Congressional Budget Office

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# Answers to Questions for the Record Following a Hearing by the Senate Committee on the Budget on the Work of the Congressional Budget Office

*On May 19, 2015, the Senate Committee on the Budget convened a hearing at which Keith Hall, Director of the Congressional Budget Office, testified about CBO's work. After that hearing, Chairman Enzi and other Members of the Committee submitted questions for the record, and this document gives CBO's answers.*

## Chairman Enzi

**Question.** CBO's FY 2016 budget submission to the appropriations committees earlier this year asked for authorizing provisions in the legislative branch appropriations bill. CBO requested permission to hire employees with non-immigrant visas for difficult-to-fill positions, and to keep half of unused appropriations in FY16 for use in FY17. What are the budgetary effects of those provisions? Why did CBO seek these provisions through the appropriations process rather than with changes in the office's authorizing statute, through the Budget Committee? Is there a list of "administrative provisions" that have been adopted in appropriations bills that affect how the agency conducts its operations? If so, please share that with the Senate and House Budget Committees. If not, please prepare such a list and submit it to the Senate and House Budget Committee.

**Answer.** In fiscal year 2012 and every year since, CBO has asked the Committees on Appropriations for the authority to hire foreign nationals who have special skills and hold nonimmigrant visas for positions that are difficult to fill. This provision would not significantly affect the budget.

CBO had the authority to hire employees with nonimmigrant visas until the Consolidated Appropriations Act, 2010 (Public Law 111-117), changed a long-standing governmentwide provision regarding the use of appropriated funds. Before the change, appropriated funds could be used to employ "nationals of those countries allied with the United States in a current defense effort."[1] Dozens of such countries exist, and before the change, CBO employed a few of these foreign nationals. The current language allows appropriated funds to be used only for U.S. citizens or those "lawfully admitted for permanent residence and [are] seeking citizenship."[2]

1. See, for example, sec. 704 of the Financial Services and General Government Appropriations Act, 2009, which is division D of the Omnibus Appropriations Act, 2009, P.L. 111-08, 123 Stat. 524, 681.

2. See, for example, sec. 704 of the Financial Services and General Government Appropriations Act, 2010, which is division C of the Consolidated Appropriations Act, 2010, P.L. 111-117, 123 Stat. 3034, 3205 (2009).

In the past several years, CBO has struggled to fill crucial Ph.D. economist positions with people having skills in econometrics and financial modeling. However, the agency's options are limited because citizens and permanent residents comprise slightly less than half of recent graduates from Ph.D. economics programs in the United States. The agency expects that expanding the pool of candidates to include foreign nationals with nonimmigrant visas would help fill some of those key positions with highly skilled people.

CBO has raised this concern with both the Committees on the Budget and the Committees on Appropriations. After consulting with the former, CBO made the request to the appropriations committees for three reasons:

- The governmentwide general provision that affected CBO's hiring authority is contained in an appropriation act.
- The provision restricts the use of appropriated funds ("no part of any appropriation contained in this or any other Act shall be used to pay").
- The way the provision is written, new legislation to provide an exception to it would be required each year; section 704 begins, "Unless otherwise specified in law during the current fiscal year . . ."

Regarding the request for authority to retain half of unused appropriations provided for fiscal year 2016 for use in fiscal year 2017, this provision would probably allow CBO to carry over less than $50,000 from one year to the next. To allow for the possibility that an unexpected need to spend funds will arise near the end of the fiscal year, CBO always leaves some funds available for such contingencies. By making a small portion of its funds available for two fiscal years, this provision would enable the agency to make fuller use of its 2016 appropriation and perhaps slightly reduce its future appropriation requests.

CBO made this request to the Committees on Appropriations because appropriation acts govern how long funds are available for obligation. Specifically, a general provision for the legislative branch provides that "[n]o part of the funds appropriated in this Act shall remain available for obligation beyond fiscal year 2015 unless expressly so provided in this Act."[3] Moreover, the language that CBO proposed is based on general provisions contained in other appropriation acts.[4]

Appropriation acts have adopted 18 administrative provisions that apply specifically to CBO (see the table below). The list does not include provisions that apply generally to legislative branch agencies, federal agencies, or federal employees.

3. See sec. 202 of the Legislative Branch Appropriations Act, 2015, which is division H of the Consolidated and Further Continuing Appropriations Act, 2015, P.L. 113-235, 128 Stat. 2130, 2541 (2014).

4. See sec. 609 and sec. 815 of the Financial Services and General Government Appropriations Act, 2015, and sec. 406 of the Transportation, Housing and Urban Development, and Related Agencies Appropriations Act, 2015, which are divisions E and K, respectively, of the Consolidated and Further Continuing Appropriations Act, 2015, P.L. 113-235, 128 Stat. 2130, 2374, 2395, 2764 (2014).

## Administrative Provisions Adopted in Appropriation Acts That Affect Operations of the Congressional Budget Office

| Provision | Description | Original Source | U.S. Code Reference |
|---|---|---|---|
| 1 | Sets the pay of the Director of CBO equal to the lower of:<br>the pay of the highest paid officer of the Senate, or<br>the pay of the highest paid officer of the House.<br>Sets the pay of the Deputy Director of CBO to be $1,000 less than the pay of the CBO Director. | Section 1000(a)(5) of division B of the Departments of Commerce, Justice, and State, the Judiciary, and Related Agencies Appropriations Act, 2000, Public Law 106-113, 113 Stat. 1501, 1536, 1501A–299 (1999). Section 1000(a)(5) of division B enacted by reference H.R. 3425, a bill making miscellaneous appropriations for the fiscal year ending September 30, 1999, and for other purposes, 106th Cong., as introduced on November 17, 1999; section 224 of that act contains the relevant language. | 2 U.S.C. §601(a)(5) |
| 2 | Requires CBO, for information CBO obtains from federal agencies, to maintain the same level of confidentiality as the law requires of the agency from which the information is obtained.<br>Subjects CBO employees to the same statutory penalties for unauthorized disclosure or use as those for employees of the agency from which the information is obtained. | Section 1(a)(7) of the Consolidated Appropriations Act, 2001, P. L. 106-554, 114 Stat. 2763, 2763A–639 (2000). Section 1(a)(7) enacted by reference H.R. 5662, the Community Renewal Tax Relief Act of 2000, 106th Cong., as introduced on December 14, 2000; section 310(b) of that act contains the relevant language. | 2 U.S.C. §603(e) |
| 3 | Deems any sale or lease of property, supplies, or services to CBO to be a sale or lease to the Congress subject to section 2 U.S.C. §4103. | Section 104 of the Legislative Branch Appropriations Act, 1997, P.L. 104-197, 110 Stat. 2394, 2404 (1996). | 2 U.S.C. §605 |
| 4 | Authorizes CBO to dispose of surplus or obsolete personal property. | Section 105 of the Legislative Branch Appropriations Act, 1997, P.L. 104-197, 110 Stat. 2394, 2404 (1996). | 2 U.S.C. §606 |
| 5 | Authorizes CBO to make lump-sum payments to separated employees for unused annual leave. | Section 106 of the Legislative Branch Appropriations Act, 1997, P.L. 104-197, 110 Stat. 2394, 2404 (1996). | 2 U.S.C. §607 |
| 6 | Authorizes CBO to make lump-sum payments to enhance staff recruitment and to reward exceptional employee performance. | Section 106 of the Legislative Branch Appropriations Act, 2000, P.L. 106-57, 113 Stat. 408, 418 (1999). | 2 U.S.C. §608 |
| 7 | Authorizes CBO to offer training consistent with the training that agencies provide subject to chapter 41 of title 5, U.S. Code. | Section 125 of the Legislative Branch Appropriations Act, 2002, P.L. 107-68, 115 Stat. 560, 577 (2001). | 2 U.S.C. §609 |

