

**Estimated Budgetary Effect of a Requirement that
the Federal Reserve System Pay Interest
on Required Reserve Balances**

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NOTES

Numbers in the text and tables of this report may not add up to totals because of rounding.

Unless otherwise indicated, all years referred to are fiscal years.

This report examines what would happen to the federal budget if the Federal Reserve System paid interest on required reserve balances ("sterile reserves") to insured depository institutions or, alternatively, if it paid the same amount of interest into the deposit insurance funds. The report satisfies the requirements of section 329 of the Riegle Community Development and Regulatory Improvement Act of 1994. It was prepared jointly by the Office of Management and Budget (OMB) and the Congressional Budget Office (CBO) in consultation with the House and Senate Committees on the Budget. The report does not address the implications for economic or monetary policy of having the Federal Reserve pay interest on required reserve balances.

Part A of this report provides background information about required reserves and the budgetary status of the Federal Reserve System. Part B discusses the methods used to project the amount of interest the Federal Reserve would be required to pay annually from fiscal year 1996 through 2000 for both options. Part B also reviews the economic assumptions on which those projections are based. Part C provides estimates of the overall budgetary effects of the options and addresses the treatment of both options for purposes of the pay-as-you-go procedures under section 252 of the Balanced Budget and Emergency Deficit Control Act of 1985. OMB and CBO project that both policy options would increase the federal deficit. When this report presents estimates in ranges, one end of the range represents CBO's estimate and the other end represents OMB's estimate.

PART A

BACKGROUND ON REQUIRED RESERVES

Federal banking laws require depository institutions to hold reserve assets, called required reserves. The amount they must hold is based on the value of their transaction deposits, which are primarily demand deposits and interest-bearing checking accounts. In the Depository Institutions Deregulation and Monetary Control Act of 1980, the Congress set allowable ranges for the required reserve ratio--the percentage of various types of deposits that depository institutions must hold as required reserves. Within those ranges, the Federal Reserve specifies the applicable required reserve ratio, which it last lowered for transaction deposits in 1992 and eliminated for nonpersonal time deposits and Eurocurrency liabilities in 1990. The depository institutions must hold their required reserves either on deposit at the Federal Reserve ("required reserve balances") or as cash in their vaults or cash drawers ("vault cash"). Although it has use of the funds, the Federal Reserve does not pay interest on required reserve balances. In that respect, required reserve balances are equivalent to sterile reserves, and this report uses the two terms interchangeably.

BUDGETARY STATUS OF THE FEDERAL RESERVE

The Federal Reserve earns a "profit" on its operations, which it remits to the Treasury on a weekly basis. The payments are recorded in the federal budget as governmental receipts, or revenues. The Federal Reserve's largest source of earnings is interest from its holdings of Treasury securities, which it acquires as part of its open market operations undertaken to meet objectives of monetary policy. Since the Federal Reserve pays no interest to the owners of reserves or the holders of currency (the other major liability on its balance sheet), and the Treasury Department pays the Federal Reserve interest on its security holdings, the Federal Reserve earns profits. After paying its operating expenses and dividends to member banks and making an addition to a surplus (retained-earnings) account, the Federal Reserve returns its remaining earnings to the Treasury Department. Those payments totaled \$18 billion in fiscal year 1994, representing 1.4 percent of total federal revenues.

PART B

ESTIMATED INTEREST PAYMENTS ON REQUIRED RESERVE BALANCES

After consulting with staff from the Board of Governors of the Federal Reserve System and the Department of the Treasury, OMB and CBO agreed on a method for estimating the budgetary effects of paying interest on required reserves. However, OMB and CBO used different macroeconomic assumptions to project the level of required reserve balances and interest payments. OMB's assumptions are consistent with the economic forecast in the President's fiscal year 1996 budget, whereas CBO's estimates are based on its January 1995 economic assumptions.¹ Despite the different economic assumptions, the estimates of reserves are similar (see Table 1).

Sterile reserves can be thought of as the non-interest-paying reserves that depository institutions maintain because of the requirements of the Federal Reserve System over and above the reserves they maintain as vault cash and excess reserves to conduct their banking operations. The term does not include vault cash and excess reserves because depository institutions usually hold those for day-to-day business transactions and needs. In addition, sterile reserves do not include required clearing balances, which are held at the Federal Reserve for check-clearing purposes, because the Federal Reserve already pays a return--although limited--on those balances.

1. See *Budget of the United States Government, Fiscal Year 1996*, and Congressional Budget Office, *The Economic and Budget Outlook: Fiscal Years 1996-2000* (January 1995).

