reserve

Subject	Date initiated
Federal Reserve market oversight	2/22/84
U.S. government function as lender of last resort	8/21/84
Bank-insulation strategies	12/11/84
Risks in the commercial banking industry	2/27/85
Regulation of banks' foreign exchange rate	5/14/85
Impact of changing fee structure	5/30/85
Federal banking agencies' uniform country risk examination system	9/20/85
Role of credit assurances	10/9/85
Analysis of government securities market	11/27/85
Adequacy of Treasury's investment accounting process	2/11/86
Credit cards	3/13/86
Potential information abuses	5/1/86
Food stamps redemption process	5/7/86
Sectoral problems in banking	7/30/86
Regulation Q	11/3/86
Internationalization of capital markets	11/7/86
Government securities secondary market trading system	11/7/86
Deposit insurance	11/12/86
Supervision of banks' use of short-term funding	11/24/86

Table F.2

## Completed GAO Reports Related to the Federal Reserve System

Report	Number	Date
Comparing Policies and Procedures of the Three Bank Regulatory Agencies	GGD-79-27	3/29/79
Federal Systems Not Designed to Collect Data on All Foreign Investments in U.S. Depository Institutions	GGD-79-42	6/19/79
The Federal Reserve Should Assure Compliance with the 1970 Bank Holding Company Act Amendments	GGD-80-21	3/12/80
Internal Auditing Can Be Strengthened in the Federal Reserve System	GGD-80-59	8/8/80
Despite Positive Effects, Further Foreign Acquisitions of U.S. Banks Should Be Limited until Policy Conflicts Are Fully Addressed	GGD-80-66	8/26/80
Federal Examinations of Financial Institutions: Issues That Need to Be Resolved	GGD-81-12	1/6/81
Examinations of Financial Institutions Do Not Assure Compliance with Consumer Credit Laws	GGD-81-13	1/21/81
Disappointing Progress in Improving Systems for Resolving Billions in Audit Findings	AFMD-81-27	1/23/81
Federal Reserve Security over Currency Transportation Is Adequate	GGD-81-27	2/23/81
The Federal Structure for Examining Financial Institutions Can Be Improved	GGD-81-21	4/24/81
Response to Questions Bearing on the Feasibility of Closing the Federal Reserve Banks	GGD-81-49	5/21/81
Bank Secrecy Act Reporting Requirements Have Not Yet Met Expectations, Suggesting Need for Amendment	GGD-81-80	7/23/81
Federal Reserve Could Improve the Efficiency of Bank Holding Company Inspections	GGD-81-79	8/18/81
Information on Selected Aspects of Federal Reserve System Expenditures	GGD-82-33	2/12/82
Federal Review of Intrastate Branching Can Be Reduced	GGD-82-31	2/24/82
Despite Improvements, Recent Bank Supervision Could Be More Effective and Less Burdensome	GGD-82-21	2/26/82
Issues to Be Considered while Debating Interstate Bank Branching	GGD-82-36	4/9/82
The Federal Reserve Should Move Faster to Eliminate Subsidy of Check Clearing Operations	GGD-82-22	5/7/82
Information about Depository Institutions' Ancillary Activities Is Not Adequate for Policy Purposes	GGD-82-57	6/1/82
Bank Merger Process Should Be Modernized and Simplified	GGD-82-53	8/16/82
An Analysis of Fiscal and Monetary Policies Bank Examination for Country Risk and International Lending	PAD-82-45 ID-82-52	8/31/82 9/2/82
Credit Insurance Disclosure Provisions of the Truth-in-Lending Act Consistently Enforced Except When Decisions Appealed	GGD-83-3	10/25/82
Financial Institutions Regulatory Agencies Can Make Better Use of Consumer Complaint Information	GGD-83-13	8/25/83
Unauthorized Disclosure of the Federal Reserve's Monetary Policy Decision	GGD-84-40	2/3/84
Federal Financial Institutions Examination Council Has Made Limited Progress toward Accomplishing Its Mission	GGD-84-4	2/3/84
Control Improvements Needed in Accounting for Treasury Securities at the Federal Reserve Bank of New York	AFMD-84-10	5/2/84
Statutory Requirements for Examining International Banking Institutions Need Attention	GGD-84-39	7/11/84
Supervisory Examinations of International Banking Facilities Need to Be Improved	GGD-84-65	9/30/84
An Examination of Concerns Expressed about the Federal Reserve's Pricing of Check Clearing Activities	GGD-85-9 GGD-85-9A	1/14/85