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## Administrative Provisions Adopted in Appropriation Acts That Affect Operations of the Congressional Budget Office (Continued)

| Provision | Description | Original Source | U.S. Code Reference |
|---|---|---|---|
| 8 | Authorizes CBO to repay all or a portion of employees' student loans in order to recruit or retain qualified personnel. | Section 127 of the Legislative Branch Appropriations Act, 2002, P.L. 107-68, 115 Stat. 560, 577 (2001). | 2 U.S.C. §610 |
| 9 | Authorizes CBO employees to engage in details or other temporary assignments in other agencies, study, or uncompensated work experience that will contribute to the employees' development and effectiveness. | Section 1101 of the Legislative Branch Appropriations Act, 2003, which is division H of the Consolidated Appropriations Resolution, 2003, P.L. 108-7, 117 Stat. 11, 370. | 2 U.S.C. §611 |
| 10 | Authorizes CBO to establish an executive exchange program under which its employees may be assigned to private-sector organizations and employees of private-sector organizations may be assigned to CBO for 1-year periods to further the institutional interests of CBO or the Congress. | Section 1201 of the Legislative Branch Appropriations Act, 2008, which is division H of the Consolidated Appropriations Act, 2008, P.L. 110-161, 121 Stat. 1844, 2238 (2007). | 2 U.S.C. §612 |
| 11 | Authorizes CBO to use telecommunications systems and services supplied by the Architect of the Capitol, the House of Representatives, or the Senate. | Section 306 of the Legislative Branch Appropriations Act, 1991, P.L. 101-520, 104 Stat. 2254, 2277 (1990). | 2 U.S.C. §1814 nt. |
| 12 | Authorizes CBO to accept voluntary services from students. | Section 1201(a) of the Legislative Branch Appropriations Act, 2014, which is division I of the Consolidated Appropriations Act, 2014, P.L. 113-76, 128 Stat. 5, 426. | 5 U.S.C. §3111(e)(2) |
| 13 | Adds CBO to the list of agencies that can permit the waiver of claims for overpayment of pay and allowances. | Section 1100 of the Legislative Branch Appropriations Act, 2006, P.L. 109-55, 119 Stat. 565, 577 (2005). | 5 U.S.C. §5584(g)(7) |
| 14 | Adds CBO to the list of agencies that may make temporary or intermittent employees exempt from the requirements of the federal retirement system. | Section 115 of the Legislative Branch Appropriations Act, 1996, P.L. 104-53, 109 Stat. 514, 527 (1995). | 5 U.S.C. §8402(c)(7) |
| 15 | Authorizes CBO to use federal tax information for long-term models of the Social Security and Medicare programs. | Section 1(a)(7) of the Consolidated Appropriations Act, 2001, P.L. 106-554, 114 Stat. 2763, 2763A–638 (2000). Section 1(a)(7) enacted by reference H.R. 5662, the Community Renewal Tax Relief Act of 2000, 106th Cong., as introduced on December 14, 2000; section 310(a) of that act contains the relevant language. | 26 U.S.C. §6103(j)(6) and (p) |

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## Administrative Provisions Adopted in Appropriation Acts That Affect Operations of the Congressional Budget Office (Continued)

| Provision | Description | Original Source | U.S. Code Reference |
|---|---|---|---|
| 16 | Authorizes the Contract Appeals Board within the Government Accountability Office to decide appeals from decisions of contracting officers of legislative branch agencies, including CBO. | Section 1501 of the Legislative Branch Appropriations Act, 2008, which is division H of the Consolidated Appropriations Act, 2008, P.L. 110-161, 121 Stat. 1844, 2249 (2007). | 31 U.S.C. §702 nt. |
| 17 | Authorizes CBO to enter into contracts to procure severable services for a period that begins in one fiscal year and ends in the next fiscal year and to enter into multiyear contracts to the same extent as executive branch agencies under the authority of sections 3902 and 3903 of title 41, U.S. Code. | Section 1(a)(2) of the Consolidated Appropriations Act, 2001, P.L. 106-554, 114 Stat. 2763, 2763A–108 (2000). Section 1(a)(2) enacted by reference H.R. 5657, the Legislative Branch Appropriations Act, 2001, 106th Cong., as introduced on December 14, 2000; section 110 of that act contains the relevant language. | 41 U.S.C. §3904(d) |
| 18 | Adds CBO to the list of agencies that are exempt from the advertising requirement for federal government purchases and sales. | Section 1102 of the Legislative Branch Appropriations Act, 2003, which is division H of the Consolidated Appropriations Resolution, 2003, P.L. 108-7, 117 Stat. 11, 370. | 41 U.S.C. §6102(h) |

Source: Congressional Budget Office.

Note: This table includes two administrative provisions that mention CBO but were adopted under the headings for other legislative branch agencies—the Architect of the Capitol and the Government Accountability Office. The table also includes two provisions adopted in H.R. 5662, the Community Renewal Tax Relief Act of 2000, 106th Cong., because it was enacted by reference by the Consolidated Appropriations Act, 2001.

**Question.** CBO has provided Budget Committee staff data that gives full-time employees from 1990 to present, which shows the number of staff has remained relatively constant over the period, averaging 228 FTE. But there have been advances in technology over that same time that have reduced the need for clerical staff, presumably leading to an increase in analytical staff. Please provide annual data for this period showing the number of analysts employed by CBO by subject area (such as health, national security, natural resources, income security, etc.) and support staff.

**Answer.** CBO has dramatically reduced the size of its clerical staff. In the 1990s CBO budgeted for approximately 30 full-time positions for clerical support staff; the agency now has only 9 such positions. To make this transition, CBO consolidated administrative work and streamlined its processes for producing cost estimates and reports, taking advantage of new technology. Over that time, however, many of CBO's responsibilities for providing cost estimates have expanded. Specifically, CBO now is asked to prepare (both formally and informally) additional estimates and analyses for:

- Bills before they are marked up by committees;
- Amendments offered in committee, on the floor, and in conference;

- Managers' amendments and motions to recommit for the Rules Committee;
- Bills after they have been passed in one chamber; and
- Legislation subject to the statutory pay-as-you-go rules.

Also, greater need now exists for analyses of budgetary effects that extend beyond 10 years and of the health care and financial sectors. Most of those analyses are quite complex, and staffing in those subject areas has increased significantly since 1990. Reducing its clerical staff has allowed CBO to employ more analysts to complete work associated with those and other responsibilities without increasing the total number of full-time-equivalent positions.

CBO has retained data on the allocation of staff among areas of analysis or types of activity only for the past few years. Currently, the largest single allocation is for analysis of health care issues and programs (see the table below).

## Allocation of CBO Staff, June 2015

| Number of Staff | |
|---|---|
| **Principal Area of Analysis** | |
| Health | 41 |
| National Security, Veterans, and International Affairs | 23 |
| Education, Immigration, Income Security, Labor, and Retirement | 22 |
| Macroeconomics | 19 |
| Taxation | 17 |
| Energy, Environment, Natural Resources, and Transportation | 16 |
| Budget Outlook | 9 |
| Mandates | 8 |
| Finance and Housing | 8 |
| Appropriations | 6 |
| Commerce, Justice, Science, and General Government | 4 |
| **Principal Type of Activity** | |
| Senior Management | 15 |
| Information Technology | 13 |
| Human Resources, Financial Management, and Other Support | 11 |
| Publication Services | 9 |
| Clerical Support | 9 |
| Legal Services | 4 |
| Website | 4 |
| Total | 238 |

Source: Congressional Budget Office.

Note: Numbers are positions filled or committed to be filled; the number of positions is greater than the number of full-time-equivalent positions because of part-time work. Although staff are assigned to a primary type of analysis or activity in this table, they often work in many areas.

That allocation may vary during a year: In addition to shifting resources as staff members leave and new personnel are hired, the focus of current staff members may change as needs in a particular area grow or as new issues arise. CBO has hired many exceptionally versatile analysts, enabling the agency to respond as rapidly as possible to evolving legislative priorities.

**Question.** CBO testified that "in the past 17 years, the average inflation-adjusted annual salary paid to professors of economics has risen by about 47 percent, while the highest inflation-adjusted annual salary paid at CBO has fallen by 7 percent." Please provide the data, including data sources, to support this statement. Does the "highest annual salary paid" at CBO include bonuses? Does the comparison include non-wage compensation, such as health insurance and retirement benefits? Why should CBO staff be compared with "professors of economics"? Would a better comparison be staff at president's Office of Management and Budget, which requires similar skills and offers similar benefits?

**Answer.** CBO faces considerable competition in attracting and retaining highly educated and skilled employees. More than two-thirds of CBO's staff consists of economists and budget analysts. To evaluate the competitive market for its economists, CBO routinely compares salaries of those staff with those of employees with similar backgrounds—at not only academic institutions but also other government agencies (such as OMB, the Office of Management and Budget; GAO, the Government Accountability Office; and FDIC, the Federal Deposit Insurance Corporation) and private companies.

One strong competitor for economists is the Federal Reserve, which paid about $25,000 more than CBO could offer to people recently receiving their Ph.D. this past year. OMB does not generally make job offers to the same economists that CBO does but sometimes does make offers to the same budget analysts. Both OMB and GAO can pay more than CBO does: OMB and GAO are authorized to pay up to $183,300 in 2015.[5] The FDIC can pay technical experts, including financial economists, up to $276,558 in 2015.

Comparing economics professors with CBO staff is particularly relevant because several of CBO's senior staff over the years have been former faculty members and CBO often seeks to hire people who have just received their Ph.D. and loses many strong candidates to positions in academia. But, since 2000, pay for economists in academia has increased substantially, whereas the maximum salary that CBO can offer has fallen, adjusting for inflation. To illustrate those differences, CBO compared the inflation-adjusted salaries of full economics professors with the highest annual salary paid at CBO. The comparison does not include nonwage compensation, such as health insurance and retirement benefits.[6]

5. Sec. 5382(b) of title 5, U.S. Code, permits most executive branch agencies with performance systems that make meaningful distinctions based on relative performance to pay members of the Senior Executive Service up to the rates for Executive Level II. See 5 U.S.C. §5382(b) (2012). OMB has such a performance appraisal system (see http://go.usa.gov/3E8yB). Section 733(a)(3)(A) of title 31, U.S. Code, permits GAO to pay up to the maximum rate for the Senior Executive Service. See 31 U.S.C. §733(a)(3)(A)(2012). GAO is also authorized to pay that rate for positions in order to meet critical scientific, technical, or professional needs. See 31 U.S.C. §732a(a) (2012).

