

**A PROFILE OF
THE CONGRESSIONAL BUDGET OFFICE**

The Congress of the **United States**
Congressional Budget Office

PREFACE

This paper describes the institutional structure, products, culture, and analytic style of the Congressional Budget Office. It is a revised version of a paper prepared by James L. Blum for the Eleventh Annual Research Conference of the Association for Public Policy Analysis and Management held in Arlington, Virginia, in November 1989. Helpful data and comments were provided by Earl Armbrust, Elizabeth Clark, Mark Desautels, Robert Hale, Roy Meyers, Frederick Ribe, and Paul Van de Water.

Francis Pierce edited the manuscript, **Thelma** L Jones typed the many drafts, and **Kathryn Quattrone** prepared it for publication.

Robert D. Reischauer
Director

September 1990

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PART I

THE INSTITUTIONAL BACKGROUND

The Congressional Budget Office (**CBO**) is the youngest of the four analytic support agencies of the U.S. **Congress**.¹ It was created by the Congressional Budget Act of 1974 (Titles MX. **P.L. 93-344**, July **12, 1974**) and started operations on February **24, 1975**, with the appointment of its first director, Alice M. Rivlin. In comparison with the charters of the other support agencies, CBO's mission is relatively narrow: to provide economic and budgetary information in support of the Congressional budget and legislative processes. The subject matter of the agency's work is quite broad, however, since the budget of the U.S. government covers a wide range of activities and plays a major role in the national economy.

The Congressional Budget Act was intended to strengthen the ability of the Congress to deal with the federal budget and to restore the balance of budgetary power, which many people felt had tipped too much toward the Executive Branch. The act established a new process for setting Congressional budget targets, with the aim of providing more discipline to the passage of **appropriations**, other spending measures, and tax legislation. It also created three new Congressional institutions to carry out the process: a Committee on the Budget in both the House of Representatives and the Senate, each with its own staff, and the Congressional Budget **Office**.²

LEGISLATIVE RESPONSIBILITIES

Although the Budget Act spelled out the functions of CBO, many of the descriptions were quite general and remained to be worked out after the agency began operations. Basically, CBO's functions can be divided into three categories: budgetary assistance, economic analysis, and policy analysis. The act is more specific on the first function than on the other two. The budgetary activities include cost estimates on pending legislation, scorekeeping **reports**,

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1. The other three analytic support agencies are the Congressional Research Service (1914), the General Accounting Office (1921), and the Office of Technology Assessment (1972).
 2. For an excellent overview of the Congressional Budget Act, the new budget process, the budget committees, and CBO, see Allen Schick, *Congress and Money: Budgeting, Spending and Taxing* (Washington, D.C.: Urban Institute, 1980).

and five-year budget projections. For the economic and policy analysis functions, the act directs CBO to produce an annual report "**with** respect to fiscal policy. . . **taking** into account projected economic **factors**," that would also discuss "national budget priorities" and alternative allocations of budgetary resources. CBO is also directed to produce such additional reports as "may be necessary and **appropriate**."

Even more **generally**, the act states **that the** duty and function of CBO **is** to provide the budget committees, the appropriations and taxing committees, and all other committees with whatever information may be requested on budgetary or other matters within their respective jurisdictions. Priority is to be given to assisting the budget, appropriations, and taxing committees; and work **for** the other committees-aside **from** cost estimates and other budgetary **information--is** to be provided "**to** the extent practicable."

Additional statutory responsibilities have been assigned to CBO since 1974, but these have been within the scope of the original charter and have generally called for additional kinds of budgetary assistance. The most significant of these additional responsibilities was to play a major role in the sequestration process established by the Balanced Budget and Emergency Deficit Control Act of 1985, more popularly known as the **Gramm-Rudman-Hollings Act** after its sponsors in the Senate.

Initially, CBO and the Office of Management and Budget (OMB) in the Executive Branch played an equal role in calculating whether the annual deficit targets **specified** by the act were met and, if not, the amounts and percentages of budgetary resources that must be sequestered to eliminate the excess deficit. In **1986**, however, the Supreme Court ruled that in giving the Comptroller General the responsibility for making the final determination on the amount of needed spending reductions, the act had invaded the responsibilities of the Executive Branch.³ Consequently, the Balanced Budget Act was amended in 1987 to give the responsibility to OMB, and CBO's role was reduced to providing advisory **reports**.⁴

The scope of CBO's responsibility in providing cost estimates on pending legislation was expanded in 1981 to include the costs to state and local governments of complying with proposed federal **legislation**.⁵ From time to time, the Congress may also direct CBO to undertake **specific** studies on various subjects, such as the appropriate budgetary treatment for federal credit pro-

3. *Bowsher v. Synar*, 106 Sup. Ct. 3181 (1986).

4. Balanced Budget and Emergency Deficit Control Reaffirmation Act of 1987.

5. State and Local Government Cost Estimate Act of 1981.

grams, or the costs of including coverage of outpatient prescription drugs under the Medicare program.

CBO PRODUCTS

A major CBO product is its annual report to the budget committees. This has evolved over time to consist of two separate documents: one providing economic and budget projections for the next five **years**, and the other presenting a collection of spending and revenue options for reducing the budget **deficit**.⁶ The economic and budget volume often includes a discussion of a current fiscal policy issue, such as the implications of federal deficits for economic growth. The Budget Act requires that the annual report be submitted by February 15. The economic and budget projections are customarily updated in mid-August.

Economic Forecasts

The Congressional Budget Office is the only entity of the Legislative Branch that makes economic forecasts and projections. CBO's forecasts are usually fairly close to the consensus of private forecasters. But they are generally less optimistic than those made by the Administration, particularly as they relate to budget estimates. The **forecasts reflect** the judgment of CBO staff and a panel of distinguished economic advisers about the likely course of the economy over the next 18 to 24 months. (The current membership of the CBO Panel of Economic Advisers is shown in the accompanying box.) Longer-run economic projections are based on trends in the labor force, in productivity, and in other historical averages.

For many years, the budget committees commonly used the CBO forecast and **projections** as the basis for their annual budget resolutions, but lately those of the Administration have been used. Two probable reasons for this change in practice are that (1) OMB now makes the final determination of whether spending reductions are needed to reach the annual deficit targets specified by the Balanced Budget Act, and (2) using CBO's less optimistic assumptions would make reaching a fixed deficit target more difficult.

Baseline Budget Projections

CBO's biannual budget projections start with the most recently completed budgetary decisions made by the Congress and show what would happen to the federal budget if no new policy decisions were made during the next five

6. Before 1985, the economic and budget projections were also published in separate volumes.

CBO's PANEL OF ECONOMIC ADVISERS

Barry P. **Bosworth**
Senior Fellow
The Brookings Institution

Andrew **Brimmer**
President
Brimmer and **Company**, Inc.

Robert Dederick
Executive Vice President
and Chief Economist
Northern Trust Company

Martin Feldstein
President
National Bureau of
Economic Research

Edward M. Gramlich
Chairman, Department
of Economics
University of Michigan

Lawrence R. Klein
Benjamin Franklin
Professor of Economics
University of Pennsylvania
Department of Economics

John Makin
Director, Fiscal Policy Studies
American Enterprise Institute
for Policy Research

Rudolph Oswald
Director, Research Department
AFL-CIO

Rudolph G. Penner
Senior Fellow
The Urban Institute

George Perry
Senior Fellow
The Brookings Institution

William **Poole**
Department of Economics
Brown University

Alice M. Rivlin
Senior Fellow
The Brookings Institution

JeffreySachs
Department of Economics
Harvard University

Paul Samuelson
Institute Professor
Department of Economics
Massachusetts Institute
of Technology

Charles **Schultze**
Director, Economic Studies
The Brookings Institution

Lawrence Summers
Harvard University
Department of Economics

James Tobin
Sterling **Professor** of Economics
Department of Economics
Yale University

Murray **Weidenbaum**
Director, Center **for** the Study
of American Business
Washington University

years. These baselines are intended to provide the Congress with a benchmark against which it can measure proposed changes in taxing and spending laws and policies. For revenues and entitlements, the baselines generally assume that current laws will continue without change. For defense and nondefense discretionary **spending**, the projections are based on the most recent appropriations, increased only to keep pace with inflation. (Projections made in 1980 through 1985 assumed real increases in defense spending authority.)