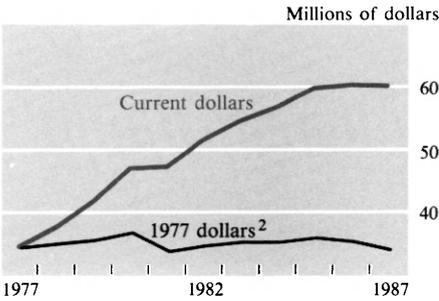
*Table F.2—Continued*

Report	Number	Date
Information on Independent Public Accountant Audits of Financial Institutions .....	GGD-84-44FS	4/21/86
An Analysis of Two Types of Pooled Investment Funds .....	GGD-86-63	5/12/86
How the Markets Developed and How They Are Regulated .....	GGD-86-26	5/15/86
U.S. Banking Supervision and International Supervisory Principles .....	NSIAD-86-93	7/25/86
Financial Institution Regulators' Compliance Examination .....	GGD-86-94	8/1/86

Appendix G

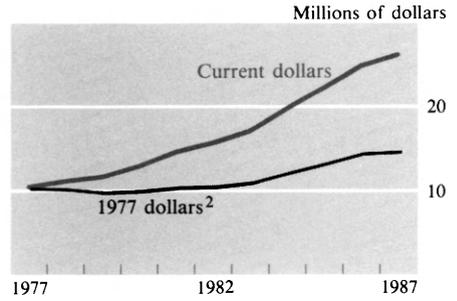
*Trends in Expenses and Employment at the Board of Governors*

*Chart G.1*  
Expenses for Personnel Services at the Board of Governors, 1977-87<sup>1</sup>



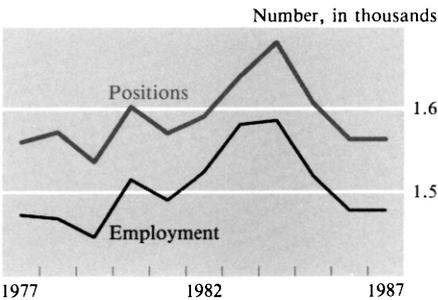
1. Excluding accrued expense for increased value of unused annual leave. For 1986, estimate; 1987, budget.
2. Calculated with the GNP implicit price deflator.

*Chart G.3*  
Expenses for Nonpersonnel Services at the Board of Governors, 1977-87<sup>1</sup>



1. For 1986, estimate; 1987, budget.
2. Calculated with the GNP implicit price deflator.

*Chart G.2*  
Employment and Positions at the Board of Governors, 1977-87<sup>1</sup>

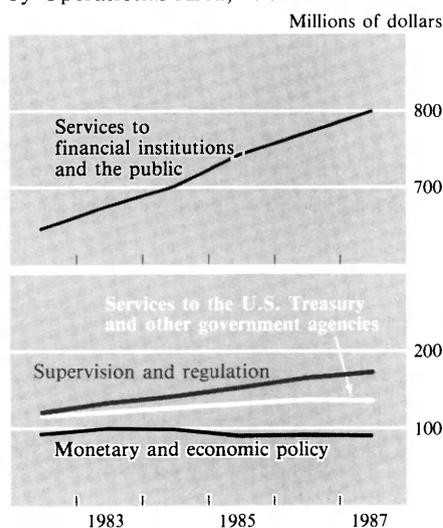


1. Year-end data. For 1986, estimate; 1987, budget.

## Appendix H

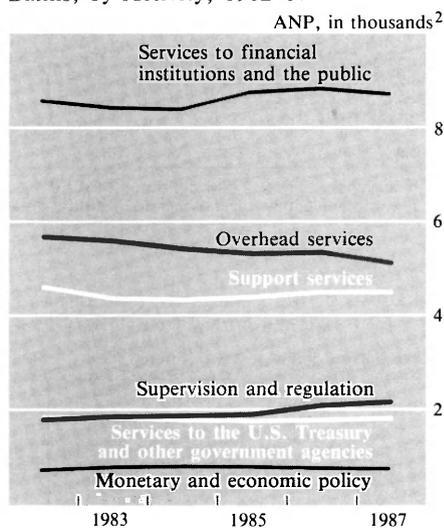
## Trends in Expenses and Employment at the Federal Reserve Banks

Chart H.1

Expenses of the Federal Reserve Banks, by Operational Area, 1982-87<sup>1</sup>

1. For 1986, estimate; for 1987, budget.

Chart H.2

Employment at the Federal Reserve Banks, by Activity, 1982-87<sup>1</sup>

1. For 1986, estimate; for 1987, budget.

2. See chap. 3, note 2, for definition of ANP.

Table H.1

Operating Expenses of the Federal Reserve Banks, by District, 1986-87<sup>1</sup>