TABLE 1. ESTIMATED LEVELS OF STERILE RESERVE BALANCES
(By fiscal year, in billions of dollars)

	1996	1997	1998	1999	2000
BIF Members					
OMB	23.7	25.1	26.5	28.0	29.5
CBO	22.6	23.6	24.9	26.0	27.1
SAIF Members					
OMB	2.6	2.8	2.9	3.1	3.3
CBO	2.3	2.4	2.4	2.4	2.4
NCUSIF Members					
OMB	0.2	0.2	0.2	0.2	0.3
CBO	0.2	0.2	0.3	0.3	0.3
Total Balances					
OMB	26.6	28.1	29.7	31.3	33.1
CBO	25.2	26.2	27.5	28.7	29.8

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

NOTES: Numbers exclude balances held by nonfederally insured institutions.

BIF = Bank Insurance Fund; SAIF = Savings Association Insurance Fund; NCUSIF = National Credit Union Share Insurance Fund.

Table 1 shows projected balances of sterile reserves for each category of insured depository institution. OMB's estimates equal the Federal Reserve's estimate of fiscal year 1994 average required reserve balances, increased by the projected growth rate of M1 that is consistent with the Administration's macroeconomic forecast.² As shown in Table 1, OMB projects that required reserve balances will

2. There is some evidence to suggest that cash and demand deposits have been growing at a lower rate than other M1 components. However, it is not clear at this point whether the trend is a temporary or permanent shift. In addition, using projected M1 to determine the growth rate for sterile reserves is consistent with the Administration's forecast for Federal Reserve earnings.

grow from about \$27 billion in 1996 to about \$33 billion in 2000. CBO's estimates are based on the same fiscal year 1994 average required reserve balances but CBO's economic assumptions. Under CBO's assumptions, sterile balances grow from about \$25 billion in 1996 to nearly \$30 billion in 2000. Those balances are owned by depository institutions whose deposits are federally insured by the Bank Insurance Fund (BIF), the Savings Association Insurance Fund (SAIF), or the National Credit Union Share Insurance Fund (NCUSIF).

Under both policy options, the Federal Reserve would pay the same amount of interest on sterile reserves, whether it paid the interest to the depository institutions or to the deposit insurance funds. Table 2 shows CBO's and OMB's estimates of interest payments for the 1996-2000 period, based on the projected levels of sterile reserve balances and interest rates. Both agencies' estimates assume that the Federal Reserve would pay an interest yield on required reserve balances that was equal to the federal funds rate--an assumption that staff members of the Board of Governors of the Federal Reserve System agree is reasonable. Under OMB's interest rate assumptions, the federal funds rate declines slightly from 5.6 percent in 1996 to 5.5 percent in 1997 through 2000. Consequently, OMB estimates that the Federal Reserve would make \$1.5 billion in interest payments in 1996 and \$8.2 billion over the 1996-2000 period. Under CBO's economic assumptions, the federal funds rate falls from 6.2 percent in 1996 to 5.3 percent in 1998 and remains there through 2000. CBO estimates that the Federal Reserve would be required to pay \$1.5 billion in interest in 1996 and \$7.6

billion over the 1996-2000 period. Under both agencies' estimates, the bulk of the interest would be paid on the reserves of BIF-insured institutions, which hold most of the deposits and reserves of depository institutions.

TABLE 2. ESTIMATED INTEREST PAYMENTS ON STERILE RESERVE BALANCES
(By fiscal year, in billions of dollars)

	1996	1997	1998	1999	2000
BIF Members					
OMB	1.3	1.4	1.5	1.5	1.6
CBO	1.4	1.3	1.3	1.4	1.4
SAIF Members					
OMB	0.1	0.2	0.2	0.2	0.2
CBO	0.1	0.1	0.1	0.1	0.1
NCUSIF Members					
OMB	a	a	a	a	a
CBO	a	a	a	a	a
Total Payments					
OMB	1.5	1.5	1.6	1.7	1.8
CBO	1.5	1.5	1.5	1.5	1.6

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

NOTE: BIF = Bank Insurance Fund; SAIF = Savings Association Insurance Fund; NCUSIF = National Credit Union Share Insurance Fund.

a. Less than \$50 million.