The budget committees use the baseline budget projections in developing annual budget resolutions and reconciliation instructions. CBO uses them in its bill cost estimates and scorekeeping tabulations (see below). The baseline projection methodology, for the most part, has been incorporated in the procedures set forth by the Balanced Budget Act for making budget estimates.

Deficit Reduction Options

Since 1982, CBO has included in its annual report a separate volume on options for reducing the federal deficit. This document discusses alternative strategies for reducing the deficit, and provides specific spending and revenue options for the Congress to consider. The first of these reports was prepared in 1980 at the request of the House Budget Committee, and proved to be so popular that it was made part of the CBO annual report two years later. It is still the most widely distributed of all CBO publications. The report has been used by many Members of the Congress, as well as outside groups, to develop deficit reduction proposals and to educate the public about the difficult choices that are involved in reducing the deficit.

Analysis of the President's Budget

Another popular CBO report is the annual analysis of the President's budget, prepared at the request of the Senate Appropriations Committee. The proposed budget is recast using CBO's economic assumptions and estimating techniques, thus allowing the Congress to see how the CBO baseline projections would be affected by the Administration's revenue and spending proposals. In recent years the analysis has shown that the President's budget proposals implied much larger deficits than estimated by OMB, if CBO's less optimistic (many would say "more realistic") assumptions were used. For example, in eight of the last nine years (fiscal years 1982 to 1990), CBO has estimated that adoption of the President's budgetary proposals would result in baseline deficits averaging \$22 billion higher than those estimated by the Administration; **CBO's** less optimistic economic assumptions accounted for almost half of the difference.

Program Analysis

At the request of various Congressional **committees**, CBO analyzes specific program and policy issues that affect the federal budget. These analyses, usually resulting in published reports and studies, cover a broad range of federal activities. They examine current policies, develop alternative approaches, and project how the alternatives would affect current programs as well as the federal budget and the economy. In keeping with CBO's **nonpartisan** charter, the program analyses do not offer policy recommendations. "On the one **hand**" and "on the other hand" are phrases used frequently in CBO reports and studies, and they characterize much of CBO's analytic work. Many CBO publications have had an influence extending beyond Capitol **Hill**, helping to shape the public discussion of issues addressed in them.

CBO's published reports and studies typically take nine to twelve months to complete, or even longer. Other analyses, conducted in a shorter time frame, may result in unpublished staff papers or memorandums. Table 1 shows

TABLE 1. CBO PUBLISHED AND UNPUBLISHED ANALYSES, 1980-1989

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Published^a										
Annual Reports ^b	4	3	4	4	4	3	3	3	3	3
Economic, Tax, and Budget Studies	10	12	8	7	8	4	5	6	5	6
Program Analyses	20	17	26	26	19	15	18	16	17	10
Subtotal	34	32	38	37	31	22	26	25	25	19
Unpublished^c										
Economic, Tax, and Budget Analyses	2	2	0	1	3	7	2	2	2	5
Program Analyses	6	17	11	5	10	11	8	8	7	9
Subtotal	8	19	11	6	13	18	10	10	9	14
Total	42	51	49	43	44	40	36	35	34	33

a. Included in CBO's *List of Publications*.

b. Includes the winter reports (economic and budget outlook, deficit reduction options) and the summer update reports.

c. Includes selected unpublished papers and staff memorandums.

the output of published reports and studies and of selected unpublished papers or memorandums since 1980. The number of published reports and studies produced each year has declined somewhat in recent years, as the focus of legislative activity has shifted because of budgetary pressures, and more analytical work has been produced in the form of **papers**, staff memorandums, or letters to committees.

Bill Cost Estimates

CBO prepares cost estimates for virtually every public bill reported by Congressional committees to show how these legislative proposals would affect spending or revenues over the next five years. Other cost estimates are prepared for use in earlier stages of bill drafting, for floor amendments, and for conference committees. Where appropriate, the estimates also contain the projected costs to state and local governments for carrying out the proposed legislation.

Bill cost estimates usually are transmitted formally to the committees responsible for the legislation by a letter from the CBO **Director**. Preliminary estimates may also be provided informally.

The number of bill cost estimates prepared each year varies, depending on the amount of legislation being considered and reported by legislative committees. Since 1980, the number of federal cost estimates has ranged from 553 to 861, with an average of about 700 per year (see Table 2). A large part of CBO's bill costing activity in the years 1981 through 1987 was for House and Senate committees receiving reconciliation instructions in the annual budget resolutions. These efforts are equivalent to several hundred bill cost estimates, but are not reflected **fully** in Table 2 because CBO's bill cost estimate tracking system treats work on the reconciliation proposals as if it related to a few large bills.

TABLE 2. CBO BILL COST ESTIMATES (Formal and informal)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Federal Estimates	861	553	747	676	687	601	667	743	771	603
State and Local Estimates	n.a.	n.a.	4	573	641	533	588	531	675	470

NOTE: n.a. = not applicable.

The CBO bill cost estimates have become an integral part of the legislative process. Committees refer to them increasingly at every stage of bill drafting, and they often have an impact on the final outcome of legislation. They have this effect because they are used to determine whether the committees are in compliance with the annual budget resolutions and **reconciliation** instructions.

While the CBO cost estimates are considered to be authoritative for legislation affecting **spending**, they are not so regarded for revenue legislation that involves income, estate and **gift**, excise, and payroll taxes. These revenue estimates are produced by the **Joint Committee on Taxation**--a separate analytic staff group that works closely with the tax writing committees, and which long preceded CBO on the Congressional **scene**.⁷

Unlike CBO's estimates of the cost impact of proposed legislation on the federal budget, its estimates of state and local costs have little or no impact on legislative outcomes. The requirement to prepare these estimates resulted from pressure by state and local governments that were concerned about the increasing cost of federal mandates. They hoped that the cost of new mandates could be curtailed or avoided by highlighting the costs in CBO estimates. With few exceptions, however, Congressional debates on proposed billing have ignored CBO's state and local cost estimates. This is probably because they are only informational and do not represent any binding constraint on the budget.

In addition to cost estimates for bills reported by legislative committees, CBO also provides the appropriations committees with outlay estimates for all appropriation bills. The numbers contained in appropriation bills usually represent budget authority, and it is necessary to estimate the resulting outlays. The CBO outlay estimates are prepared for each appropriation account and are transmitted to the staffs of the committees largely in the form of computer tabulations. These estimates often are critical in determining subcommittee compliance with annual budget resolution allocations for appropriations.

Scorekeeping

One of CBO's most important functions is to keep track of all the spending and revenue legislation that is considered each year, so that the Congress can know whether it is acting within the limits set by the annual budget resolutions. The bulk of CBO scorekeeping activities involves spending actions. CBO's staff provide the budget and appropriations committees with frequent computer

7. The Committee staff was instrumental in having the 1985 Balanced Budget Act include a section stating that CBO shall use exclusively the revenue estimates provided by the Joint Committee on Taxation for its bill cost estimates.

tabulations of Congressional action on appropriation and other spending bills (and also on tax bills). The scorekeeping system keeps track of all bills affecting the budget **from** the time they are reported **from** committee to the time they are enacted into law. The scorekeeping data base is quite large (there are more than **1,000** separate spending accounts) and keeping it current takes a major effort.

Scorekeeping did not originate with the establishment of CBO. The Congress began keeping track of budgetary decisions around 1968 through a joint appropriations committee known as the Joint Committee on Reduction of Federal Expenditures. When CBO began operations in 1975, this joint committee was terminated and its scorekeeping functions and staff were **transferred** to CBO.