Thousands of dollars, except as noted

District	1986 estimate	1987 budget	Change	
			Amount	Percent
Boston	68,710	70,480	1,770	2.6
New York	223,032	230,939	7,908	3.5
Philadelphia <sup>2</sup>	65,507	66,209	702	1.1
Cleveland	69,031	71,583	2,552	3.7
Richmond	90,563	92,055	1,492	1.6
Atlanta	106,040	109,947	3,907	3.7
Chicago	137,995	142,231	4,237	3.1
St. Louis	58,785	60,299	1,514	2.6
Minneapolis	57,119	59,128	2,009	3.5
Kansas City	75,390	78,200	2,810	3.7
Dallas	75,360	76,345	985	1.3
San Francisco	136,537	140,397	3,860	2.8
<b>Total</b>	<b>1,164,068</b>	<b>1,197,813</b>	<b>33,746</b>	<b>2.9</b>

1. In this and the following tables, components may not add to totals because of rounding.

2. Excluding incremental expenses associated with

the Treasury Direct program, which is located in the District, Philadelphia's change is -\$192 thousand or -.3 percent.

Table H.2

## Employment at the Federal Reserve Banks, by District, 1986-87

Average number of personnel, except as noted<sup>1</sup>

District	1986 estimate	1987 budget	Change	
			Amount	Percent
Boston .....	1,462	1,460	-2	-.1
New York .....	4,123	4,047	-76	-1.8
Philadelphia <sup>2</sup> .....	1,240	1,256	16	1.3
Cleveland .....	1,414	1,399	-15	-1.1
Richmond .....	1,968	1,963	-5	-.3
Atlanta .....	2,212	2,196	-16	-.7
Chicago .....	2,843	2,803	-40	-1.4
St. Louis .....	1,318	1,322	4	.3
Minneapolis .....	1,095	1,079	-16	-1.5
Kansas City .....	1,635	1,621	-14	-.9
Dallas .....	1,595	1,563	-32	-2.0
San Francisco .....	2,476	2,453	-23	-.9
<b>Total</b> .....	<b>23,381</b>	<b>23,162</b>	<b>-219</b>	<b>-.9</b>

1. See chap. 3, note 2, for definition of ANP.

2. Excluding employment associated with the Treasury Direct program, which is located in the District, Philadelphia's change is -9 ANP or -.8 percent.

Table H.3

Expenses of the Federal Reserve Banks  
for Central Bank and Treasury Services, by District, 1986-87<sup>1</sup>

Thousands of dollars, except as noted

District	1986 estimate	1987 budget	Change	
			Amount	Percent
Boston .....	37,502	37,228	-275	-.7
New York .....	154,032	159,004	4,972	3.2
Philadelphia <sup>2</sup> .....	43,099	43,119	20.8	*
Cleveland .....	38,150	38,980	830	2.2
Richmond .....	48,916	49,222	306	.6
Atlanta .....	52,061	53,483	1,422	2.7
Chicago .....	73,454	74,832	1,378	1.9
St. Louis .....	35,541	36,032	491	1.4
Minneapolis .....	25,880	26,202	322	1.2
Kansas City .....	41,313	42,083	770	1.9
Dallas .....	39,270	38,780	-490	-1.2
San Francisco .....	80,501	81,176	675	.8
<b>Total</b> .....	<b>669,719</b>	<b>680,139</b>	<b>10,421</b>	<b>1.6</b>

\* Less than .05.

1. Includes direct, support, and overhead expenses charged to monetary and economic policy, services to the U.S. Treasury and other government agencies, supervision and regulation, and nonpriced services to financial institutions and the public.

2. Excluding incremental expenses associated with the Treasury Direct program, which is located in the District, Philadelphia's change is -\$875 thousand or -2.4 percent.

Table H.4

## Expenses of the Federal Reserve Banks, by Operational Area, 1986-87

Thousands of dollars, except as noted

Operational area	1986 estimate	1987 budget	Change	
			Amount	Percent
Monetary and economic policy .....	91,965	90,802	-1,163	-1.3
Supervision and regulation .....	164,331	171,690	7,359	4.5
Services to financial institutions and the public .....	770,745	799,379	28,634	3.7
Services to the U.S. Treasury and other government agencies .....	137,027	135,943	-1,084	- .8
<b>Total</b> .....	<b>1,164,068</b>	<b>1,197,813</b>	<b>33,746</b>	<b>2.9</b>
MEMO <sup>1</sup>				
Support .....	368,033	395,972	27,940	7.6
Overhead .....	361,933	350,753	-11,181	-3.1

1. Costs of support and overhead included in expenses by operational area. Support refers to activities, such as data processing, whose costs can be

charged to users according to amount of use. Overhead refers to activities, such as auditing, whose costs are charged according to the users' shares of total costs.