6. Between 2005 and 2010, benefits were about the same for federal employees overall and private-sector employees among workers with professional degrees or doctorates. See Congressional Budget Office, *Comparing the Compensation of Federal and Private-Sector Employees* (January 2012), www.cbo.gov/publication/42921.

For full professors, the average inflation-adjusted annual salary rose by 32 percent between 2000 and 2015 (see the table below). Growth in the salary of assistant professors over that period is similar. CBO based its analysis on data the *American Economic Review* publishes annually in an article titled "American Economic Association Universal Academic Questionnaire Summary Statistics." This calculation uses an additional year of data that became available after CBO prepared its May 19 testimony and focuses on changes since 2000 for the reason described below.[7]

## Comparison of Salaries, Adjusted for Inflation

| | 2000 (2015 dollars) | 2015 (2015 dollars) | Percentage Change |
|---|---|---|---|
| Average Salary of a Full Professor of Economics, per Month | 14,644 | 19,300 | 32 |
| Highest CBO Salary, per Month | 15,442 | 14,375 | -7 |

Sources: Congressional Budget Office; Charles E. Scott and John J. Siegfried, "American Economic Association Universal Academic Questionnaire Summary Statistics," *American Economic Review*, vol. 105, no. 5 (May 2015), pp. 679–681, Table 1, http://dx.doi.org/10.1257/aer.15000007; and Charles E. Scott and John J. Siegfried, "American Economic Association Universal Academic Questionnaire Summary Statistics," *American Economic Review*, vol. 89, no. 2 (May 2000), pp. 534–536, Table 1, http://dx.doi.org/10.1257/aer.90.2.534.

Note: Salaries are reported on a monthly basis for comparability. Values for full professors are calculated from nine-month salaries for academic years, generally from September through June of the year indicated. Many professors receive additional salary for summer work; data on that pay are not available.

The highest annual salary at CBO is paid to the Director. Since November 1999, that salary has been the lower of the highest-paid officers in the House and Senate, so this answer focuses on changes since then. Specifically, between 2000 and 2015, that salary fell by 7 percent, adjusted for inflation. The Director does not receive a bonus. In CBO's testimony on May 19, the agency incorrectly reported that the highest inflation-adjusted salary at CBO declined by 7 percent over the past 17 years rather than the past 15 years; the version of the testimony now posted on CBO's website reflects the corrected and most recent data reported here.

**Question.** CBO's budget includes $124,000 for recruitment bonuses. How many new hires each year receive these bonuses? What is the largest bonus the agency has awarded? How does CBO determine when a position requires a recruitment bonus? Is the need for a recruitment bonus determined before the position is posted to the agency's website? Are there written procedures in place for the use of recruitment bonuses?

**Answer.** Recruitment bonuses remain an important tool for recruiting high-quality employees to CBO, in part because CBO's salaries are limited. The number of new employees that receive recruitment bonuses varies from year to year depending on CBO's budget and hiring plan. Many recruitment bonuses are paid for new analysts in positions that are difficult to fill—for example, economists with microeconomic simulation modeling skills and health analysts—and others are paid to attract particularly high-quality candidates. (Because the

7. To calculate the growth rate reported in its May 19 testimony, CBO used a more accurate but also more complex method than used here. The more complex method used growth rates for matched samples in consecutive years instead of simply comparing values for the beginning and end of the period. For growth from 2000 to 2015, the more complex approach yields a rate 5 percentage points higher than the rate shown here.

number and amounts of recruitment bonuses are sensitive personnel information, CBO has not provided specifics in this answer.)

CBO generally decides whether the agency will include a recruitment bonus as part of the compensation package after posting the job announcement, when it is more apparent how competitive the market is for the type of position. During negotiations with candidates that CBO is seeking to hire, the agency exercises its judgment about whether to offer a recruitment bonus or increase an earlier offer, depending in part on what competing offers the candidate may be considering.

CBO's administrative manual describes procedures regarding recruitment bonuses and hiring more generally. One requirement is that employees who receive a recruitment bonus but who do not complete one year of service at CBO must repay the bonus.

**Question.** CBO's FY 2016 budget includes $600,000 for one-time performance bonuses, which amounts to about $2,500 per full-time employee. How many performance bonuses are awarded each year? What is the average performance bonus awarded to employees who receive them? Are there written guidelines about how these bonuses are awarded, including maximums for both the dollar amount of the award and the award as a share of base salary? Is the entire performance bonus pool used each year, or is some of the pool allowed to lapse?

**Answer.** CBO's budget for performance bonuses varies depending on the year. Each year, on the basis of the budget, the CBO Director has determined whether bonuses can be provided and, if so, the amount that can be devoted to them and the guidelines for allocating them. For example, during fiscal year 2013, CBO did not pay any performance bonuses because of budget constraints. In fiscal year 2014, a significant number were paid. (Because the number and amounts of performance bonuses are sensitive personnel information, CBO has not provided specifics in this answer.)

In recent years, the CBO Director has made the final decision regarding each bonus paid to CBO employees. CBO does not always use the whole bonus pool.

**Question.** CBO's FY 2016 budget includes $683,000 for performance-based salary increases, which amounts to about $2,900 per full-time employee. This appears to be the only increase in base salary that is available to employees earning over $100,000 annually since CBO does not budget for cost of living increases (COLAs) for those employees. What percentage of employees earning more than $100,000 receives performance increases? What is the average performance pay raise awarded to employees who receive them? Are there written guidelines about how these pay raises are awarded, including maximums for both the dollar amount of the award and the award as a share of base salary? Is the entire amount budgeted for performance-based salary increases used each year?

**Answer.** Under CBO's compensation policy, employees who make $100,000 or more annually do not receive a cost-of-living increase; they are eligible only for an annual performance-based salary increase. CBO has also established salary ranges for all positions at the agency.

During fiscal year 2014 and the first six months of 2015, about three-quarters of CBO employees making $100,000 or more received performance-based pay increases; most of those who did not had reached the top of the range for their positions. In fiscal year 2014, CBO used the entire amount budgeted for performance-based pay increases. (Because the amounts of performance-based salary increases are sensitive personnel information, the agency has not provided specifics in this answer.)

CBO employees are rated on a five-level scale according to the following criteria:

- Quality of work,
- Productivity and timeliness,
- Initiative,
- Written and oral communication skills, and
- Effectiveness of working relationships.

Only employees whose performance was rated at the highest two levels (outstanding and very good) are eligible for a performance-based salary increase.

Each year the Director issues guidelines regarding salary increases based on employees' performance and salary level. Employees with the highest performance rating are eligible for higher percentage increases than those with the second-highest rating, and employees with higher salaries are eligible for smaller percentage increases than employees with lower salaries.

Because the pay of the highest-paid officers of the House and Senate has not increased since 2009, the highest salary at CBO has not increased either. That limit, in turn, constrains the salaries that can be paid to other managers and senior analysts. About 30 percent of the members of the CBO staff are not eligible for pay increases in their current positions because their pay is at the top of the range for the position they hold. As a result, the pay can be similar for some employees with substantially different amounts of responsibility.

**Question.** What opportunities for cost savings exist at CBO? Are there opportunities for outsourcing support services like printing and graphics? Is it necessary for CBO to have all subject areas covered by its study divisions, or should staffing in such units be more strategically targeted to issues that will be ripe for legislative action in the next few years? Could CBO issue fewer analytic reports, particularly those that are not truly initiated by Congressional inquiries? Could changes to CBO's authorizing statute promote efficiencies at CBO?

**Answer.** CBO is constantly looking for ways to reduce or avoid costs and to allocate resources to their most important use. Future legislation related to hiring and pay at CBO would help the agency better fulfill its mission.

*Efficiency of Operations.* CBO has partnered with other legislative branch agencies to share common services and contracts, such as ones for financial management support, auditing, and communications. CBO also coordinates with its sister agencies to obtain some free training. During monthly or quarterly meetings with various legislative branch working groups—such as the Chief Administrative Officer Council, the Chief Information Officer Council, and the Financial Management Council—attendees explore ways to increase efficiencies. For example, many legislative branch agencies, including CBO, recently moved their financial management system to "the cloud," which will be more economical. CBO also uses contracts negotiated by the Senate, the General Services Administration, and other agencies to obtain lower prices.