Scorekeeping sounds like a relatively easy task, but it is in fact quite complicated and is often very controversial. There are virtually no written rules, and scorekeeping conventions are frequently challenged by committees that feel pinched by the limits set in the annual budget resolutions. Moreover, it is sometimes difficult to decide whether an item should be counted as budget authority or as an outlay, particularly if it represents a new way of fulfilling government financial obligations. The two budget committees are the ultimate **scorekeepers** for the Congress, for it is **they--and not CBO--that** advise the parliamentarians on whether a point of order (used to prevent departure from a budget resolution) should apply to a particular revenue or spending bill. This is appropriate because scoring disputes are often settled by political compromises between the committees. Nevertheless, the budget committees look to CBO to provide the necessary technical judgments and numerical estimates that go into the scorekeeping decisions.

Although OMB now has the ultimate authority for Balanced Budget Act scorekeeping, the bipartisan budget agreement between the President and the joint leadership of the Congress for the 1990 budget stipulated that Congressional enforcement of the agreement in the legislative process would be based on CBO scoring. This seeming anomaly arose for three reasons: the Congress believes that CBO scoring is more impartial than OMB's; the differences in CBO and OMB scoring are usually not very great, particularly for appropriation bills; and each agency has independent methods of making budget estimates that cannot be replicated by the other.

Sequestration Reports

CBO also prepares two sequestration reports each year, on August 20 and October 10, as part of the Balanced Budget Act procedure for enforcing the annual deficit targets. As noted earlier, however, the CBO reports are advisory and serve only as a benchmark for judging the accuracy of the OMB **seques-**

tration calculations. CBO is responsible, however, for notifying the Congress whenever it or OMB projects a recession in the next year (**defined** as two consecutive quarters of less than zero real economic growth), or after the Department of Commerce reports two consecutive quarters of real economic growth of less than 1 percent. Under these **circumstances**, the Congress can elect to set aside the Balanced Budget Act **deficit** targets and enforcement procedures.

Congressional Testimony

In addition to providing published reports and studies, unpublished papers, staff memorandums, **letters**, and computer tabulations, CBO is frequently asked to testify before a variety of Congressional committees (see Table 3). This testimony is often in connection with an ongoing or completed report or study, though sometimes new analyses are prepared for such appearances. The testimony is usually presented by the Director, especially at full committee hearings, but other CBO staff members also testify each year before subcommittees or on fairly narrow topics.

TABLE 3. CBO CONGRESSIONAL TESTIMONY, 1980-1989

Committee	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Budget Committees										
House	2	9	3	3	1	3	1	5	1	5
Senate	3	5	5	2	3	1	2	3	1	1
Appropriations and Tax Committees^a										
House	4	6	3	9	9	3	1	5	4	8
Senate	3	3	4	6	2	4	2	3	2	6
Authorizing Committees										
House	9	18	10	15	9	9	9	13	8	4
Senate	10	9	12	12	6	10	4	6	4	6
Joint Congressional Committees	<u>1</u>	<u>2</u>	<u>2</u>	0	<u>2</u>	<u>2</u>	<u>2</u>	<u>1</u>	<u>0</u>	<u>2</u>
Total	32	52	39	47	32	32	21	36	20	32

a. Excludes testimony on CBO appropriation requests.

MAJOR CBO CLIENTS

The Congressional Budget Office naturally is closely associated with the House and Senate Budget Committees. They were all created by the same act of Congress, which stipulated that the two committees get **first** priority for CBO **services**, that the two committees be responsible for providing Congressional oversight of CBO activities, and that the two committees make recommendations on who should be appointed CBO Director.

The budget committees are by no means the only clients for CBO products. Budgetary assistance is provided to all the other committees in the form

TABLE 4. SPONSORSHIP OF CBO REPORTS AND STUDIES, 1980-1989

Sponsors	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Statutory Requirement										
Annual reports ^a	4	3	4	4	4	3	3	3	3	3
Other	1	2	1	3	1	0	3	3	3	6
Budget Committees										
House	4	6	4	3	8	2	3	1	3	1
Senate	7	5	10	8	6	6	2	4	6	2
Appropriations and Tax Committees										
House	6	5	5	3	3	2	3	1	0	0
Senate	0	1	4	4	3	2	3	3	2	2
Authorizing Committees										
House	3	5	9	8	5	2	7	4	7	4
Senate	10	5	9	10	8	5	8	7	2	2
Joint Congressional Committees	0	2	0	1	2	1	0	1	0	0
Leadership	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	0	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	34	32	38	37	31	22	26	25	25	20

NOTE: Columns do not always add to totals because of multiple requestors for some reports or studies.

a. Includes summer update reports as well as the winter reports.

of bill cost estimates and scorekeeping tabulations. The majority of requests for CBO policy analyses that result in published studies come from the appropriations, taxing, and authorizing **committees**, as shown in Table 4 on page 11. Moreover, as shown in Table 3, over half of CBO Congressional testimony is given before authorizing committees, and another quarter before the appropriations and taxing committees.

Demands for CBO services, particularly for budgetary assistance, are about equally divided between the House of Representatives and the Senate. Somewhat more of the Senate requests for policy analyses culminate in published studies than those of the House (see Table 4). Leaving aside reports that are published to satisfy a statutory requirement, 53 percent of the published studies since 1980 have been sponsored by the Senate committees and 44 percent by House committees. In terms of Congressional testimony, however, the situation is just the reverse. **Fifty-five** percent of CBO testimony since 1980 has been given before House committees and 41 percent before Senate committees.

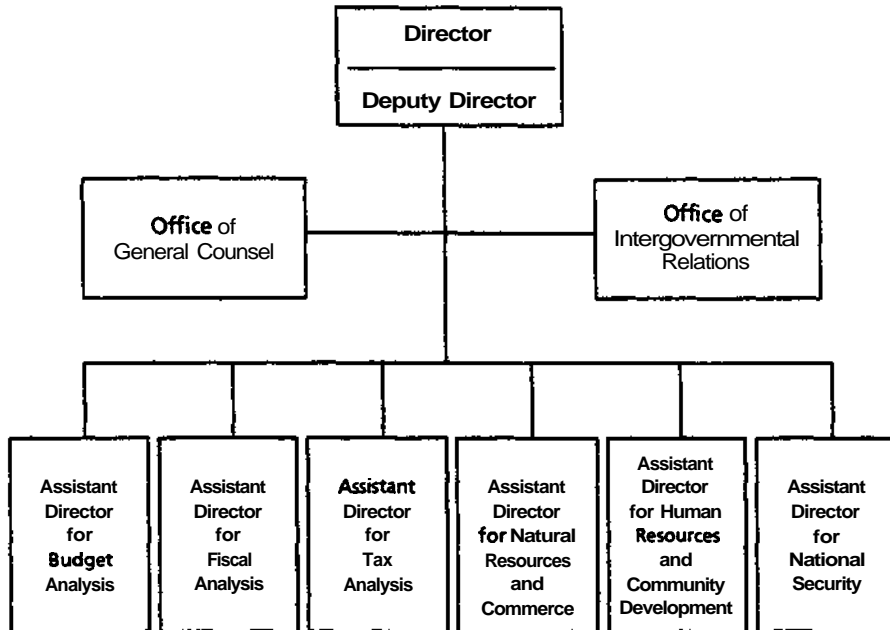
ORGANIZATION AND STAFFING

After considering recommendations received from the two budget committees, the Speaker of the House of Representatives and the President pro tempore of the Senate jointly appoint the CBO Director. The appointment is required to be made without regard to political affiliation and solely on the basis of a candidate's fitness to perform the Director's duties. The term of office is for four years, with no limit to the number of **terms** a Director may serve. The Deputy Director is appointed by the Director, as are all CBO staff members. All appointments are made without regard to political affiliation and solely on the basis of professional competence.

So far, there have been three Directors, each a well-known economist with expertise in the federal budget process. Alice M. Rivlin served two terms, from 1975 to 1983; Rudolph G. Penner served one term, from 1983 to 1987; and Robert D. Reischauer became the third Director in March 1989. During the **two-year** hiatus between the Penner and Reischauer terms, two persons served as Acting Director: Edward M. Gramlich, who had been Penner's deputy, and James L. **Blum**, the Assistant Director for Budget Analysis, who was designated as Acting Director by Gramlich when he returned to his university job at the end of **1987**.