Table H.5

Expenses of the Federal Reserve Banks  
for Monetary and Economic Policy, by District, 1986-87

Thousands of dollars, except as noted

District	1986 estimate	1987 budget	Change	
			Amount	Percent
Boston .....	5,414	5,161	-253	-4.7
New York <sup>1</sup> .....	30,625	32,170	1,545	5.0
Philadelphia .....	4,565	4,028	-537	-11.8
Cleveland .....	4,766	4,782	16	.3
Richmond .....	4,309	4,178	-131	-3.0
Atlanta .....	6,146	6,019	-127	-2.1
Chicago .....	8,105	7,844	-261	-3.2
St. Louis .....	4,822	4,887	65	1.4
Minneapolis .....	4,671	3,998	-673	-14.4
Kansas City .....	4,788	4,759	-28	-.6
Dallas .....	4,938	4,549	-389	-7.9
San Francisco .....	8,817	8,427	-390	-4.4
<b>Total</b> .....	<b>91,965</b>	<b>90,802</b>	<b>-1,163</b>	<b>-1.3</b>

1. Expenses of open market trading operations, located in the District, are \$11.1 million for 1986 and \$12.8 million for 1987.

Table H.6

Expenses of the Federal Reserve Banks  
for Supervision and Regulation, by District, 1986-87

Thousands of dollars, except as noted

District	1986 estimate	1987 budget	Change	
			Amount	Percent
Boston <sup>1</sup> .....	7,879	7,652	-227	-2.9
New York .....	32,397	34,418	2,021	6.2
Philadelphia <sup>1</sup> .....	7,548	7,383	-165	-2.2
Cleveland .....	9,692	10,346	654	6.8
Richmond .....	9,476	10,151	674	7.1
Atlanta .....	13,663	13,950	287	2.1
Chicago .....	23,844	24,563	720	3.0
St. Louis <sup>1</sup> .....	7,283	7,215	-68	-0.9
Minneapolis .....	7,805	8,187	382	4.9
Kansas City .....	14,197	14,948	751	5.3
Dallas .....	11,816	12,324	508	4.3
San Francisco .....	18,732	20,553	1,821	9.7
<b>Total</b> .....	<b>164,331</b>	<b>171,690</b>	<b>7,359</b>	<b>4.5</b>

1. The reduction is related primarily to decreases in services other than supervision.

Table H.7

Expenses of the Federal Reserve Banks  
for Services to Financial Institutions and the Public, by District, 1986-87

Thousands of dollars, except as noted

District	1986 estimate	1987 budget	Change	
			Amount	Percent
Boston .....	48,510	50,895	2,386	4.9
New York .....	129,422	134,542	5,121	4.0
Philadelphia .....	37,499	38,383	884	2.4
Cleveland .....	45,605	47,429	1,825	4.0
Richmond .....	68,164	69,120	955	1.4
Atlanta .....	76,582	79,991	3,409	4.5
Chicago .....	90,049	94,280	4,231	4.7
St. Louis .....	38,574	40,081	1,507	3.9
Minneapolis .....	40,762	42,809	2,046	5.0
Kansas City .....	49,614	51,950	2,336	4.7
Dallas .....	51,749	52,839	1,090	2.1
San Francisco .....	94,216	97,060	2,845	3.0
<b>Total</b> .....	<b>770,745</b>	<b>799,379</b>	<b>28,634</b>	<b>3.7</b>

Table H.8

Expenses of the Federal Reserve Banks  
for Services to the U.S. Treasury and Other Government Agencies, by District, 1986-87

Thousands of dollars, except as noted

District	1986 estimate	1987 budget	Change	
			Amount	Percent
Boston .....	6,907	6,772	-135	-2.0
New York .....	30,588	29,809	-779	-2.5
Philadelphia <sup>1</sup> .....	15,895	16,415	520	3.3
Cleveland .....	8,969	9,026	57	.6
Richmond .....	8,614	8,607	-6	-.1
Atlanta .....	9,649	9,987	339	3.5
Chicago .....	15,998	15,544	-453	-2.8
St. Louis .....	8,105	8,115	10	.1
Minneapolis .....	3,882	4,135	253	6.5
Kansas City .....	6,791	6,543	-248	-3.7
Dallas .....	6,858	6,632	-226	-3.3
San Francisco .....	14,773	14,358	-415	-2.8
<b>Total</b> .....	<b>137,027</b>	<b>135,943</b>	<b>-1,084</b>	<b>-.8</b>

1. Excluding incremental expenses associated with the Treasury Direct program, which is located in the District, Philadelphia's change is -\$375 thousand or -3.7 percent.