PART C

BUDGETARY AND PAY-AS-YOU-GO EFFECTS OF THE TWO OPTIONS

The Riegle Community Development and Regulatory Improvement Act of 1994 requires OMB and CBO to estimate the budgetary effects of the two policy options for paying interest on sterile reserves. As mentioned above, under Option 1 the Federal Reserve would pay the interest directly to insured depository institutions. Under Option 2, the Federal Reserve would instead pay the interest to the Bank Insurance Fund, the Savings Association Insurance Fund, and the National Credit Union Share Insurance Fund. The remainder of this report presents the estimated budgetary effect of both options, including option-specific effects not discussed in the previous section, and the estimated effect for pay-as-you-go purposes.

Option 1

Budget Estimate. If the Federal Reserve began paying interest to insured depository institutions on their required reserve balances on October 1, 1995, its profits would decrease by about \$1.5 billion in 1996, OMB and CBO both estimate, and by about \$1.5 billion to \$1.8 billion per year through 2000 (depending on which economic assumptions are used). Annual Treasury revenues would fall by an equal amount. Over the period from 1996 to 2000, federal revenues from the Federal Reserve would decrease by \$7.6 billion to \$8.2 billion (see Table 3).

TABLE 3. ESTIMATED BUDGETARY EFFECTS OF OPTION 1
(By fiscal year, in billions of dollars)

	1996	1997	1998	1999	2000	1996- 2000
Change in Revenues						
Federal Revenue Earnings						
OMB	-1.5	-1.5	-1.6	-1.7	-1.8	-8.2
CBO	-1.5	-1.5	-1.5	-1.5	-1.6	-7.6
Corporate Income Tax						
OMB	0.4	0.4	0.4	0.4	0.5	2.1
CBO	0.4	0.4	0.4	0.4	0.4	1.9
Total Revenues						
OMB	-1.1	-1.2	-1.2	-1.3	-1.4	-6.2
CBO	-1.2	-1.1	-1.1	-1.1	-1.2	-5.7
Change in Deficit						
OMB	1.1	1.2	1.2	1.3	1.4	6.2
CBO	1.2	1.1	1.1	1.1	1.2	5.7

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

For budget-estimating purposes, both OMB and CBO assume that if the Federal Reserve paid the interest directly to depository institutions, those institutions' profits would rise and corporate income tax receipts would thereby increase. The estimates in this report assume that depository institutions would not pass the increase in profits along to their customers. The increase in their profits, as a result, would equal the decline in Federal Reserve profits. Overall corporate profits in the economy, which include Federal Reserve profits for the purposes of the national accounts, would remain unchanged. Gross domestic product would also remain

unchanged, consistent with the standard revenue-estimating convention. However, since the profits of depository institutions are subject to the federal income tax, total taxable income would increase. Assuming that those institutions would pay a marginal corporate income tax rate of 25 percent (except for tax-exempt credit unions), OMB and CBO estimate that income tax revenues would increase by about \$2 billion over the 1996-2000 period (see Table 3).

Alternatively, especially in the longer term, depository institutions might pass some or all of their increased profits through to their business and consumer customers by raising interest rates on deposits or lowering rates on loans. If a complete passthrough did occur, then the customers--not the depository institutions--would accrue the income and pay additional income taxes. The increase in income tax revenues would probably be similar to that estimated without such a passthrough assumption.

The net effect on the budget would be the difference between the reduced Federal Reserve earnings and the increased income tax payments of depository institutions. OMB projects that the deficit would increase by \$1.1 billion in 1996 and by correspondingly larger amounts in subsequent years, so that over the 1996-2000 period it would grow by \$6.2 billion. CBO projects that the federal deficit would increase by \$1.1 billion to \$1.2 billion per year through 2000 and by a total of \$5.7 billion during the 1996-2000 period.

Pay-as-You-Go Estimate. The Balanced Budget and Emergency Deficit Control Act of 1985 (the Balanced Budget Act) sets up pay-as-you-go procedures through 1998 for legislation that affects federal government receipts. Based on CBO's economic assumptions, Option 1 would decrease governmental receipts by \$3.4 billion over the 1996-1998 period and thus would be subject to pay-as-you-go scoring. OMB estimates that Option 1 would lower governmental receipts by \$3.5 billion over the three-year period and would be subject to pay-as-you-go scoring.