The process of jointly appointing the CBO Director has proved to be difficult. It took seven months after the Congressional Budget Act was enacted for the two budget committees to agree on the Rivlin appointment, eight months for them to agree on the Penner appointment after Rivlin's second

Figure 1.
Organizational Structure of the Congressional Budget Office



term **expired**, and more than two years to agree on the **Reischauer** appointment after Penner's term expired. The delay in the Rivlin appointment involved a conflict between the House and Senate over the extent to which CBO would provide more than just budgetary assistance to the Congress. In the contest between "**budgeting**" and "**analysis**," the broader Senate view ultimately **prevailed**.⁸ The delay in the Reischauer appointment **involved**, in part, a conflict between the House and the Senate on the extent to which the candidates under consideration could perform the job in a **nonpartisan** manner.

The CBO staff is **organized** along the lines of its products, and the organizational structure has been very stable throughout its short history. A choice was made at the outset to separate the "budget" and the "**program** analysis" staffs in order to ensure that CBO could fulfill its budgetary assistance responsibilities and also provide in-depth policy **analysis**.⁹ The primary responsibility

8. Allen Schick, *Congress and Money*, p. 133.

9. This decision is discussed in a case entitled "**Starting from Scratch: Alice Rivlin and the Congressional Budget Office**," prepared by Nancy D. Kates for use at the John F. Kennedy School of Government, Harvard University, 1989.

TABLE 5. CBO STAFF ALLOCATIONS BY PROGRAM OR FUNCTION, 1980 AND 1989

Program or Function	1980		1989	
	Profes- sional	Support	Profes- sional	Support
Budget Analysis	61	11	72	10
Fiscal Analysis	21	3	20	3
Tax Analysis	12	2	13	2
Program Analysis				
National Security	19	4	17	3
Human Resources	22	5	23	3
Natural Resources	17	4	17	4
General Government	<u>5</u>	<u>1</u>	<u>3</u>	<u>1</u>
Subtotal	63	14	60	11
Central Support				
Director's Office	3	2	4	2
General Counsel	1	1	2	0
Intergovernmental				
Relations	<u>12</u>	<u>12</u>	<u>15</u>	<u>12</u>
Subtotal	16	15	21	14
Total	173	45	186	40

for preparing bill cost estimates, **five-year projections**, and scorekeeping tabulations was assigned to the Budget Analysis Division. The Fiscal Analysis Division is responsible for preparing CBO's economic forecasts and longer-run economic projections, and responding to requests for analyses of fiscal policy and other macroeconomic issues. The Tax Analysis Division is responsible for revenue estimates and for preparing requested studies on tax policy issues. Finally, three program divisions, representing broad areas of legislative concern and organized along functional lines, are responsible for preparing requested policy and program analyses. The Director's office, a general counsel's office, and a central support staff (which includes a small general government program analysis unit) complete the staffing. The current organizational structure, which is almost identical to that of 1975, is illustrated in Figure 1 on page 13.10

10. The only significant change has been the **combination** of a management **programs** division with the Office of Intergovernmental Relations in 1977, which placed all of the central administrative and support staffs in one group.

TABLE 6. CONGRESSIONAL BUDGET OFFICE APPROPRIATIONS
(By fiscal year, in thousands of dollars)

Fiscal Year	Requested ^a	Enacted
1976 & TQ	10,317^b	6,052^c
1977	10,416	9,577
1978	10,200	10,400
1979	11,629	11,368
1980	14,000	12,386
1981	14,009	12,519
1982	14,706	13,226
1983	16,800	15,094
1984	17,280	16,723
1985	17,895	17,541
1986	18,455	16,160^d
1987	19,229	17,783
1988	18,988	17,886
1989	18,900	18,361
1990	19,950	19,229^e

- a. Includes pay supplementals.
- b. Request was for 12-month period, October 1975 through September 1976.
- c. Enacted appropriations covered only the nine-month period, January through September 1976.
- d. Includes a reduction of \$726,000 from the sequestration of 1986 funds under the Balanced Budget Act.
- e. Includes a reduction of \$267,000 from the sequestration of 1990 funds under the Balanced Budget Act.

The number of CBO employees is limited by the agency's annual appropriations.¹¹ The limitation has risen from 193 positions in fiscal year 1976 to 226 positions today. Increases were provided in the 1977 appropriation bill to round out CBO's initial staffing, and in the 1979, 1983, and 1986 bills for additional responsibilities mandated by the Congress.

The initial plan was that about 45 percent of CBO's staff would be assigned to the program divisions and only 20 percent to budget analysis. As the workload for providing budgetary assistance proved greater than originally expected, resources were shifted to the Budget Analysis Division. Today,

11. The initial staffing request for 259 positions in fiscal year 1976 was scaled back to 193. The appropriations committees were concerned that CBO analytic work would duplicate the activities of other Congressional support agencies and believed that too many positions had been requested for policy analysis work. See Allen Schick, *Congress and Money*, and Nancy D. Kates, "Starting from Scratch."

36 percent of the staff positions have been allocated to that **division**, which provides the bulk of CBO's budgetary assistance services. The program divisions include 31 percent of the staff, the Fiscal and Tax Analysis divisions 17 percent, and the central support units 16 percent (see Table 5 on page 14).

While the organizational structure is based largely on CBO's products, a great deal of interaction and interdependence exists among the divisions. All CBO units use the economic projections of the Fiscal Analysis Division for their budget estimates and program analyses. The program analysis groups often assist the Budget Analysis Division in **fulfilling** its cost analysis responsibilities by constructing large microdata bases and analytic models. In **turn**, the Budget Analysis **Division's** cost analysts often assist the program divisions in their analytic studies. Finally, many studies involve contributions from two or more of the divisions. All divisions contribute to the agency's annual report.

CBO's BUDGET

CBO's 1989 appropriation was \$18.4 million, slightly more than the \$17.9 million appropriation for the Office of Technology Assessment, about 40 percent of the \$44.7 million appropriation for the Congressional Research Service, and only 5 percent of the General Accounting **Office's** \$347.3 million appropriation. By comparison, the Office of Management and Budget's appropriation for **1989** was \$42.0 million.

The history of CBO's appropriation **requests**, and the amounts actually provided, are presented in Table 6 on page 15. CBO's 1989 appropriation was almost double the appropriation for its **first full** year of operation in fiscal year 1977, but this largely reflects inflation. Measured in real terms (constant **1982** dollars), the 1989 appropriation was about equal to the 1977 appropriation.

The largest part of CBO's expenditures is for personnel. During the last five years, personnel costs have risen **from** 56 percent of total obligations to 75 percent (see Table 7). The rise in personnel expenses **reflects** higher costs for employee benefits, including accounting changes resulting from federal retirement reforms in 1986, and increases in employee pay. Salary adjustments, within certain bounds, are granted at the discretion of the Director. They generally occur under two **circumstances--as** an **agencywide** adjustment that tracks **across-the-board** increases enacted by the Congress for Executive Branch agencies, and as merit increases following an evaluation of individual performance.

The second largest component of CBO's budget is computer costs, which have fallen from 35 percent of outlays in **1984** to **16** percent in 1989. Computer costs have fallen sharply not only relative to other costs but in dollar **amounts**, as shown in Table 7. The decrease in computer costs can be attributed to three

factors: the **large-scale** use of microcomputers (every CBO analyst is provided a personal computer); the use of more efficient management software for the agency's large budget data bases; and lower charges for computer time-sharing services as the result of reduced hardware costs. CBO does not have its own mainframe computer, although it is authorized to have **one**, but instead hires the computers of the House Information Systems.