Table H.9

Expenses of the Federal Reserve Banks  
for Salaries of Officers and Employees, by District, 1986-87<sup>1</sup>

Thousands of dollars, except as noted

District	1986 estimate	1987 budget	Change	
			Amount	Percent
Boston .....	37,602	39,677	2,075	5.5
New York .....	115,420	120,508	5,088	4.4
Philadelphia <sup>1</sup> .....	30,309	32,201	1,891	6.2
Cleveland .....	33,024	34,845	1,821	5.5
Richmond .....	43,439	46,263	2,824	6.5
Atlanta .....	51,095	53,194	2,099	4.1
Chicago .....	70,902	72,594	1,692	2.4
St. Louis .....	29,786	31,551	1,764	5.9
Minneapolis .....	26,316	27,534	1,219	4.6
Kansas City .....	39,113	41,244	2,131	5.4
Dallas .....	38,596	39,504	908	2.4
San Francisco .....	66,989	69,376	2,387	3.6
<b>Total</b> .....	<b>582,591</b>	<b>608,490</b>	<b>25,899</b>	<b>4.4</b>

1. Excluding incremental expenses associated with the Treasury Direct program, which is located in the District, Philadelphia's increase is \$1.7 million or 6.1 percent.

Table H.10

Factors in the 1986-87 Change in Salaries  
of Officers and Employees of the Federal Reserve Banks, by District

Percentage points

District	Merit adjust- ment	Structure adjust- ment	Promotions and reclassifi- cations	Change in staffing	Turnover and lag <sup>1</sup>	Overtime	Other	Total change
Boston .....	5.1	.1	1.4	-.5	-.9	-.3	.6	5.5
New York .....	5.3	.0	.5	-.7	-1.0	-.3	.6	4.4
Philadelphia .....	4.5	.0	.8	1.6	.0	-.6	.0	6.2
Cleveland .....	4.6	.1	.9	1.6	-1.6	-.2	.1	5.5
Richmond .....	5.5	.0	1.4	1.0	-.9	-.6	.1	6.5
Atlanta .....	5.3	.5	.7	-1.4	-.4	-.6	.0	4.1
Chicago .....	4.9	.1	1.6	-1.7	-1.9	-.4	.0	2.4
St. Louis .....	4.9	.0	.6	.5	-.1	-.2	.2	5.9
Minneapolis .....	4.6	.0	.8	-1.5	.0	-.1	.7	4.6
Kansas City .....	5.0	.5	1.2	.4	-1.5	-.1	.1	5.4
Dallas .....	3.9	.1	.2	-.9	-.6	-.4	.0	2.4
San Francisco .....	5.0	-.4	.5	-1.4	.4	-.5	.0	3.6
<b>Total .....</b>	<b>4.9</b>	<b>.1</b>	<b>.9</b>	<b>-.5</b>	<b>-.8</b>	<b>-.4</b>	<b>.2</b>	<b>4.4</b>

1. Turnover is the replacement of a departing employee with one having a lower pay grade. Lag is the time during which a position remains vacant.

Table H.11

Capital Outlays of the Federal Reserve Banks, by District, 1986-87<sup>1</sup>

Thousands of dollars, except as noted

District	1986 estimate	1987 budget	Change	
			Amount	Percent
Boston .....	7,769	6,407	-1,362	-17.5
New York .....	29,315	37,411	8,096	27.6
Philadelphia .....	5,531	4,117	-1,414	-25.6
Cleveland .....	6,845	10,371	3,526	51.5
Richmond .....	10,436	23,594	13,158	126.1
Atlanta .....	22,730	16,761	-5,969	-26.3
Chicago .....	39,736	44,230	4,494	11.3
St. Louis .....	5,766	5,116	-649	-11.3
Minneapolis .....	4,194	6,025	1,831	43.7
Kansas City .....	9,024	5,683	-3,341	-37.0
Dallas .....	5,675	3,906	-1,768	-31.2
San Francisco .....	41,842	19,919	-21,923	-52.4
<b>Total .....</b>	<b>188,861</b>	<b>183,540</b>	<b>-5,321</b>	<b>-2.8</b>