Every year, during development of its budget, CBO scrutinizes its arrangements with contractors to ensure that requirements remain valid and that goods and services are purchased using the most economical sources. In recent years, the agency has eliminated or avoided costs in library operations, for instance, by eliminating underused subscriptions—both in hard copy and online—and by negotiating with vendors to obtain the lowest possible price for renewals. A few years ago, CBO eliminated library cataloging services. Instead of hiring permanent personnel for support services, the agency has contracted for administrative support during peak periods. By boosting its audiovisual capability to conduct interviews and meetings, CBO has eliminated some travel expenses.

The agency has reduced printing (both commercial and in-house) significantly over the years, yielding savings in printing and postage. CBO uses in-house printing for projects with very tight deadlines and small-volume projects that are more expensive to outsource. Years ago, one clerical position was heavily dedicated to this role; it is now a duty of an employee who also has other job responsibilities.

The development of graphics for a particular report is an integral part of the analytical process and would be difficult to outsource efficiently. That development is an iterative process like the development of text, especially as CBO aims to produce more effective graphics. Data visualization, like clear writing, is an important way that CBO communicates its analyses to the Congress. Graphics production currently requires less than a full-time-equivalent position. Outsourcing graphics development or production would increase costs.

*Allocation of Staff Resources.* The amount of time that CBO's staff spends on any particular issue or subject area varies over time in response to the focus of legislative action. Analysts at CBO are versatile and often shift portfolios to examine new topics as the need arises. For example, in 2009, staff from many divisions around CBO helped to analyze energy and environmental policies aimed largely at reducing emissions of gases that contribute to global warming. Legislative activity related to climate change has waned since then, and those same staff members have since worked on a variety of other issues, including economic forecasting, income inequality, the effects of natural disasters, and the budgetary impacts of oil and gas production on federal lands. However, those staff members have also continued to monitor new research related to energy and the environment, to be prepared if legislative activity related to those issues intensifies.

Since its inception, CBO has had to balance the allocation of resources between ongoing needs for short-term products and research and model development that will improve future products. For example, the agency's ability to analyze proposals in the health area in 2009 and 2010 was made possible by developmental work that began several years earlier (as well as by the reallocation of staff resources and staffing increases when legislative activity in that area intensified). Therefore, CBO's managers and analysts continually work with committees and their staffs to identify and understand the scope and nature of the work that would be most useful to the Congress in the short term and in the long term.

Most of CBO's reports are prepared in response to interest on the part of Congressional committees, as determined in the course of frequent consultations between CBO staff and committee staff. Much of the work that is internally generated and documented in analytic reports serves to prepare the agency to meet future needs of the Congress. For example, because CBO devoted effort to modeling the economic effects of fiscal policy—and publishing analytic reports explaining CBO's approach to such modeling—the agency was better prepared to provide the dynamic analysis required in the recent budget resolution.[8] Furthermore, such analytic reports help increase CBO's transparency because they explain the basis of the agency's findings so that Members of Congress, their staffs, and outside analysts can understand the results and question the analytic approaches used.

*CBO's Authorizing Legislation.* CBO is grateful for the support of the Budget Committees, the Appropriations Committees, and Congressional leadership. That ongoing support has helped preserve the agency's independence and ability to produce timely, objective, nonpartisan analysis. Future legislation could promote efficiencies at CBO by helping CBO attract and retain top talent by enhancing the agency's hiring and pay authorities. Most recent graduates from Ph.D. economics programs are foreign nationals who hold nonimmigrant visas; allowing CBO to hire such people would increase the pool of potential job candidates, making it more likely that the agency would find people with skills that match CBO's needs. Allowing the agency to pay employees up to the maximum amount for Senior Executive Service and Senior Level employees would help make CBO comparable to other government agencies, including the Office of Management and Budget and the Government Accountability Office. Increased pay authority would also allow the agency to relieve some of the compression of pay between some employees with substantially different amounts of responsibility. Both effects (comparability to other agencies and reduced pay compression) would help CBO to attract and retain top talent, which would reduce the costs associated with turnover and training and increase the efficiency with which CBO could produce high-quality products. Even with such authority, however, CBO could not match the salaries offered to economists working for academic institutions, private companies, the Federal Reserve, and some executive branch agencies with special pay authorities, such as the Federal Deposit Insurance Corporation, the Securities and Exchange Commission, and others.

**Question.** CBO issues hundreds of scores each year on bills voted out of committee. These scores are incorporated into the committee reports that are typically filed prior to floor consideration. There is no fixed timeline for CBO to issue these bill scores, however. Does CBO track how long it takes to release formal cost estimates of bills once they have been voted out of committee? What percentage of committee-approved bills receive cost estimates within a week of the committee vote? A month? Three months? How does CBO determine how to prioritize the scoring of multiple bills voted out of committee simultaneously? Is there a written procedure to guide this determination?

**Answer.** CBO does not track how long it takes to prepare cost estimates for bills that have been voted out of committee because that is not the best measure of the agency's success at meeting its statutory responsibility to provide cost estimates to the Congress. Section 402 of the Budget Act requires that, to the extent practicable, CBO's cost estimates be included in the reports committees file for approved bills.[9] One meaningful measure of success would be

8. See Congressional Budget Office, *How CBO Analyzes the Effects of Changes in Federal Fiscal Policies on the Economy* (November 2014), www.cbo.gov/publication/49494.

9. Sec. 402 of the Congressional Budget and Impoundment Control Act of 1974, P.L. 93-344, as amended (codified at 2 U.S.C. §653 (2012)).

to calculate the number of the 402 estimates that were completed in time to be included in those bill reports or available before lawmakers considered those bills on the floor. Over the past decade, about 94 percent of the bill reports that committees filed contained CBO's cost estimates. During that period, estimates for over 99 percent of the bills that committees reported were available on the agency's website before legislators considered those bills on the floor.

The length of time it takes to prepare a cost estimate varies with the size, scope, and complexity of the legislation. How quickly CBO can complete an estimate also depends on how much information about the bill the committee has provided to CBO before it officially considers the legislation and when the agency receives final language from the committee, which can sometimes take weeks. Some estimates—such as those for bills to name a building or reauthorize a program—are straightforward to prepare and are brief (one to two pages), requiring no more than a day to complete.

By contrast, cost estimates for more complex legislation take much longer to complete. For example, the estimate for the National Defense Authorization Act requires many weeks of work from about 10 analysts, with much of that work taking place before the committee officially considers the bill. Each year, that legislation typically runs about 1,000 pages and covers a wide variety of issues. It authorizes about $600 billion in discretionary appropriations for the Department of Defense and other agencies. It also addresses many policy issues such as military health care, retirement pay, acquisition policy, nuclear energy, nuclear weapons, aspects of foreign policy, detention of foreign combatants, various military operations, and the acquisition and disposal of defense facilities. Comprehensive immigration legislation and proposals to repeal or substantially modify the Affordable Care Act are other examples of proposals that require weeks or months of work on the part of many CBO analysts.

CBO coordinates with committees to determine when they plan to file bill reports and aims to complete cost estimates in time to be included in those reports. When a committee approves many bills simultaneously, or when multiple committees are considering legislation in the same subject area, CBO determines the priority of its work on cost estimates—in consultation with the committees—according to committees' plans for issuing reports and plans for when the bills will be considered by the Senate or House as a whole.

**Question.** CBO testified that the office prepares "thousands" of informal cost estimates annually. How does CBO prioritize this work, amidst its other responsibilities? Does work on these informal scores delay the issuance of official scores on bills that have been voted out of committee? Does CBO track the number and source of these requests for unofficial scores, and the rate at which CBO is able to respond to them? Has the work burden of these informal scores increased over time? How much? Might a return to regular order in Congress be a benefit to managing CBO's workload?

**Answer.** Most of CBO's formal cost estimates are prepared for bills that committees have approved, but reviewing proposals at other stages of the legislative process—though challenging and often time-consuming—is also a crucial part of CBO's mission to inform the Congress about legislation's potential budgetary effects. Committees often ask for preliminary, informal estimates of draft legislation as they seek to have a clear picture of the budgetary impact of proposals and variants of proposals before they formally consider legislation. And the budget committees, the House Rules Committee, or Congressional leadership often ask for such estimates for amendments that the Senate or House may consider. Those preliminary analyses also help CBO develop analytic approaches to eventually support the preparation of formal cost estimates.

After the number of requests in 2011 seemed to increase significantly, CBO began tracking informal estimates. In each year from 2012 to 2014, CBO provided between 5,000 and 6,000 informal estimates. Some analyzed complex issues, such as legislation that would allow borrowers to refinance outstanding student loans at lower rates. In others, CBO simply determined whether enacting a proposal would result in direct spending, without providing a specific point estimate.

About one-quarter of CBO's informal estimates have been for amendments to appropriation bills, and at least that many were for amendments to defense authorization bills. Proposals to change the Affordable Care Act, reauthorize farm programs, modify the Sustainable Growth Rate formula for setting the rates Medicare pays to physicians, or reauthorize child nutrition programs all have required CBO to informally review many proposals.