TABLE 7. CONGRESSIONAL BUDGET OFFICE OBLIGATIONS
(By fiscal year, in thousands of dollars)

Fiscal Year	Personnel Costs ^a	Computer Services ^b	Other Expenses	Total
1976 & TQ^c	3,575	1,633	719	5,927
1977	5,343	2,688	900	8,931
1978	5,461	3,488	986	9,935
1979	6,075	3,389	955	10,419
1980	6,648	4,669	982	12,299
1981	7,153	4,147	1,066	12,366
1982	7,591	4,498	1,110	13,199
1983	8,265	4,849	1,230	14,344
1984	9,008	5,586	1,458	16,052
1985	9,760	5,300	1,348	16,408
1986	10,063	4,049	1,403	15,515
1987	11,129	4,075	1,447	16,651
1988	12,075	3,393	1,857	17,325
1989	13,210	2,853	1,499	17,562

a. Objectclasses 11, 12, and 13, personnel compensation and benefits.

b. Object class 25.0, other services, which contains the bulk of computer costs.

c. Covers only the nine-month period, January through September 1976.

PART II

THE INSTITUTIONAL CULTURE

The institutional culture of the Congressional Budget Office has been conditioned by its legislative **mandate**, its **Directors**, and the Congressional environment in which it operates. The legislative mandate, aside **from** specifying a number of budgetary duties, was fairly general, allowing the first CBO **Director**, Alice Rivlin, wide latitude in working out the specifics of what the new agency would do. It was clear, however, that CBO was to operate in a **nonpartisan** manner. This **nonpartisan** stance was reinforced by emphatic instructions, in the first CBO appropriation, that the office was not to take a position on any policy issue. The results of CBO's work-its **analyses**, budget estimates, and other products-were to be made available to all Members of the Congress and the public. A further impetus toward **nonpartisanship** stems from the fact that CBO works for both Houses of the Congress, each with its own traditions and mores, and serves both the majority and minority in each House.

NO POLICY RECOMMENDATIONS

The nonpartisan stance has been instrumental in preserving CBO's reputation for professionalism, and has enhanced the credibility of its budget estimates and analyses. Taking a policy position on a particular budget issue could bring charges of bias, and this would jeopardize the agency's usefulness to the Congress. As the conferees observed in their report on CBO's initial appropriation, "In the Legislative Branch, debate over public policy must be conducted by elected **officials**."¹

The constraint against making policy recommendations is not universal among legislative agencies. It seems to apply to the Congressional Research Service but not to the General Accounting **Office**.² Perhaps the size of the GAO and the long tenure of its Comptroller General protect it from the pressures

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1. Conference Report No. **94-718** on H.R. 10647, Supplemental Appropriations for Fiscal Year **1976**, December **12**, **1975**.
 2. See Harry S. Havens, "The Evolution of the General Accounting Office: From Voucher Audits to **Program** Evaluations," a paper prepared for the November **1989** research conference of the **Association** for Public Policy Analysis and Management.

felt by CBO and CRS. At other levels of **government**, however, legislative budget staffs similar to CBO often make policy recommendations (**for**example, the Legislative Analyst for the California state legislature routinely takes policy positions). This would be unacceptable behavior for CBO because of the intensely political nature of the Congressional budget process.

CBO occasionally offers technical recommendations. It is sometimes directed to do so in making certain studies, but these relate only to the budget process or other technical areas in which the agency's recommendations are presumed to be based on professional expertise and not to reflect political views. CBO is also generally recognized as having a quasi-political role to play as a defender of budgetary integrity and rational planning. Accordingly, the agency has endorsed a multiyear approach to budgeting, and has favored a comprehensive budget as against one fragmented into different parts for Social Security and other programs. On a more technical level, CBO has recommended that the **budgetary** treatment of credit programs should focus on subsidy costs and not cash **flows**, and has suggested a number of technical provisions such as the definition of a budget baseline that came to be included in the Balanced Budget Act. Although those matters are sometimes quite controversial, CBO's recommendations are usually regarded as being politically neutral.

FULL DISCLOSURE

CBO routinely discloses the assumptions and methods used for its cost **estimates**, budget projections, and program analyses. Some bill cost estimates are quite detailed because the basis for the estimates is complex. Occasionally, when there is no time to write up a formal cost estimate (this often happens with reconciliation bills), staff papers will be prepared later to explain important estimates. Many of CBO's published reports contain technical appendixes that explain the derivation of critical estimates or analyses, and these are sometimes supplemented by staff memorandums to the sponsoring committees.

This willingness to publish the methods underlying its cost estimates and other analyses adds to the general acceptance of CBO's work as objective and impartial. It also contributes to an openness among U.S. government analytic agencies that is the envy of many foreign government analysts. Occasionally charges are made that CBO's work is biased, but the general view in the Congress and the media is quite the **opposite--that** the work is unbiased and expertly done. Errors occur from time to time, sometimes spectacular ones, but these are disclosed when they become apparent, and are usually accepted as resulting from the uncertainties of political and social life.

RESPONSIVENESS

There are three rules for successful staff work on Capitol Hill. The first is to respond to the needs of Members and committees. Analytic work must be completed and delivered in time for use in a committee markup or report. Completing an analysis after a decision has been made is generally not of much help. Mainly for this reason, the budgetary assistance and program analysis functions were assigned to separate staff units in CBO. The demands for budgetary assistance were felt to leave little time for in-depth **program** analysis if the same staff had to perform both functions. (At OMB, to a large extent, budgetary work has crowded out program analysis.) Being responsive often means that work must be anticipated and started in advance of a committee request for a **specific** product. CBO usually gets high marks for responsiveness, in both its program analyses and its cost estimates. It frequently communicates the results of analytic studies to committee staff through informal briefings in advance of published reports, and often supplies informal cost estimates by telephone.

The second rule is to be clear and concise in presenting reports. This is sometimes referred to as "meeting the subway test." That is, a Member of the **Congress** should be able to grasp the gist of an analysis in the time it takes to ride the subway between the House or Senate office buildings and the Capitol. CBO places great importance on **readability**, and employs four **full-time** editors to enhance the quality of its written output. From time to time, it offers writing classes for staff members who want to improve their writing skills. If good writing has become part of CBO's culture, one reason is that the first Director insisted on clear exposition, a practice she followed herself in her own work.

The third rule is not to surprise key Members or committees with unexpected findings. Committee chairmen, ranking minority **members**, and staff directors like to know about critical budget estimates or analyses before they appear in the press, so that they will be able to respond to **questions--particularly** if the results are unfavorable to policies they champion. CBO, therefore, gives great attention to the distribution of its products. The public release of its reports is carefully coordinated with the requesting committees, and, insofar as possible, CBO analyses are delivered to all interested parties simultaneously. Sometimes a committee itself will release a CBO report, and often the release coincides with a committee hearing (as is usually the case with CBO's annual report to the budget committees and CBO's analysis of the President's budget).

INDEPENDENT ROLE

Although CBO was created as part of a major reform of the Congressional budget process, and is closely identified with the two budget committees, it has acquired an independent role in the legislative process. This independent role derives in part from serving a large constituency. Alice Rivlin **established** the principle that CBO worked for all of the Congress and not just for the budget committees. As noted earlier, the **appropriations**, taxing, and authorizing committees now commission most of CBO's analytic studies. The bulk of CBO's committee testimony is also before these committees. This outcome is the direct result of Rivlin's intention that CBO would be not just a budget office that estimated the cost of legislative actions, but also a policy analysis **office** that would help shape the content of **legislation**.³