Table H.12

## Capital Outlays of the Federal Reserve Banks, by Class of Outlay, by District, 1986-87

Thousands of dollars

District and year	Data processing and data communication equipment	Furniture, furnishings, and fixtures	Other equipment	Land and other real estate	Buildings	Building machinery and equipment	Leasehold improvements	Total
<i>Boston</i>								
1986 estimate . . . .	5,544	177	817	0	1,140	90	0	7,769
1987 budget . . . . .	4,505	177	487	0	1,219	20	0	6,407
<i>New York</i>								
1986 estimate . . . .	18,812	1,812	2,581	1,000	2,994	39	2,076	29,315
1987 budget . . . . .	12,120	1,723	2,472	14,000	6,810	0	287	37,411
<i>Philadelphia</i>								
1986 estimate . . . .	4,348	251	546	0	90	0	295	5,531
1987 budget . . . . .	1,157	432	462	0	145	1,921	0	4,117
<i>Cleveland</i>								
1986 estimate . . . .	1,897	741	544	0	2,350	1,282	31	6,845
1987 budget . . . . .	3,569	1,088	661	192	3,823	1,017	21	10,371
<i>Richmond</i>								
1986 estimate . . . .	6,278	427	831	0	2,825	75	0	10,436
1987 budget . . . . .	6,984	204	1,300	125	14,922	60	0	23,594
<i>Atlanta</i>								
1986 estimate . . . .	14,030	2,427	1,373	568	3,668	664	0	22,730
1987 budget . . . . .	8,467	1,088	737	100	6,070	300	0	16,761
<i>Chicago</i>								
1986 estimate . . . .	11,252	1,194	947	0	26,022	208	113	39,736
1987 budget . . . . .	10,460	1,586	778	0	28,368	2,127	910	44,230
<i>St. Louis</i>								
1986 estimate . . . .	1,723	379	308	0	2,277	1,078	0	5,766
1987 budget . . . . .	1,782	461	305	0	2,396	172	0	5,116
<i>Minneapolis</i>								
1986 estimate . . . .	3,492	36	453	0	174	39	0	4,194
1987 budget . . . . .	4,882	84	354	0	501	205	0	6,025
<i>Kansas City</i>								
1986 estimate . . . .	3,316	1,280	1,418	241	1,588	1,181	0	9,024
1987 budget . . . . .	2,751	401	847	0	1,152	531	0	5,683
<i>Dallas</i>								
1986 estimate . . . .	2,643	628	498	0	864	973	70	5,675
1987 budget . . . . .	1,987	323	409	20	998	100	70	3,906
<i>San Francisco</i>								
1986 estimate . . . .	10,489	892	1,268	0	28,155	618	420	41,842
1987 budget . . . . .	5,954	544	1,667	0	8,381	1,155	2,218	19,919
<i>Total</i>								
1986 estimate . . . .	83,825	10,243	11,583	1,810	72,147	6,249	3,005	188,861
1987 budget . . . . .	64,617	8,110	10,478	14,437	74,785	7,608	3,506	183,540

Table H.13

Budget Performance of the Federal Reserve Banks,  
Operating Expenses, by District, 1986

Thousands of dollars, except as noted

District	1986 budget <sup>1</sup>	1986 estimate	Change	
			Amount	Percent
Boston <sup>2</sup>	68,387	68,710	323	.5
New York <sup>3</sup>	222,728	223,032	304	.1
Philadelphia	65,526	65,507	-19	.0
Cleveland	68,894	69,031	137	.2
Richmond	90,637	90,563	-74	-.1
Atlanta <sup>4</sup>	105,610	106,040	430	.4
Chicago	139,505	137,995	-1,510	-1.1
St. Louis	58,801	58,785	-17	.0
Minneapolis	57,188	57,119	-69	-.1
Kansas City <sup>4</sup>	75,219	75,390	171	.2
Dallas	75,360	75,360	0	.0
San Francisco	137,550	136,537	-1,012	-.7
<b>Total</b>	<b>1,165,405</b>	<b>1,164,068</b>	<b>-1,337</b>	<b>-.1</b>

1. As revised in March 1986 in the wake of Gramm-Rudman-Hollings (see appendix C). The Reserve Banks were permitted to exceed their revised 1986 budgets in exempt areas: local real estate taxes, direct expenses of priced services, and expenses of priced service projects.

2. Boston expects to exceed its revised budget because taxes on real estate and spending on priced services were greater than anticipated.

3. New York expects to exceed its revised budget because of substantial costs for establishing a District computer contingency center.

4. Cleveland, Atlanta, and Kansas City expect to exceed their revised budgets mainly because of greater spending in direct expenses of priced services.