Amendments for bills before floor consideration in the Senate or House often take priority over other work. CBO looks to the budget committees, leadership, and committees of jurisdiction for input to help establish priorities when there may be hundreds of potential amendments for a particular bill. Without direction otherwise from the budget committees, leadership, or committees of jurisdiction, reviews of legislative proposals before committee consideration have lower priority than reviews of amendments for active bills and cost estimates for bills reported from a committee. Having a committee vote on bills more often before the entire chamber considered them—that is, having more legislation follow "regular order"—would make planning and setting priorities for CBO's workload easier.

**Question.** On several occasions at the May 19 oversight hearing, you emphasized how important transparency practices will be to your tenure as Director. You described current transparency practices as including consultation with outside experts, publication of estimation assumptions and analytical methods, and description of models employed in creating budget and other estimates. You represented to the Committee that you would like to expand current practices. Please provide further description of what you mean by an expanded transparency practice. Include in that description plans for enhancing the role of outside experts in auditing CBO's work, changes in the publication of methodologies and assumption that would make CBO's work clearer to users of that work, and the steps you will likely take to document the models CBO employs in its budget and economic work. Also, please give the Committee a proposed timeline for accomplishing this greater level of transparency.

**Answer.** Continuing to present and clearly explain the methodology and results of CBO's analyses is one of the agency's three broad goals for the coming year. Input from outside experts and extensive external review will remain an important component of transparency. CBO's documents and related information will aim to go well beyond presentations of results and explain how the agency conducts it analysis. And the agency will promote transparency by making many types of analyses publicly available on its website and by answering questions about those analyses.

In addition to continuing practices that have proven useful in providing explanations, CBO will expand some practices and introduce some new ones:

- CBO will consult with the budget committees and other committees about their priorities for the types of estimates for which they would like more documentation and the type of documentation they would find most useful. Understanding those priorities better will help the agency balance the desire to publish more detail about finished analyses with requests for new analyses and with its other responsibilities, such as regularly updating its baseline budget and economic projections. Devoting additional resources to publishing more detail reduces the resources available for those other responsibilities.

- CBO's staff will make more external presentations to explain the agency's methods. The agency will also obtain more feedback about those methods and make slides from the presentations publicly available. For example, CBO has already scheduled several presentations at universities and conferences over the next six months to discuss dynamic analysis and obtain feedback.[10]

- To garner more information about aspects of CBO's analyses for which the base of evidence appears thin, CBO will publicly identify the types of information that would help improve the quality of its estimates. In so doing, CBO may learn more about existing evidence or may spur researchers to develop evidence related to particular issues.

- CBO's cost estimates will expand discussion of the bases of the estimates, when feasible and appropriate. Also, more CBO reports will include appendixes, have supplemental material, or be accompanied by working papers that elucidate the agency's methods. Sometimes CBO will publish that analytical detail later than the report to balance the desire for timely publication of results with the desire for additional documentation.

CBO has already begun to make progress in these areas and expects to accomplish more in the coming months.

**Question.** Most economists point to the federal regulatory burden as a major reason behind the slow economic recovery. Federal agencies continue to propose new regulations and underestimate their economic impact. This coupled with inconsistent executive branch oversight has led to the private sector and Congress to look to an independent agency such as CBO to perform better economic analysis and more thorough study of proposed regulations. Does CBO have the capacity with its economic models to forecast the economic impact of regulations on the private sector and, if asked, provide any additional reports on agency activity to Congress?

**Answer.** CBO informs the Congress about the budgetary effects—and sometimes the economic effects—of bills and other policy proposals that the Congress considers. The agency typically supplies that information during the legislative process. By contrast, the Administration is responsible for adopting regulations to implement enacted laws, and it must provide information on the benefits and costs of proposed regulations.[11]

Some CBO analyses of the budgetary and economic effects of bills and policy proposals consider the potential effects of regulation because assessing those effects may be necessary to

10. For a recent example of such a presentation, see Wendy Edelberg, Assistant Director for Macroeconomic Analysis, Congressional Budget Office, "Dynamic Scoring at CBO" (presentation at the Conference of Business Economists, Washington, D.C., May 10, 2015), www.cbo.gov/publication/50179.

11. For more information about the differences between the responsibilities of CBO and those of the Administration in the regulatory process, see Congressional Budget Office, letter to the Honorable James Lankford providing a brief comparison of cost estimates for mandates as prepared by CBO and by federal agencies for selected regulatory rules (May 20, 2011), www.cbo.gov/publication/41475.

project the budgetary consequences of the legislation. For instance, CBO analyzed bills that the Congress considered that would have required adopting a cap-and-trade program for greenhouse gas emissions.[12] Determining the implications of such proposals for the federal budget required CBO to construct a model to estimate the price of allowances that would be used to implement that program.[13] In contrast with the Administration's analysis of specific regulations, CBO's analysis was undertaken to determine the implications for the federal budget, was based on the broadly defined policy that the bill described (rather than on the detailed regulations that would have followed had the bill been enacted), and did not provide an estimate of the economywide cost or benefits of the proposal.

CBO also routinely provides information during the legislative process about the mandates that a bill would impose on the private sector if that bill was enacted, regardless of whether the mandate would require a rulemaking process by the Administration. As specified in the Unfunded Mandates Reform Act (UMRA), CBO reviews most legislation that authorizing committees report to identify any mandates on the private sector, including new mandates and expansions or extensions of existing ones.[14] In its review of legislation, CBO must determine whether the total direct costs of the mandates would exceed UMRA's statutory threshold.[15] UMRA also directs CBO to prepare analyses of mandates at other stages of the legislative process when called upon by the Congress to do so. However, the impact of such mandates sometimes depends to a large degree on how the Administration would implement the mandate and what kinds of regulations it would issue in doing so. Sometimes, when the legislation is being considered, CBO cannot assess the costs to the private sector with any precision because it has no clear basis for predicting the regulatory actions the Administration would take if the bill was enacted.

Reviewing proposed specific regulations during the federal rulemaking process would substantially increase CBO's responsibilities, even if such assessments were limited to major rules that would impose annual costs of $100 million or more on the economy. CBO does not currently have the capacity, in general, to forecast the economic impact of specific regulations on the private sector. The agency could not analyze proposed regulations without either adding considerably more resources or redirecting substantial resources away from other functions required by law. On the basis of a review of regulatory impact analyses from the 1990s, when lawmakers considered establishing an independent office to assess proposed regulations, CBO concluded that the average cost to produce a regulatory impact analysis at that time was $570,000.[16] Similarly, CBO estimated that establishing an office to independently analyze the costs and benefits of rules would cost at least $30 million a year.[17] Because those amounts are from the 1990s and are not adjusted for inflation, the cost today

12. See, for example, Congressional Budget Office, cost estimate for H.R. 2454, American Clean Energy and Security Act of 2009 (June 5, 2009), www.cbo.gov/publication/41189.

13. See Congressional Budget Office, *How CBO Estimates the Costs of Reducing Greenhouse-Gas Emissions* (April 2009), www.cbo.gov/publication/41745.

14. For more information on CBO's responsibilities under the Unfunded Mandates Reform Act, see Congressional Budget Office, *Private-Sector Mandates in Federal Legislation* (January 2013), www.cbo.gov/publication/43840.

15. In 2015, the threshold, which CBO adjusts annually for inflation, is $154 million for private-sector mandates.

16. See Congressional Budget Office, *Regulatory Impact Analysis: Costs at Selected Agencies and Implications for the Legislative Process* (March 1997), www.cbo.gov/publication/14237.

17. See Congressional Budget Office, cost estimate for H.R. 1704, Congressional Office of Regulatory Analysis Creation Act (March 13, 1998), www.cbo.gov/publication/10674.

would probably be considerably higher even after accounting for technological improvements, such as the development of the Internet, that would allow such analyses to be prepared more efficiently.

**Question.** Twenty years ago Congress passed the Unfunded Mandates Reform Act of 1995 at the insistence of state, local and tribal governments as well as businesses frustrated at having to carry out unfunded federal and private-sector mandates that they could not afford. To fix this problem, the legislation required CBO to establish a system to estimate the cost of these mandates at the request of committees for their consideration; the legislation could then be subject to a point of order on the floor. Earlier this year, the House passed the first major overhaul of the law since it was enacted and addresses how CBO performs its cost estimates. Do you have enough personnel to make these changes, and are you able to gather sufficient economic information to carry out the reports intended by the law?

**Answer.** The Unfunded Mandates Reform Act (UMRA) defines federal mandates and requires CBO to estimate whether the total cost of requirements meeting that definition in legislation that authorizing committees approve would exceed certain thresholds.[18] For 2015, those thresholds—adjusted annually for inflation—are $77 million for intergovernmental mandates and $154 million for private-sector mandates. CBO measures mandate costs as the incremental costs associated with a new requirement during the first five years that the mandate is in effect.