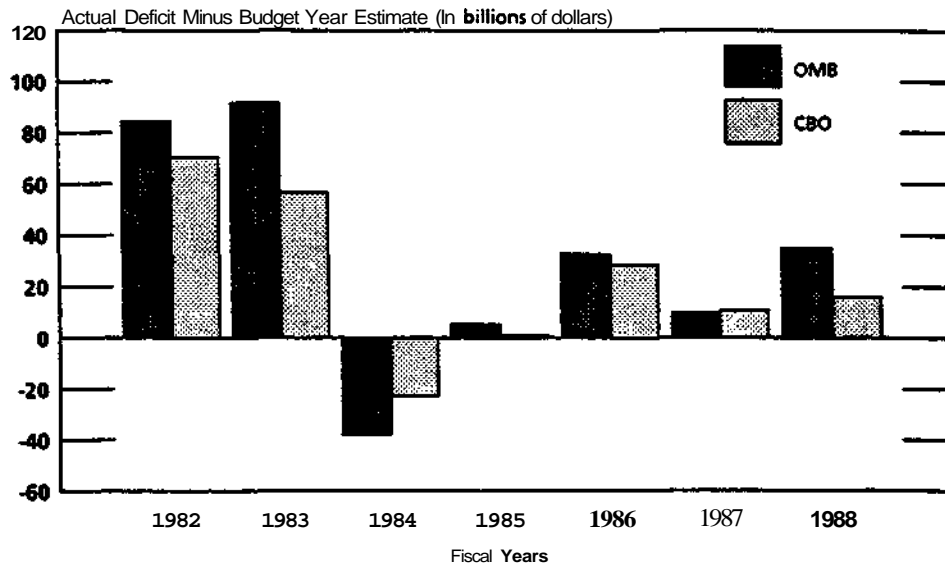
Another important part of establishing an independent role was the first Director's success in publicizing CBO's products. The Budget Act makes clear that the public is to have access to CBO estimates and other information, but Rivlin went beyond the simple access requirement by distributing copies of completed reports to the media, holding briefings, giving interviews, and making speeches. CBO quickly developed its own identity and became a good source of articles on major public policy issues. Today, CBO remains a popular and credible source of information for the press, which often provides an important vehicle **for** communicating the results of CBO studies to the Congress.

Concern was expressed at the **outset**, particularly by the appropriations committees, that CBO's policy analyses would duplicate the work of other Congressional **agencies--the** Congressional Research **Service**, the Office of Technology **Assessment**, and the General Accounting Office. This concern still arises in CBO's appropriation **hearings**, particularly when several of these support agencies have all published reports on the same general issue. The four agencies have established an interagency coordinating group and notification process designed to prevent unwarranted duplication of effort. Occasionally they produce joint studies, but CBO has focused on establishing its own niche in the policy analysis field by emphasizing its comparative advantage in quantitative economic and budget analysis.

In the final analysis, however, CBO's independent role and credibility rest on the quality of its budget estimates and analyses. CBO is regarded as having the best budget numbers in town, largely because the agency is seen as impartial and more realistic than its Executive Branch counterpart, OMB. This reputation is supported by a comparison of the economic and technical errors made by CBO and OMB in their budget estimates in recent years. As depicted

3. See Allen Schick, *Congress and Money*, for further discussion of this point.

Figure 2.
Economic and Technical Misestimates



SOURCES: Congressional Budget Office; Office of Management and Budget.

in Figure 2, CBO's estimating errors have been smaller than those of OMB in six out of the last seven years. In the six years when CBO's errors were **smaller**, CBO's **deficit** estimates were closer to the mark by an average of **\$15 billion**. In the one year when OMB's errors were smaller, the OMB deficit estimate was closer by only \$1 billion.

MANAGEMENT STYLE

Since CBO is quite small as government agencies go, it does not need a lot of bureaucratic procedures. There are relatively few managers, and assistant directors are given wide latitude in supervising their divisions and hiring and **firing** personnel. As far as salaries and other personnel matters are concerned, the Budget Act stipulates that CBO staff are to be treated as if they were employees of the House of **Representatives**.⁴ This has enabled CBO to establish its own salary system and personnel procedures, which are quite simple compared with those of the Executive Branch. People can be put on the payroll

4. The Budget Act specifies the compensation of the CBO Director and the Deputy Director (at levels III and IV of the executive salary schedule respectively), but not that of other personnel.

quite easily, and because they do not acquire tenure they can be discharged without difficulty if their work is unsatisfactory. When, occasionally, staff members are asked to leave, it is usually done gently, and they are allowed ample time to **find** other employment.

The management style of all CBO Directors has been very informal. Every Director has made an effort to become acquainted with all the employees. Executive staff meetings are relatively infrequent, and a lot of internal coordination of agency work is achieved in hallway conversations. A very **collegial** atmosphere exists in the agency at all levels.

Probably the most systematic procedure at CBO involves the publication of reports and studies. The drafts go through a rigorous internal review, and usually other comments are solicited from experts **outside** CBO. Meetings are held to discuss the comments of all reviewers and to reach a consensus on what revisions are needed. After agreement is reached as to the content, the report or study generally goes through an extensive editing process and a final review

TABLE 8. EDUCATIONAL BACKGROUND OF CBO PROFESSIONAL STAFF, JANUARY 1989

CBO Division	H.S.	A.A.	BA/BS	Master's ^a	Ph.D.	J.D.
Budget Analysis	3	1	19	35	10	--
Fiscal Analysis	-	--	4	3	9	-
Tax Analysis	-	--	4	4	7	-
Program Analysis						
National Security			4	7	5	-
Human Resources			3	2	13	-
Natural Resources	--	--	3	7	8	-
General Government	-	-	—	3	—	--
Central Support						
Director's Office		-		-	2	-
General Counsel		-		—	--	2
Intergovernmental Relations	<u>2</u>	<u>--</u>	<u>9</u>	<u>4</u>	<u>--</u>	<u>--</u>
Total	5	1	46	65	54	2

NOTE: There were 14 vacant **professional** positions in January, **including** those of the Director and Deputy **Director**, which are usually filled by persons with Ph.D. degrees.

a. Three staff members hold two or more master's degrees.

by the Director. A preface to each publication cites the many contributors who helped to form the final product, and these citations are not pro forma. Despite the rigors of the review **process**, it is faster and more streamlined than at many other agencies and institutions.

The review process for published reports and studies often is used for major unpublished **analyses**, but not for most of the other budget estimates and projections. In most instances, time is too short for an extensive review of bill cost estimates or scorekeeping tabulations. The need to proceed quickly places a premium on having a highly skilled staff who are good at working with numbers. **Consequently**, a lot of care is taken in recruiting and hiring personnel.

STAFF PROFILES

CBO is an agency dominated by economists. All CBO Directors have been economists, and about 60 percent of the professional staff have either majored in economics **at** the undergraduate level or have acquired graduate degrees in economics. Nearly all the professional staff have completed four years or more of college, and nearly 70 percent have graduate degrees (see Table 8 on page 24). People with **Ph.D.s** are numerous in all CBO analytic divisions, although in the largest division, Budget **Analysis**, a majority have master's degrees. About **12** percent of the professional staff have master's degrees in public **administra-**

TABLE 9. SEX AND AGES OF CBO PROFESSIONAL STAFF, JULY 1989

Unit	Sex		Age				Average
	Male	Female	20-29	30-39	40-49	50+	
Budget Analysis	41	24	14	29	20	2	36
Fiscal Analysis	13	3	5	3	7	1	36
Tax Analysis	8	7	2	10	2	1	36
Program Analysis							
National Security	12	4	4	5	7	—	36
Human Resources	11	9	4	5	11	—	37
Natural Resources	12	5	—	10	7	—	38
General Government	3	—	—	1	2	—	40
Central Support							
Director's Office	2	—	—	—	1	1	50
General Counsel	1	1	—	1	—	1	50
Intergovernmental Relations	<u>7</u>	<u>6</u>	<u>—</u>	<u>6</u>	<u>3</u>	<u>4</u>	<u>43</u>
Total	110	59	29	70	60	10	37

tion or public **policy**, and **two-thirds** of these work in the Budget Analysis Division.

CBO employees are relatively **youthful**, with a large proportion of women. The average age of the professional staff in July 1989 was 37, and 35 percent of the professional staff were female (see Table 9 on page 25). In comparison, the average age of the Congressional Research Service's professional staff was 43, and 40 percent of the CRS staff was female. The average age of CBO's staff and the proportion of women have both increased somewhat since 1980. Nine years ago, the average age was only 33, and 31 percent of the professional staff were women. About **15** percent of CBO's total staff, but only 6 percent of the professional staff, are from minority population groups (including Asians or Pacific islanders, blacks, and **Hispanics**).

Professional staff turnover at CBO has averaged about 16 percent a year (30 terminations and new hires a year), mostly at the more junior levels. Half of the professional staff have been at CBO for more than five years, and the average length of employment of the executive staff (Director, Acting Deputy Director, General Counsel, and Assistant Directors) is close to 10 years. The average length of CBO employment for all the professional staff is about six years **as of August 1989** (see Table 10).