Table H.14

Budget Performance of the Federal Reserve Banks,  
Employment, by District, 1986Average number of personnel, except as noted <sup>1</sup>

District	1986 budget <sup>2</sup>	1986 estimate	Change	
			Amount	Percent
Boston	1,461	1,462	1	.1
New York	4,167	4,123	-44	-1.1
Philadelphia	1,259	1,240	-19	-1.5
Cleveland	1,421	1,414	-7	-.5
Richmond	1,981	1,968	-13	-.7
Atlanta	2,215	2,212	-3	-.1
Chicago	2,888	2,843	-45	-1.6
St. Louis	1,324	1,318	-6	-.5
Minneapolis	1,108	1,095	-13	-1.2
Kansas City	1,630	1,635	5	.3
Dallas	1,578	1,595	17	1.1
San Francisco	2,499	2,476	-23	-.9
<b>Total</b>	<b>23,531</b>	<b>23,381</b>	<b>-150</b>	<b>-.6</b>

1. See chap. 3, note 2, for definition of ANP.

2. The March 1986 reduction following Gramm-

Rudman-Hollings did not alter the ANP budgeted for 1986.

Table H.15

Expenses of the Federal Reserve Banks, by Operational Area, 1982-87<sup>1</sup>

Thousands of dollars, except as noted

Year	Monetary and economic policy	Supervision and regulation	Services to financial institutions and the public	Services to the U.S. Treasury and other government agencies	Total
1982 .....	93,010	119,316	646,151	115,126	973,602
1983 .....	100,443	131,848	675,918	120,256	1,028,465
1984 .....	99,351	140,690	701,453	126,307	1,067,802
1985 .....	90,945	151,991	742,896	131,544	1,117,377
1986 estimate .....	91,965	164,331	770,745	137,027	1,164,068
1987 budget .....	90,802	171,690	799,379	135,943	1,197,813
Average annual change, percent .....	-.5	7.5	4.3	3.4	4.2

1. Expenses for 1982 are adjusted for the cost of currency. Until 1983, costs associated with procuring, issuing, and retiring Federal Reserve notes were in-

cluded in Reserve Bank operating budgets. On January 1, 1983, the Board of Governors assumed responsibility for all currency expenses.

Table H.16

Employment at the Federal Reserve Banks, by Activity, 1982-87<sup>1</sup>

Average number of personnel, except as noted

Year	Monetary and economic policy	Supervision and regulation	Services to financial institutions and the public	Services to the U.S. Treasury and other government agencies	Support <sup>2</sup>	Overhead <sup>2</sup>	Total
1982 .....	743	1,796	8,566	1,851	4,599	5,676	23,230
1983 .....	804	1,862	8,424	1,838	4,367	5,589	22,883
1984 .....	826	1,885	8,395	1,798	4,340	5,424	22,669
1985 .....	816	1,912	8,754	1,781	4,398	5,323	22,984
1986 estimate .....	790	2,104	8,833	1,805	4,504	5,346	23,381
1987 budget .....	780	2,181	8,722	1,841	4,511	5,127	23,162
Average annual change, percent .....	1.0	4.0	0.4	-.1	-.4	-2.0	-.1

1. See chap. 3, note 2, for definition of ANP.

2. See table H.4, note 1, for definition.

## Accounting Changes

Several accounting rules that were used in 1986 to allot costs for support and overhead were changed to assign those costs to the areas benefiting from work to be done in 1987. Table H.17 shows the effect of these changes on the expenses for Central Bank and Treasury services.

The category "centralized adminis-

tration of Federal Reserve services" has been renamed "administration of priced Federal Reserve services," and costs will be allocated only to priced services. The cost of time spent on Central Bank and Treasury services will be distributed directly to the benefiting activities.

The modular approach to developing the software for the Integrated Accounting System permits costs for

each software module to be charged to the benefiting services. The development of the interdistrict accounting module, which includes the cash letter monitoring system, primarily will support priced services in 1987.

The System communication center will distribute costs in 1987 to benefiting activities based upon actual hours and standard hourly rates rather than equally prorating costs to operational areas.

In "Bank administration," the allocation rule will be modified to require 20 percent of the costs to be allocated equally to the four Central Bank and Treasury service operational areas (monetary and economic policy, services to the U.S. Treasury and other government agencies, supervision and regulation, and nonpriced services to financial institutions and the public) and 20 percent to priced services. In 1986, 25 percent of the costs were allocated to each of the first three operational areas, with priced services and nonpriced services to financial institutions and the public receiving a combined 25 percent.

The automation program office will also redistribute costs in 1987 to benefiting activities based upon actual hours and standard hourly rates rather than equally prorating costs to operational areas.