Three provisions of H.R. 50, the Unfunded Mandates Information and Transparency Act of 2015, would affect CBO. (The provisions of H.R. 50, as passed by the House of Representatives on February 4, 2015, that affect CBO are identical to those in the introduced version of S. 189, which has the same title.) Other versions of this legislation have been proposed in recent Congresses, and CBO has worked with staff of the Committee on Oversight and Government Reform to identify areas where the Congress might benefit from more information and to ensure that CBO could supply that information.[19]

One provision would require CBO, at the request of a Committee Chair or Ranking Member, to compare the costs to state and local governments of proposed changes in conditions of federal assistance (such as grant programs) with the existing or proposed authorized levels for such programs. Despite having a limited staff dedicated to analyzing mandates, CBO could, with enough time, respond to a limited number of such requests—just as the agency responds to requests for analyses on other topics from committee leaders.

Another provision would amend the definition of direct costs, particularly in relation to analyzing costs of private-sector mandates. CBO believes that this provision simply clarifies that definition and that the clarification reflects the agency's current analytical practice.

18. CBO's annual report on UMRA gives an overview of UMRA's requirements and CBO's statutory responsibilities. Appendix A of that report gives even more detail about the act's structure. See Congressional Budget Office, *A Review of CBO's Activities in 2014 Under the Unfunded Mandates Reform Act* (March 2015), www.cbo.gov/publication/50051.

19. For more information about CBO's exchanges with the Committee on Oversight and Government Reform about earlier drafts of this legislation, see the agency's letter to the Honorable James Lankford providing input regarding H.R. 373, the Unfunded Mandates Information and Transparency Act of 2011 (October 31, 2011), www.cbo.gov/publication/42726.

The third provision would add a point of order related to the cost of private-sector mandates. Under current law, Members of Congress can raise a point of order against legislation that would create an *intergovernmental* mandate with costs above the annual threshold UMRA specifies—unless the legislation would authorize appropriations or provide direct funding to cover those costs. H.R. 50 (and S. 189, its companion in the Senate) would apply a similar point of order to legislation with *private-sector* mandates with costs estimated to exceed UMRA's annual threshold. CBO expects that the additional point of order would not significantly affect the agency's work on mandates.

Other provisions of the legislation (in both H.R. 50 and S. 189) would place several additional reporting requirements on federal agencies that issue rules and regulations. Those provisions would not affect CBO's operations.

## Senator Sessions

**Question.** Your predecessor, Dr. Douglas Elmendorf, on December 23, 2009, in a letter to the Senate Budget Committee wrote the following:

> To describe the full amount of HI trust fund savings as both improving the government's ability to pay future Medicare benefits and financing new spending outside of Medicare would essentially double-count a large share of those savings and thus overstate the improvement in the government's fiscal position.

Please review Dr. Elmendorf's letter and provide answers to the following questions. Do you agree with Dr. Elmendorf that using mandatory spending trust funds to finance other government programs essentially, "double counts" the fund? How will CBO evaluate the double counting of the Medicare Trust Fund in formulating the budgetary impacts of legislation? Please provide me with the data you used in formulating your answer. Given that Dr. Elmendorf stated in his letter, "The [Hospital Insurance] (HI) trust fund is not currently running an annual surplus," please estimate the insolvency date for HI trust fund. Please provide me with all data you used in formulating the insolvency date. Furthermore, do you believe that any other government administered trust funds are also double counted? Please provide me with a list of any trust funds you believe are also double counted, as well as the relevant data you used in reaching your conclusion. If you do not believe that any other government administered trust funds are double counted, please explain why and provide me with all data used in making your determination.

**Answer.** Trust funds are accounting mechanisms to link earmarked receipts—money designated for a specific purpose—to corresponding expenditures. The trust funds with the largest amounts of income and expenditures are the Social Security Old-Age and Survivors Insurance and Disability Insurance Trust Funds, Medicare's Hospital Insurance (HI) Trust Fund, and the funds dedicated to the government's retirement programs for its military and civilian personnel. Ordinarily, when a trust fund receives cash not needed immediately to pay benefits or cover other expenses, the U.S. Treasury issues securities in that amount to the fund and then uses the extra income to reduce the amount of new federal borrowing necessary to finance the governmentwide deficit. (The reverse happens when revenues for a trust fund program fall short of expenses.) Because the balances in a trust fund are held in the form of government securities, the cash needed to pay for future benefits or other spending must come from taxes, income from other sources, or borrowing from the public in the year when the spending will occur.

The HI trust fund accounts for payments made to hospitals and providers of post–acute care services under Part A of the Medicare program. All together, in calendar year 2013, about 43 percent of gross federal spending on Medicare was financed by the HI trust fund's dedicated income. That income is derived largely from the Medicare payroll tax (2.9 percent of workers' earnings, divided equally between the worker and the employer); in 2014, those taxes accounted for 87 percent of the $262 billion in noninterest income credited to the HI trust fund.[20] Another 7 percent came from part of the income taxes on Social Security benefits collected from beneficiaries with relatively high income. The remaining 6 percent of noninterest income credited to the HI trust fund consisted largely of premiums paid by beneficiaries; amounts paid to providers and later recovered; fines, penalties, and other amounts collected by the Health Care Fraud and Abuse Control Program; and other transfers and appropriations. In addition, the trust fund is credited with interest on its balances; that interest amounted to $9 billion in 2014.

CBO expects HI expenditures to outstrip the trust fund's income, including interest, in most of the years through 2025. CBO has not projected the fund's balance beyond the baseline's 10-year period, but such projections would probably show the fund continuing to incur deficits in later years. CBO expects that, if current laws remained in place, the fund's balance would probably be exhausted early in the decade after 2025.

*Double Counting.* If legislation would reduce HI spending or increase taxes credited to the trust fund, and if those budgetary gains were used to offset additional spending for other programs or activities, CBO still believes that to describe the HI trust fund savings as *both* improving the government's ability to pay future Medicare benefits *and* financing new spending outside Medicare would essentially double-count those savings.[21]

Consider a policy that would increase payroll taxes for Hospital Insurance or reduce payments to hospitals by $10 billion next year as well as increase spending on a program other than Medicare by the same amount. By increasing the balance in the HI trust fund, such a policy would help extend the legal authority to pay benefits for the program because, under current law, the trust fund would someday be exhausted and would no longer have legal authority to make all the payments that would otherwise be due. That hypothetical legislation would give the government the legal authority to spend $10 billion (plus some interest earnings) more on future benefits. However, the policy would not help reduce federal debt held by the public and would not improve the government's ability to pay those future Medicare benefits. In essence, it would provide the legal authority to pay more Medicare benefits in the future, but no additional resources to finance those payments.

CBO's cost estimates focus on how potential legislation would affect the budget—specifically, the "unified budget," which includes the transactions of trust funds. In a cost estimate, the agency may report how a potential policy change would affect trust fund balances as supplementary information but would not count an increase in the balance of a trust fund as

20. Starting in 2013, an additional Medicare tax of 0.9 percent has been assessed on the amount of an individual's earnings over $200,000 (or $250,000 for married couples filing joint income tax returns). As it does with the Social Security payroll tax, the federal government makes an intragovernmental transfer from the general fund of the Treasury to the HI trust fund to cover the employer's share of the Medicare payroll tax for federal workers.

21. For previous discussion of this issue, see Congressional Budget Office, "Effects of the Patient Protection and Affordable Care Act on the Federal Budget and the Balance in the Hospital Insurance Trust Fund" (December 23, 2009), http://go.usa.gov/3E8mJ (PDF; 18 KB), and letter to the Honorable Jeff Sessions providing additional information on the effect of the Patient Protection and Affordable Care Act on the Hospital Insurance Trust Fund (January 22, 2010), www.cbo.gov/publication/20980.

additional savings. In the example above, CBO would report that the proposed legislation would *not* affect the overall budget because the net savings in Medicare would be offset by additional spending for another program. CBO would not describe that policy as improving the government's ability to pay future Medicare benefits and therefore would not double-count the budgetary savings from that policy.

The same considerations apply when the agency analyzes all federal programs involving trust funds. Some, such as the Social Security trust funds, operate like the HI trust fund, but not all trust funds do.[22] Some, for example, require appropriation action to spend the fund's balances, so increasing those balances does not by itself extend the government's spending authority. CBO's cost estimates for legislation affecting any trust fund programs would focus on the effects on the unified budget because, in CBO's view, how legislation affects the unified budget deficit—and by extension, debt held by the public—is the best indication of how that legislation would affect the government's financial condition.

*HI Trust Fund Exhaustion.* Annual expenditures from the HI fund are projected to grow at an average rate of close to 6 percent over the coming decade, rising from $281 billion in 2015 to almost $500 billion in 2025. CBO expects expenditures to outstrip income, excluding interest, in all years through 2025 other than in 2017 and 2018, producing annual deficits that are relatively small in the first half of the period but that rise to $43 billion in 2025. With interest receipts included, the trust fund is projected to run deficits starting in 2021. By 2025, CBO projects, the annual deficit (including interest receipts) will reach $36 billion and the fund's balance will be down to $156 billion, if current laws remain in place.