Option 2

Budget Estimate. Requiring the Federal Reserve to make payments to the three deposit insurance funds that were equal to interest on sterile reserves would have a similar but moderately smaller budgetary impact than requiring it to pay depository institutions directly. OMB and CBO estimate that profits of the Federal Reserve System would decline by the same amount as estimated for Option 1, since it makes no difference to whom the Federal Reserve pays the interest. Thus, as in that estimate, the Federal Reserve's payment to the Treasury would decline by about \$7.6 billion to \$8.2 billion over the 1996-2000 period, depending on which economic assumptions are used. The Federal Reserve's interest payment, however, would provide additional income of about \$6.8 billion to \$7.3 billion to BIF, \$0.7 billion to \$0.8 billion to SAIF, and \$0.1 billion to NCUSIF over that period, thereby increasing

each fund's cash balance (see Table 4). Much of that increase in income, however, would be passed on to the depository institutions. The effect on each insurance fund is described below.

Bank Insurance Fund. The Federal Deposit Insurance Corporation (FDIC), which administers BIF and SAIF, has recently proposed reducing the deposit insurance premiums for banks from an average rate of 23 cents per \$100 of domestic deposits to 4.5 cents. The FDIC must consider a number of statutory requirements in determining rates for deposit insurance: the assessment schedule is supposed to reflect the relative risk of BIF's losing money from the failure of a bank, each BIF member must pay an assessment of at least \$2,000 annually, and the fund's target reserve ratio is to be maintained at 1.25 percent of total estimated insured deposits. Furthermore, the FDIC believes that it no longer has the authority to provide rebates to banks. Consistent with those constraints, CBO would expect that the FDIC would return to the banks, in the form of even lower insurance rates, about \$5.7 billion in interest payments from the Federal Reserve over the 1996-2000 period. The remaining excess, about \$1.1 billion, would increase net collections to BIF. That surplus would augment existing equity, and the fund's balance would exceed the target of \$1.25 per \$100 of insured deposits.

TABLE 4. ESTIMATED BUDGETARY EFFECTS OF OPTION 2
(By fiscal year, in billions of dollars)

	1996	1997	1998	1999	2000	1996- 2000
Change in Revenues						
Federal Reserve Earnings						
OMB	-1.5	-1.5	-1.6	-1.7	-1.8	-8.2
CBO	-1.5	-1.5	-1.5	-1.5	-1.6	-7.6
Corporate Income Tax						
OMB	0.3	0.4	0.4	0.4	0.4	1.8
CBO	0.3	0.3	0.3	0.3	0.3	1.4
Total Revenues						
OMB	-1.2	-1.1	-1.3	-1.3	-1.4	-6.4
CBO	-1.3	-1.2	-1.2	-1.2	-1.3	-6.1
Change in Outlays						
Bank Insurance Fund						
OMB	-0.3	0.3	0	0	0	0
CBO	-0.4	-0.1	-0.2	-0.2	-0.2	-1.1
Savings Association Insurance Fund						
OMB	-0.1	-0.2	-0.2	-0.2	-0.2	-0.8
CBO	-0.1	-0.1	-0.1	-0.1	-0.1	-0.7
National Credit Union Share Insurance Fund						
OMB	a	a	a	a	a	-0.1
CBO	a	a	a	a	a	-0.1
Total Outlays						
OMB	-0.4	0.1	-0.2	-0.2	-0.2	-0.9
CBO	-0.5	-0.3	-0.3	-0.4	-0.4	-1.8
Change in Deficit						
OMB	0.8	1.2	1.1	1.2	1.2	5.5
CBO	0.8	0.9	0.9	0.9	0.9	4.3

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

a. Reduction of less than \$50 million.

By contrast, under the Administration's budget assumptions, the Federal Reserve's interest payments to BIF alone would not be sufficient to keep the recapitalization ratio at 1.25 percent in any year of the five-year period except 1996. The reason for the different outcome is that the President's budget baseline assumes higher insurance losses--and therefore higher premium income--than CBO's. Hence, OMB estimates that the FDIC would respond to the collection of interest in 1996 and later years by readjusting or lowering the premiums paid by banks more than CBO's assumptions would allow. OMB estimates the reduction in premiums at \$7.3 billion over the five-year period. In addition, under OMB's assumptions, the fund's balance would stay at the 1.25 percent level in all years except 1996, when the interest payment from the Federal Reserve would exceed expected premium income.

Assuming that the portion of the transfer from the Federal Reserve that did not stay in BIF would not affect overall corporate profits, the policy would result in a shift of profits from the Federal Reserve to depository institutions, which both CBO and OMB assume have a marginal corporate income tax rate of 25 percent. As a result, revenues from corporate income taxes would increase by \$1.4 billion to \$1.8 billion over the 1996-2000 period (see Table 4).