TABLE 10. LENGTH OF EMPLOYMENT OF CBO
PROFESSIONAL STAFF, AUGUST 1989

Unit	Less Than 2 Years	2 to 5 Years	5 to 10 Years	10 Years or More	Average (Years)
Budget Analysis	8	23	16	18	6.6
Fiscal Analysis	5	4	5	2	5.2
Tax Analysis	5	4	5	1	4.2
Program Analysis					
National Security	1	8	5	2	6.6
Human Resources	9	3	8	—	3.6
Natural Resources	4	6	7	—	4.4
General Government	—	—	—	3	13.0
Central Support					
Director's Office	—	—	2	—	
General Counsel	1	—	—	1	7.5
Intergovernmental Relations	<u>1</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>7.2</u>
Total	34	51	52	32	5.8

CBO'S ANALYTIC STYLE

CBO's analytic style is determined for the most part by what it does. Providing budgetary assistance requires using quantitative analysis and statistical models. CBO uses data generated by federal agencies and other sources in its cost estimation and program analysis work, including agency program data, periodic censuses and population surveys, and research studies by private groups. Computer simulations of large microdata sets, and spreadsheet analysis on personal computers, are frequently used in preparing estimates and analyses. Mainstream economic theory provides the basic framework for most of CBO's analytic work. Finally, much of CBO's bill costing, scorekeeping, and program analysis focuses on baseline projections.

QUANTITATIVE ANALYSIS AND MODELING

CBO discovered quickly that it had to develop its own independent capability for making detailed budget estimates. Not only did its economic forecasts usually differ from those of the Administration, but the Administration's budget estimates were not always accurate enough for the purpose of the new Congressional budget process. Also, it was essential to have independent projections of entitlement programs in order to develop cost estimates for proposed changes in eligibility and benefits. Consequently, CBO devoted a lot of effort to developing quantitative methods and models for estimating and projecting budget revenues and outlays.

In-House Models

Three examples of the fairly elaborate modeling work that CBO has done in making budget estimates are the models for interest costs on federal debt, farm commodity price **supports**, and individual income tax receipts. The CBO interest model is designed to produce budget estimates quickly under a variety of economic and fiscal policy assumptions. It contains data on all outstanding Treasury debt issues (including amounts, interest rates, and maturity dates for all outstanding issues) and makes projections of interest outlays on a monthly basis, based on assumptions about such factors as future interest rates, budget deficits, and the length of maturity of new Treasury debt issues. The interest model can be used to project the date when federal debt limits will be **reached**,

and to analyze the dynamics and economic effects of federal debt and interest costs.¹

Similar detailed work has been done in order to project spending by the Commodity Credit Corporation (CCC) on farm price support programs. The outlay projections start with the provisions in current law governing the basic parameters of the farm programs (such as target prices and nonrecourse loan rates) and are based on detailed assumptions about future market conditions for each supported commodity, including levels of farmer participation in government programs, farm production, domestic use, exports, government and market **stocks**, and market prices. Although CCC outlays are recorded in a single budget account, it is necessary to have projections for each supported farm commodity in order to estimate the cost impact of proposed changes in farm law or administrative **policy**.²

The Tax Analysis Division has developed a model for estimating individual income tax receipts, combining macroeconomic assumptions about national income levels and other variables with microdata drawn from the Treasury Department's public use sample of **federal** individual income tax returns. Until the enactment of the Tax Reform Act of 1986, individual income tax revenues were estimated using a family of **time-series** econometric models. Because the tax reform changed the tax code so dramatically, a new approach became necessary. CBO's new income tax calculator can be **modified** to **reflect** actual or proposed changes in tax law; it has been used for a number of tax policy studies, as well as for projecting tax **returns**.³

CBO also constructs quantitative budget models for program analyses. A good example is the Defense Resources Model (**DRM**), built shortly after CBO was established. The DRM is a projection model for estimating the impact on operating costs of changes in the composition of the military forces. The model has been used to estimate the costs of developing a **600-ship** Navy, **returning** Army divisions **from** Europe and elsewhere, increasing the Air Force to 40 tactical wings, and many other options that CBO has been asked to analyze. The model computes both direct and indirect costs for separate program elements such as B-52 bombers or submarines, infantry or armored divisions located stateside or overseas, and nuclear or conventionally powered

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1. See Congressional Budget Office. *Federal Debt and Interest Costs* (September 1984) for a detailed discussion of the CBO interest model. Additional work has been done to streamline the model.
 2. Recent projections of CCC outlays are discussed in Congressional Budget Office, *The Outlook for Farm Commodity Program Spending, Fiscal Years 1990-1995* (April 1990).
 3. For a more detailed discussion of CBO's income tax calculator, as well as the models used by the Treasury Department and the Joint Committee on Taxation, see Robert P. Strauss, "Micro-simulation Models and Taxpayer Behavior: Understanding Current Law and Its Alternatives," Carnegie-Mellon University, 1989.

aircraft carriers. The model was originally on a commercial mainframe computer, but has since been brought in-house to a microcomputer on an analyst's desk.⁴

Other Models

CBO also uses models built and maintained elsewhere. For example, it uses the Transfer Income Model (TRIM) maintained by the Urban Institute for analyzing proposed changes in income support programs such as Aid to Families with Dependent Children (AFDC). It employed this model in analyzing the potential costs of various welfare reform proposals in the late 1970s.⁵ TRIM is a micro-simulation model based on the Census Bureau's Current Population Survey, which is a survey of economic and demographic characteristics of U.S. households. This model can be used to estimate numbers of families eligible for, and participating in, AFDC under current law and under alternative legislative provisions.

In its analysis of the budget and economic effects of various options for curbing acid rain, CBO used the National Coal Model maintained by the Energy Information Administration, an independent statistical and analytic agency within the Department of Energy. The model is a large linear program designed to simulate the behavior of the domestic coal market under a variety of assumptions, with particular attention devoted to regional coal demands by electric utilities.⁶

COMPUTER SIMULATIONS

CBO increasingly relies on computer analyses and simulations using large microdata sets generated by government agencies and other organizations for both cost analyses and policy analyses. One recent analysis using a large data set was of the projected costs of the catastrophic drug insurance program. The potential costs of this new program were quite uncertain when it was enacted in 1988. Both the Administration and CBO were directed in the legislation to analyze new data that became available in July 1989 from the 1987 National

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4. For a more detailed description of the **DRM**, see Congressional Budget Office, *Operation and Support Costs for the Department of Defense (July 1988)*, Appendix A.
 5. See, for **example**, Congressional Budget Office, *Welfare Reform: Issues, Objectives, and Approaches (July 1977)*, and *The Administration's Welfare Reform Proposal: An Analysis of the Program for Better Jobs and Income (April 1978)*.
 6. See Congressional Budget Office, *Curbing Acid Rain: Cost, Budget, and Coal-Market Effects (June 1986)*.

Medical Expenditure **Survey**, a nationally representative survey of the non-institutionalized population.

CBO used the survey data to determine the distribution of spending on prescription drugs for elderly and disabled Medicare **enrollees** living in their communities. Simulations of drug spending by Medicare enrollees who live in institutions such as nursing homes were done with data from the **1985 National Nursing Home Survey**.⁷ The analysis showed that prescription spending by the Medicare population had increased by more than had been projected in CBO's 1988 cost estimate, and consequently the expected costs for the new **catastrophic** drug insurance program would be much higher than originally estimated. This is an example of one of CBO's more spectacular cost estimating errors, since it became a factor in the debate to repeal the catastrophic program.