## Status of the Hospital Insurance Trust Fund

Billions of Dollars

| Category | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Income (Excluding interest) | 273 | 288 | 303 | 317 | 332 | 348 | 366 | 384 | 403 | 423 | 444 |
| Expenditures | 281 | 297 | 303 | 308 | 335 | 355 | 379 | 417 | 430 | 443 | 488 |
| Noninterest Deficit (-) or Surplus | -8 | -9 | 0 | 9 | -3 | -7 | -13 | -33 | -27 | -20 | -43 |
| Interest Received | 9 | 9 | 10 | 10 | 10 | 11 | 11 | 10 | 10 | 9 | 8 |
| Total Deficit (-) or Surplus | 2 | 0 | 10 | 19 | 8 | 4 | -2 | -23 | -18 | -11 | -36 |
| End-of-Year Balance | 204 | 204 | 214 | 233 | 241 | 245 | 243 | 220 | 202 | 192 | 156 |

Source: Congressional Budget Office.

Note: This fund is also known as the Medicare Part A Trust Fund. This analysis is based on CBO's March 2015 budget projections, with adjustments to incorporate the effects of Public Law 114-10, the Medicare Access and CHIP Reauthorization Act of 2015, which became law on April 16, 2015.

CBO has not projected the fund's balance beyond the baseline's 10-year period, but such projections would probably show the fund continuing to incur deficits in later years. CBO expects that, if current laws remained in place, the fund's balance would probably be exhausted early in the decade after 2025. That projection is not based on comprehensive analysis of spending for Part A of Medicare. However, the acceleration of trust fund deficits during the 2021–2025 period and the effects of demographics and other factors on future spending for the Hospital Insurance program suggest that the fund will be depleted relatively quickly after that point.

22. For additional information on those trust funds, see Congressional Budget Office, *The Budget and Economic Outlook: 2015 to 2025* (January 2015), Appendix E, www.cbo.gov/publication/49892.

### Senator Stabenow

**Question.** As you know, Congress recently adopted a budget that requires CBO and JCT to provide macroeconomic feedback for any major piece of legislation, also known as dynamic scoring. There has been a great deal of concern raised about the accuracy and impartiality of dynamic scoring, given the large number of assumptions that would have to be made. In your estimation, how accurate do you think dynamic scoring is compared to the current scoring methods employed at CBO?

**Answer.** Conventional analysis of proposed legislation incorporates analysis of behavioral responses by individuals and businesses to incentives in the legislation but does not incorporate effects on the economy as a whole, meaning that potential macroeconomic effects exert no feedback on the budget. Sometimes, however, that macroeconomic feedback may be important, so that trying to account for such effects may increase the likelihood of producing an accurate answer. To accomplish that result, CBO has devoted considerable effort during the past several years to improving its ability to estimate fiscal policies' macroeconomic effects and the associated impact on the budget. That effort has included extensive reviews of relevant economic research and yielded tools that the agency can apply to help analyze a variety of policies.

CBO's conventional analyses and analyses that include macroeconomic effects both try to give a single point estimate for each of the next 10 years of how proposed legislation would affect the federal budget deficit. How accurate those estimates are can be measured by the degree to which a set of point estimates of the effects of various changes in law differ from the eventual actual outcomes.[23] Such accuracy is determined by two properties of the set of cost estimates, centeredness and spread:

- *Centeredness* indicates how close the average of the estimates is to the average of the eventual actual values.
- *Spread* reflects the dispersion of the differences between the estimates and their eventual actual values around the average of those differences.

Estimates that are more centered and have less spread are more accurate. One concrete measure of this concept of accuracy is the probability that the actual cost will eventually fall within a certain range around the reported estimate.

Hence, under certain conditions, including feedback effects would probably make estimates more accurate than estimates based only on conventional analysis:

- If the estimates are for policies that are likely to have significant feedback effects,
- If the estimates of those feedback effects are centered around the actual effects, and
- If the spread of those estimates is small.

Often, however, estimates that include significant feedback effects will be more centered around the actual outcomes (because they aim to account for all of the effects) but will also

23. For additional discussion about how to measure accuracy, see Congressional Budget Office, *CBO's Economic Forecasting Record: 2015 Update* (February 2015), www.cbo.gov/publication/49891.

have considerably larger spread because of the inherent uncertainties involved in estimating macroeconomic effects.

That combination may or may not be more accurate, as CBO defines the term, but CBO expects that incorporating effects from macroeconomic feedback will improve the quality of estimates for complex legislation with many types of provisions and significant budgetary effects. Incorporating those effects makes the estimates more centered, and errors in estimating the effects stemming from particular provisions tend to cancel each other out. For that reason, CBO emphasizes the importance of having estimates be in the middle of the distribution of potential outcomes.

Determining the accuracy of CBO's cost estimates—conventional estimates and estimates including macroeconomic feedback—for legislation that is ultimately enacted is often quite difficult and sometimes impossible. In general, the actual costs or savings resulting from enacting legislation are a small part of a large budget account or revenue stream and cannot be separately identified. Nonetheless, to improve its approach to estimating, CBO regularly scrutinizes errors in its projections, reviews data on actual spending patterns for federal programs, and consults outside experts on those programs.

**Question.** Given the large number of assumptions, would CBO provide the full range of what they think are the likely cost/benefits to the federal government for the legislation? If CBO only provides a single score under the macroeconomic scoring requirement, what level of certainty do you think you could assign to such a score?

**Answer.** In general, CBO quantifies the expected effect of legislation on the federal budget in point estimates and discusses other effects that the legislation might have, to the extent practicable. Most of those estimates have some uncertainty associated with them—sometimes a great deal of uncertainty—but CBO rarely has a meaningful analytical basis on which to quantify that uncertainty. The agency's cost estimates serve to identify both the positive and the negative budgetary effects of legislation so that the Congress can understand those costs and enforce its budget rules. CBO generally does not try to quantify the nonbudgetary effects (including benefits) that might stem from legislation.

For cost estimates that include analysis of macroeconomic effects, CBO will separately report the budgetary impact of those effects and the effects that a conventional cost estimate would include. This dual approach will make the relative size of the macroeconomic and conventional effects readily apparent. To the extent possible, CBO's cost estimates will also describe the uncertainty of both types of estimates, which could vary greatly from estimate to estimate.

**Question.** Some have talked about using dynamic scoring for federal investments as well. We all know that education, research, and infrastructure are essential investments in our long-term economy that support direct and indirect jobs. For instance, the Bureau of Labor Statistics data shows that individuals with bachelor's degrees have nearly twice the weekly income and half the unemployment rate of individuals with only a high school diploma. In your opinion, if we use dynamic scoring principles for the tax code, shouldn't we also use this scoring for investments as well?

**Answer.** The budget resolution specifies that CBO will incorporate the budgetary impact of macroeconomic effects into cost estimates for legislation involving both mandatory spending and revenues with effects exceeding certain thresholds, but not for appropriation bills or bills that just authorize appropriations. CBO also will incorporate the budgetary impact of macroeconomic effects in cost estimates for legislation when requested to do so by one of the Chairmen of the budget committees.

Appropriation bills have funded most federal investment, and CBO has begun to develop tools to estimate the macroeconomic effects of changes in federal investment so funded. Last year's analysis of the President's budget proposal included estimates of the budgetary impact of such effects, as did CBO's analysis of one set of alternative policies in last year's report on the long-term budget outlook.[24]

Although the budget resolution does not require it, CBO could, upon request by a committee Chair or Ranking Member and given sufficient time, prepare analyses of the macroeconomic effects of proposed changes in funding for federal investment; such analyses would be separate from any cost estimate associated with the request. In those analyses, CBO would estimate how changes in federal investments affect the economy in relation to the amount of federal investment already incorporated into CBO's economic forecast, which are the amounts implicit in CBO's baseline projections. For many types of investments, those amounts—through 2021—are shares of the discretionary funding amounts specified under the Budget Control Act of 2011, as amended.[25] In the following years, they are similar amounts with adjustments to account for the effects of inflation. Thus, only incremental changes to federal investment that differ from the projected amounts would be estimated to have macroeconomic effects in relation to CBO's baseline projections of the economy.

Investments that affect the economy might include, for example, infrastructure, research and development, and education. How an increase in federal spending on such investment would affect the economy—and hence the budget—would differ in the short term and long term:

- In the short run, as with other government purchases, increased federal investment spending is estimated to boost output by increasing total demand for goods and services. That boost tends to be larger when output is well below its maximum sustainable amount and the Federal Reserve's response to changes in fiscal policies is likely to be limited.

- In the long run, increases in federal investment spending—if not offset by decreases in other spending or increases in taxes—are estimated to have opposing effects on economic output. Increased federal spending on investment generally raises productivity in various ways, which tends to boost output. However, higher spending also causes the government to borrow more, which tends to "crowd out" private investment, lowering output.