Savings Association Insurance Fund. Unlike BIF, which is expected to reach its legislatively mandated reserve level this summer, SAIF is unlikely to be recapitalized between now and 2000 without a change in law, OMB and CBO believe. The FDIC

recently proposed to maintain the current risk-based assessment schedule, which requires savings and loans to pay an annual rate averaging about 24 cents per \$100 of insured deposits. Given the status of SAIF, OMB and CBO expect that it would use the interest payments from the Federal Reserve to shore up its balances. Thus, over the next few years, the Federal Reserve's payments would be adding to SAIF's equity rather than lowering deposit insurance premiums (as would be the case with BIF) and would increase SAIF's net collections by an estimated \$0.7 billion to \$0.8 billion through 2000 (see Table 4).

National Credit Union Share Insurance Fund. Since the mid-1980s, the earnings on its investments have allowed NCUSIF to cover insurance losses and administrative expenses, increase its retained earnings, waive annual premiums, and, in some years, distribute excess cash to credit unions. Current law requires NCUSIF to maintain a fund balance of between \$1.25 and \$1.30 per \$100 of insured deposits, with excess amounts refunded to member credit unions. Because the interest payment from the Federal Reserve would be so small and would not significantly affect NCUSIF's reserve balance, the fund is expected to retain the income, thereby increasing its reserves. Savings are projected to total about \$63 million to \$70 million during the 1996-2000 period (see Table 4). Over time, however, the reserves of the fund would grow faster as a result of this payment, and credit unions would benefit through future cash distributions or lower insurance premiums.

Summary. Requiring the Federal Reserve to pay interest on sterile reserves to the deposit insurance funds would reduce governmental receipts by an estimated \$6.1 billion to \$6.4 billion through 2000 and outlays by about \$0.9 billion to \$1.8 billion over the same period. CBO estimates that the combined effect would increase the federal deficit by \$4.3 billion over the 1996-2000 period, whereas OMB estimates that the deficit would rise by \$5.5 billion. Either of the estimated increases in the deficit is smaller than the \$5.7 billion to \$6.2 billion rise projected for the first policy option (to pay interest on required reserve balances to the depository institutions) because the portion of the Federal Reserve's payment that adds to the equity of the deposit insurance funds has no overall effect on the deficit.

Pay-as-You-Go Estimate. As mentioned earlier, the Balanced Budget Act sets up procedures through 1998 for legislation affecting mandatory spending and receipts. The budgetary effects of providing the necessary funding to meet the government's existing deposit insurance commitments are excluded from those procedures. The deposit insurance exemption covers only that portion of the Federal Reserve's payment that does not result in reduced deposit insurance premiums. That exemption amounts to \$0.5 billion to \$1.1 billion through 1998.

TABLE 5. PAY-AS-YOU-GO ESTIMATES FOR BOTH OPTIONS
(By fiscal year, in billions of dollars)

	1996	1997	1998	1996- 1998 ^a
Option 1				
Change in Receipts				
OMB	-1.1	-1.2	-1.2	-3.5
CBO	-1.2	-1.1	-1.1	-3.4
Change in Outlays				
OMB	n.a.	n.a.	n.a.	n.a.
CBO	n.a.	n.a.	n.a.	n.a.
Option 2				
Change in Receipts				
OMB	-0.8	-1.2	-1.1	-3.1
CBO	-0.8	-0.9	-0.9	-2.5
Change in Outlays				
OMB	0	0	0	0
CBO	0	0	0	0

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

NOTE: n.a. = not applicable.

a. If the pay-as-you-go procedures were extended through 2000, the change in receipts for Option 1 for the 1996-2000 period would equal -\$6.2 billion for OMB and -\$5.7 billion for CBO. For Option 2, the cumulative change in receipts would equal -\$5.5 billion for OMB and -\$4.3 billion for CBO.

CBO and OMB would include the remaining budgetary effects, representing reduced revenues only, for pay-as-you-go purposes (see Table 5). CBO estimates that the reduction in revenues would total about \$0.8 billion in 1996 and \$0.9 billion the two following years. OMB estimates that federal receipts would decline by \$0.8 billion in 1996, \$1.2 billion in 1997, and \$1.1 billion in 1998. The estimates include both a reduced Federal Reserve payment to the Treasury (paid to BIF instead) of

about \$3.4 billion to \$4.2 billion through 1998 and increased revenues from the income tax (from the Federal Reserve payment that flows through BIF to the banks) of about \$0.8 billion to \$1 billion over the same period. The deficit effect of Option 2 for pay-as-you-go purposes would equal its deficit effect for budgetary purposes, although all of the effect would be on revenues for purposes of pay-as-you-go scoring.