The Current Population Survey (CPS) produced by the Bureau of the Census provides useful data for policy analysis on the economic and social status of families. CBO has developed a capability to mine this rich data source to produce **significant** studies. One example is a study of the trends in family income since 1970, which was derived from CPS data with adjustments for family size and inflation. The analysis revealed that families as a whole were markedly better off in 1986 than they had been 16 years earlier, but that some classes of families, particularly low-income single mothers with children, and families with heads under age 25, became worse off during the period. These income patterns showed that the inequality of incomes among families increased during the **period**.⁸

CBO also used CPS data in conjunction with Internal Revenue Service (IRS) tax files to produce a study that examined how changes in tax laws and changes in income have affected the distribution of federal tax liabilities. This study revealed that the distribution of total federal taxes has become less progressive since 1977.⁹ Another major study, based on a **time-series** analysis of tax data for **1954-1985**, provided new evidence on the relationship between realizations of long-term capital gains and tax rates on capital gains. The results of this statistical analysis were used to simulate tax payments by individual taxpayers, based on a sample of IRS tax returns. The simulation indi-

7. Congressional Budget Office, *Updated Estimates of Medicare's Catastrophic Drug Insurance Program* (October 1989).

8. See Congressional Budget Office, *Trends in Family Income: 1970-1986* (February 1988).

9. See Congressional Budget Office, *The Changing Distribution of Federal Taxes: 1975-1990* (October 1987).

cated that lowering the top rate on long-term capital gains to 15 percent would result in a net revenue **loss**.¹⁰

While quantitative models and computer simulations are used in many CBO budget estimates and program analyses, much analytic work still consists of reading agency reports and other relevant studies, developing good agency contacts and reliable sources of information, and keeping abreast of economic and programmatic data as they are reported each month. Budget analysts, for example, generally spend more time on the telephone gathering information than they do at their personal computers in developing bill cost estimates. CBO's estimates and analyses usually depend more on access to the best available information than on elaborate statistical modeling.

MAINSTREAM ECONOMICS

Many of CBO's program analyses and budget estimates require making assumptions about the performance of the U.S. economy. These assumptions are based on CBO's economic forecasts and medium-term projections.

CBO does not maintain its own **econometric model** of the economy. Its economic forecasts are derived **judgmentally**. They can be characterized as **middle-of-the-road** and are usually quite close to the consensus of private forecasts reported monthly in the *Blue Chip Economic Indicators*. This outcome is not surprising since CBO's forecasting starts with a review of other forecasts. Staff judgments and advice from CBO's Panel of Economic Advisers usually result in only minor changes from the consensus outlook. CBO's economic forecasts of real growth and other major economic variables have turned out to be about as accurate as other **forecasts**, including the Administration's. All forecasts tend to err in the same direction (turning points in economic cycles are notoriously difficult to predict), and no single forecaster has consistently proved best **over the past 10 years**.¹¹

CBO's analyses of fiscal policy and other macroeconomic issues are also based on a consensus of economists' views, when this exists. The consensus was quite **Keynesian** in character in the 1960s and **1970s**, but in recent years it has

10. See Congressional Budget Office. *How Capital Gains Tax Rates Affect Revenues: The Historical Evidence* (March 1988).

11. For a discussion of the accuracy of CBO's economic forecasts, see Congressional Budget Office, *The Economic and Budget Outlook: An Update* (August 1987), Chapter III.

been modified following the rise of other schools of thought. **CBO's** economic analyses have reflected this trend in **macroeconomic thinking**.¹²

In analyzing issues affecting particular sectors of the economy, CBO's approach is based on standard microeconomic methodology. Recent CBO studies have covered a wide range of **topics**, including the **GATT** negotiations and U.S. trade policy (1987), how federal policies affect the steel industry (1987), the use of federal R&D to promote commercial innovation (1988 and 1990), the prospects of the U.S. space program in the 1990s and beyond (1988), the risks and benefits of building the superconducting super collider (1988), trends in educational achievement (1986), and agricultural progress in the Third World and its effect on U.S. farm exports (1989).

THE IMPORTANCE OF HAVING A BASELINE _____

Much of CBO's analytical work is incremental in nature; that is, it is addressed to determining the net effect a change in law or policy would have on the economy or the budget or both. To do this type of analysis, it is usually important to have a **baseline**--a benchmark measure of what would happen if there were no change in law or policy. CBO's economic forecast often serves as such a baseline for CBO's economic analyses, and CBO's baseline budget projections serve a similar purpose for many budget estimates. A major example of the latter is the annual volume devoted to deficit reduction **options**, which is part of CBO's annual report to the budget committees. This volume lists over 100 different policy options for reducing spending or **raising** revenues, and shows for each the impact it would have on the budget measured in terms of incremental changes in CBO's baseline budget projections. Cost estimates for entitlement legislation are similarly presented in terms of incremental changes in the budget baseline.

The baseline approach is also used in analyzing the economic effects of possible legislation in various areas. For example, in CBO's acid rain study, the effects of different strategies to lower sulfur dioxide emissions from the nation's power plants were measured as changes from a projected baseline of what would happen under current **policy**.¹³

The baseline concept is a key part of the Congressional budget process. Budget resolutions are constructed in terms of changes from a baseline. Bud-

12. The change can be seen by comparing CBO's earlier studies, such as *The CBO Multipliers Project: A Methodology for Analyzing the Effects of Alternative Economic Policies* (August 1977), with more recent ones such as *Policies for Reducing the Current-Account Deficit* (August 1989).

13. See Congressional Budget Office, *Curbing Acid Rain: Cost, Budget, and Coal-Market Effects* (June 1986).

get committee instructions to other committees to raise taxes or reduce spending are stated in terms of incremental changes from the budget resolution baseline. The baseline concept is also an integral part of the Balanced Budget Act (**Gramm-Rudman-Hollings**) process for reducing deficits. The required budget calculations start with baseline budget estimates and use incremental changes in the baseline to determine whether across-the-board spending reductions will be required to **meet** the annual deficit targets.

Recently, some objections have been raised to the baseline approach to budgeting on the ground that it gives misleading results. Specifically, the contention is that the baseline builds in some spending growth (largely from **inflation**) so that "**cuts**" may still result in an increase in spending from the previous year.¹⁴ These objections have more to do with form than substance. Changes in entitlement or tax laws are best measured as changes **from** current laws rather than as changes from spending or receipts during the previous year, but annual appropriations usually are discussed in terms of changes **from** the previous year. In the **end**, the budget totals are the same whichever approach is used.

CONCLUSION

Before the Congressional Budget Office **existed**, only the President had a comprehensive source of information on the budget and the economy. In creating CBO, the Congress has established its own source of information on these matters, information that can be used for policy decisions or to challenge information supplied by the Executive Branch. Now the Congress can compete on more even terms in debates over budget and economic policy. This evolution has led analysts of the federal government, such as Hedrick Smith, to observe that "the CBO represents the most important shift of power on domestic issues between the executive branch and Congress in several **decades.**"¹⁵

The Congressional Budget Office has received a lot of attention in the press and other news media during the past decade for its budget projections, economic forecasts, and policy analyses. Most of the attention has been favorable; generally, CBO is viewed as providing useful and objective information. In part, CBO's reputation has been gained at the expense of the Office of Management and **Budget**, which has lost some of its credibility for accurate budget estimates and realistic economic assumptions. Fifteen years ago, OMB had no competition and its budget projections were widely used by the press,

14. See, for **example**, Office of Management and Budget, *Building a Better America* (February 9, 1989).

15. Hedrick Smith, *The Power Game* (New York: Random House, 1988).

Wall Street, academia, international organizations, and state and local governments. Now, preeminence is given to the CBO projections.

Many officials **from** foreign countries have visited CBO over the years, and several have expressed interest in establishing a similar staff capacity in their own governments. CBO is, however, very much the product of a federal regime in which the executive and legislative branches are independent and have separate powers. An agency like CBO would not fit into most parliamentary forms of government in which the legislature does not play much of a role in the budget process. Nevertheless, the idea of having an independent source of information on the budget and the **economy**, produced by a government agency with no policy agenda, intrigues many policymakers abroad.

In the end, of course, CBO is only a staff arm of the Congress, with no independent source of political power. It cannot force the Congress to use its economic forecasts, budget estimates, or policy analyses. Its influence derives only from the credibility of its work. To remain influential, CBO must continue to produce forecasts, estimates, and studies that are perceived to be unbiased and authoritative. This professional obligation has an important bearing on the conduct of its staff, from the Director to the most junior analyst.