24. See Congressional Budget Office, *The Economic Effects of the President's 2015 Budget* (July 2014), www.cbo.gov/publication/45540, and *The 2014 Long-Term Budget Outlook* (July 2014), Chapter 6, www.cbo.gov/publication/45471. For additional discussion, see *How CBO Analyzes the Effects of Changes in Federal Fiscal Policies on the Economy* (November 2014), pp. 9–10, www.cbo.gov/publication/49494.

25. For projections involving total nondefense discretionary funding, CBO's estimates incorporate the assumption that investment would equal its average share of such funding from 1980 to 2008—a period when that share was roughly constant.

**Question.** The budget resolution also included fair-value basis accounting for many of federal loan programs, including student loans. As you know, this form of accounting assumes private sector risk analysis for public sector loans; in other words, it would assume additional risks and the costs associated with those risks for scoring of loan programs and significantly increase the cost. Given that current federal accounting practices already assume risk and default for loan programs, do you think that fair value accounting would create artificial costs for investments in our future like student aid or housing assistance?

**Answer.** The budget resolution requires that, when requested by the Chairman of one of the budget committees and to the extent practicable, CBO's cost estimates for legislative proposals include fair-value estimates of the cost of provisions affecting federal credit programs. Those estimates would supplement the estimates prepared in accordance with the Federal Credit Reform Act of 1990 (FCRA). For measures related to housing, residential mortgage, and student loan programs, such supplemental estimates on a fair-value basis would be automatically reported.

Under a fair-value approach, estimated costs reflect the market value of the federal government's obligations.[26] In CBO's judgment, fair-value estimates represent a more comprehensive estimate of the cost to the government of federal credit programs than FCRA estimates because fair-value estimates more fully capture the cost of the risk that the government bears when it extends credit.

Both approaches convert a stream of future federal cash flows associated with federal loans and loan guarantees into a lump-sum amount when the loan is made. That lump sum reflects the lifetime net cost of the credit extended. Both types of estimates are based on the same stream of cash flows, which include the projections of the expected losses to the government that occur when borrowers default on their loans.

The practical difference between the approaches arises from the discount rate used to translate future streams of cash to the present. Under FCRA, the yields on Treasury securities with maturity comparable to that of the loans being issued are used to discount the cash flows. Under the fair-value approach, higher discount rates are applied to risky cash flows than rates used in the FCRA calculations, which generally results in a higher estimated cost. For example, in a 2014 cost estimate for a proposal to implement fair-value accounting for all credit programs, CBO reported that the budgetary effects of new credit extended in 2013 would be savings of about $45 billion on a FCRA basis and costs of about $5 billion on a fair-value basis (an increase in measured cost of $50 billion).[27]

That higher discount rate captures the cost of market risk, a component of financial risk. Investors can avoid much of the risk of financial investments by diversifying a portfolio; market risk is the component of risk that remains even after a portfolio has been diversified as much as possible. Market risk arises because most investments tend to perform relatively poorly when the economy is weak and relatively well when the economy is strong. People value income from investments more when the economy is weak and incomes are relatively low, and so they assign a higher cost today to future losses that could occur during economic

26. For additional discussion, see Congressional Budget Office, *Fair-Value Accounting for Federal Credit Programs* (March 2012), www.cbo.gov/publication/43027.

27. See Congressional Budget Office, cost estimate for H.R. 1872, the Budget and Accounting Transparency Act of 2014 (February 12, 2014), www.cbo.gov/publication/45109.

downturns. The cost of market risk captures the higher cost today of future losses in bad times (as well as lower cost in good times).

The government's credit programs expose it to market risk because, when the economy is weak, borrowers default on their debt obligations more often and recoveries from defaulting borrowers are smaller. That market risk is passed along to taxpayers and beneficiaries of government programs because they bear the consequences of the government's financial losses. Moreover, that risk is costly to those taxpayers and beneficiaries, who also tend to value resources more when the economy is weak.

The FCRA approach essentially treats future cash flows subject to market risk as having the same value as Treasury securities that promise the same average payments with no risk. This means that the market risk of federal credit assistance is treated implicitly as having no cost to the government. Because fair-value estimates offer a more comprehensive measure of the costs of federal credit programs, in CBO's view, the agency has generated fair-value estimates for many programs to help lawmakers more fully understand the trade-offs between certain policies.

Some critics of the fair-value approach have noted that including the cost of market risk for credit—but not for noncredit programs that also have market risk—could sometimes complicate comparisons between credit and noncredit programs. Other analysts have observed that the cost of market risk will not actually be realized in federal cash flows if actual cash flows for the program match expected cash flows. In that case, the initial charge for market risk would then be reversed because the larger-than-expected losses that the charge compensates for would not be realized. (Under both FCRA and fair-value accounting, a system of supporting accounts must be used to reconcile an original estimate of cost with the cash flows ultimately realized in the budget.) However, including the cost of market risk is necessary to arrive at a lump-sum measure of cost today that is equivalent—in economic value of the budgetary resources used—to a risky, and potentially much larger, future expenditure.

The usefulness of each approach depends on the purpose for which it is used. FCRA estimates are less comprehensive measures of cost because, by discounting using Treasury rates, they treat expected outcomes as being equivalent to certain outcomes. However, if the realized cash flows do indeed match the expected cash flows, then the addition to the federal debt caused by the loan or loan guarantee will more closely correspond to the FCRA estimate. Thus, FCRA estimates are more useful than fair-value estimates for projecting the average effect of loans and loan guarantees on the federal debt in the long run.

Cost estimates, however, are also tools that policymakers can use to make trade-offs between policies that work toward a policy goal. Projecting effects on debt is not the only—or necessarily even the primary—purpose of cost estimates. By taking into account the cost of financial risks as expressed through market prices, fair-value estimates are generally more useful than FCRA estimates to help policymakers understand trade-offs between policies that involve market risk.

## Senator Wyden

**Question.** Director Hall, you note in your testimony that it has been longstanding practice for CBO to not provide dynamic scoring for a number of reasons, a key reason being because of the uncertainty of such estimates. The Budget Conference agreement passed by

Republicans includes Sec. 3112, "Honest accounting: cost estimates for major legislation to incorporate macroeconomic effects," that requires CBO to prepare dynamic scores for major pieces of legislation. When the Senate passed its version of this provision, CBO warned in April 6th comments to this Committee that "The uncertainty of those [dynamic] effects on the economy and feedback to the budget could be very large in comparison to the direct budgetary effects of the policy." I understand that Congress is now requiring CBO to provide dynamic scores for major pieces of legislation but given CBO's repeated misgivings about the uncertainty inherent in these estimates, why should lawmakers or the American public put much stock in any dynamic scores CBO has been compelled to produce?

**Answer.** Conventional analysis of proposed legislation incorporates analysis of behavioral responses by individuals and businesses to incentives in the legislation but does not incorporate effects on the economy as a whole, meaning that potential macroeconomic effects exert no feedback on the budget. Sometimes, however, that macroeconomic feedback may be important, so that trying to account for such effects may increase the likelihood of producing an accurate answer. To accomplish that goal, CBO has devoted considerable effort during the past several years to improving its ability to estimate fiscal policies' macroeconomic effects and the associated impact on the budget. That effort has included extensive reviews of relevant economic research and yielded tools that the agency can apply to help analyze a variety of policies. To present and explain its approach, CBO has published several reports and working papers.[28]

Therefore, CBO expects that including macroeconomic effects will improve the quality of its estimates for complex legislation with significant budgetary effects, given enough time to complete the macroeconomic analysis. The budget resolution requires that CBO include macroeconomic effects in cost estimates for major legislation to the greatest extent practicable. If CBO determines that including those effects would degrade the quality of any estimate, the agency would conclude that incorporating them would not be practicable.

28. See Congressional Budget Office, *How CBO Analyzes the Effects of Changes in Federal Fiscal Policies on the Economy* (November 2014), www.cbo.gov/publication/49494; Congressional Budget Office, *How the Supply of Labor Responds to Changes in Fiscal Policy* (October 2012), www.cbo.gov/publication/43674; Robert McClelland and Shannon Mok, *A Review of Recent Research on Labor Supply Elasticities*, Working Paper 2012-12 (Congressional Budget Office, October 2012), www.cbo.gov/publication/43675; Felix Reichling and Charles Whalen, *Review of Estimates of the Frisch Elasticity of Labor Supply*, Working Paper 2012-13 (Congressional Budget Office, October 2012), www.cbo.gov/publication/43676; Jonathan Huntley, *The Long-Run Effects of Federal Budget Deficits on National Saving and Private Domestic Investment*, Working Paper 2014-02 (Congressional Budget Office, February 2014), www.cbo.gov/publication/45140; and Charles J. Whalen and Felix Reichling, *The Fiscal Multiplier and Economic Policy Analysis in the United States*, Working Paper 2015-02 (Congressional Budget Office, February 2015), www.cbo.gov/publication/49925.