"Environmental transition" refers to the conversion to production use of the hardware and software acquired for the Long-Range Automation Program. Costs of the project in 1986 were apportioned equally among operational areas; in 1987, they will be allocated to benefiting ac-

tivities according to use and standard hourly rates.

The costs of planning for contingency processing will be charged in 1987 to the benefiting areas. In 1986, they were spread equally among operational areas.

Some expenses of the customer information system will be shifted away from the economic policy determination area toward services for book-entry securities transfer and definitive safekeeping based on expected shifts in the 1987 benefits from the information system.

Table H.17

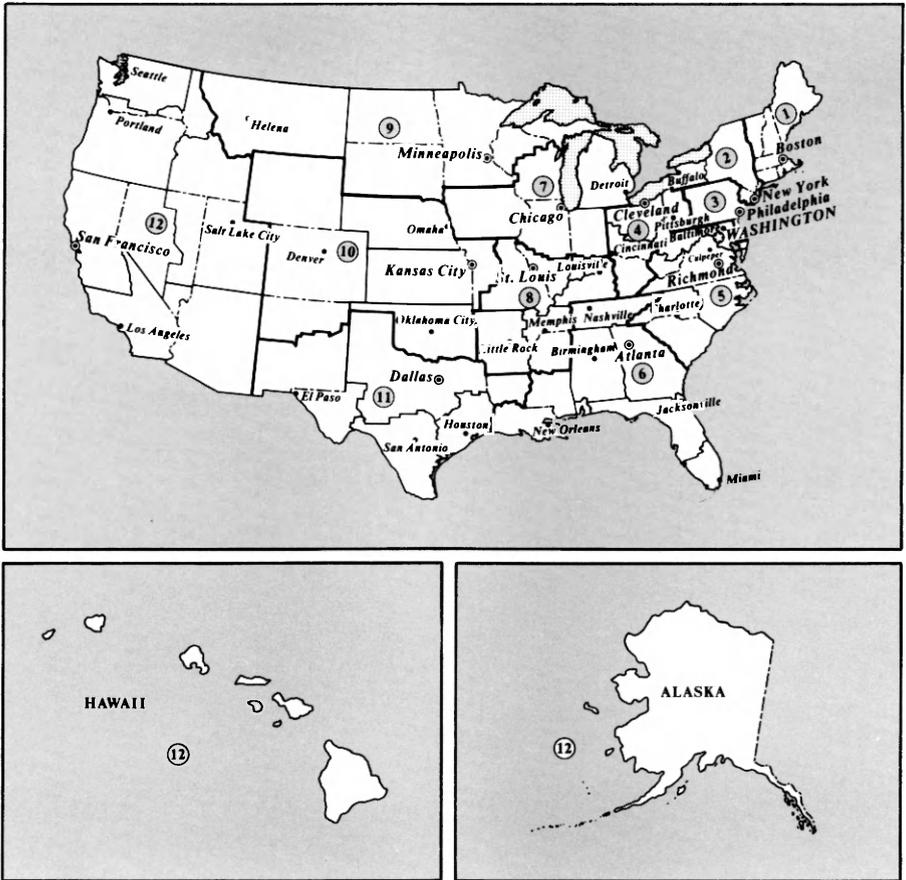
Contribution of Changes in Accounting Rules to the 1987 Expenses of the Federal Reserve Banks for Central Bank and Treasury Services

Millions of dollars, except as noted

Expense item	Amount
<i>Central Bank and Treasury services</i>	
1986 estimate .....	669.7
1987 budget based on 1986 accounting rules .....	686.1
<b>Increase before rule changes, 1986 to 1987</b>	
<b>Millions of dollars</b> .....	<b>16.4</b>
<b>Percent</b> .....	<b>2.5</b>
<i>Adjustments for rule changes</i>	
Centralized administration of Federal Reserve services .....	-2.0
Standard application for integrated accounting system .....	-1.2
System communications center support .....	-1.1
Bank administration .....	-.9
Automation program office .....	-.4
Environmental transition .....	-.4
Planning for contingency processing .....	-.2
Standard application for customer information system .....	-.03
Other .....	.2
Total .....	-6.03
<b>Increase after rule changes, 1986 to 1987</b>	
<b>Millions of dollars</b> .....	<b>10.4</b>
<b>Percent</b> .....	<b>1.6</b>

# The Federal Reserve System

## Boundaries of Federal Reserve Districts and their Branch Territories



### Legend

- Boundaries of Federal Reserve Districts
- Boundaries of Federal Reserve Branch Territories
- ⊙ Board of Governors of the Federal Reserve System
- Federal Reserve Bank Cities
- Federal Reserve Branch Cities
- Federal Reserve Bank Facilities

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