Fair-Value Estimates of the Cost of Selected Federal Credit Programs for 2015 to 2024

The Congressional Budget Office (CBO) has estimated the budgetary costs of the Department of Education's student loan programs, the Export-Import Bank's (Ex-Im Bank's) credit programs, and the Federal Housing Administration's (FHA's) single-family mortgage guarantee program using two different approaches. In one, cost is based on an estimate of the market value of the federal government's obligations, termed a fair-value approach. Those estimates are compared with ones reflecting the procedures currently used in the federal budget as prescribed by the Federal Credit Reform Act of 1990 (FCRA).[1] CBO's fair-value and FCRA estimates are based on the program terms and outcomes—including the volume and amount of lending, fees, and borrowers' rates of repayment and default—that are expected to prevail under current law.

For fiscal years 2015 to 2024, CBO found that under current law:

- The Department of Education's four largest student loan programs would yield budgetary savings of roughly $135 billion under FCRA accounting but cost roughly $88 billion on a fair-value basis;[2]

- Ex-Im Bank's six largest programs would generate budgetary savings of $14 billion under FCRA accounting but cost $2 billion on a fair-value basis; and

- FHA's single-family mortgage guarantee program would provide budgetary savings of $63 billion under FCRA accounting but cost $30 billion on a fair-value basis (see Table 1 and Figure 1).[3]

CBO used its own projections of the volume of loans and cash flows for the Department of Education's student loan programs and FHA's single-family mortgage guarantee program because those estimates are a routine part of its baseline budget projections. However, because CBO does not ordinarily project the detailed cash flows required to estimate the costs for most other federal credit programs, CBO relied on the Export-Import Bank's projections of those cash flows for this analysis of the bank's programs.

The Difference Between FCRA Procedures and the Fair-Value Approach

Although the costs of most federal activities are recorded in the budget on a cash basis (showing the balance of inflows and outflows when those flows occur), the lifetime costs of federal credit programs are recorded up front on an accrual basis (that is, they are recognized in the year in which the loan is made). The lifetime cost of a

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1. Section 504(d) of FCRA, 2 U.S.C. §661c (d) (2006).

2. To simplify the analysis, the budgetary estimates for the Department of Education are based on the *obligations* that CBO estimates the department will incur each year for student loans, rather than on the amount of loan disbursements (which would be the basis for official budget estimates). Estimates reflecting the timing of loan disbursements would differ slightly from those shown here.

3. The budgetary costs and savings for all of the programs discussed here exclude administrative expenses, which are treated separately in the federal budget.

Table 1.

Estimated Total Budgetary Costs of Selected Federal Credit Programs Under FCRA and the Fair-Value Approach, 2015 to 2024

	Type of Credit	Obligations or Commitments (Billions of dollars)	Subsidy Cost (Billions of dollars)		Subsidy Rate (Percent)	
			FCRA	Fair-Value	FCRA	Fair-Value
Department of Education						
Subsidized Stafford Loans (Undergraduate Students)	Direct loan	314	26	80	8.3	25.4
Unsubsidized Stafford Loans (Undergraduate and Graduate Students)	Direct loan	647	-86	40	-13.2	6.2
PLUS Loans (Graduate Students)	Direct loan	107	-38	-13	-35.3	-12.4
PLUS Loans (Parents of Dependent Students)	Direct loan	106	-38	-19	-35.6	-17.5
Total, Department of Education[a]		**1,174**	**-135**	**88**	**-11.5**	**7.5**
Export-Import Bank						
Export Financing	Direct loan	30	-3	-1	-9.3	-3.2
Long-Term Guarantees	Guarantee	246	-12	2	-4.7	0.7
Medium-Term Guarantees	Guarantee	2	*	**	-1.6	2.2
Medium-Term Insurance	Guarantee	2	*	**	-3.7	‡
Short-Term Insurance	Guarantee	67	*	**	†	0.7
Working Capital Fund	Guarantee	30	*	**	†	0.9
Total, Export-Import Bank		**376**	**-14**	**2**	**-3.8**	**0.4**
Federal Housing Administration						
Single-Family Mutual Mortgage Insurance Fund	Guarantee	2,232	-63	30	-2.8	1.3

Sources: Congressional Budget Office (for subsidy estimates, using data supplied by agencies) and Office of Management and Budget, *Budget of the U.S. Government, Fiscal Year 2015: Federal Credit Supplement* (for commitments and obligations).

Notes: For the Export-Import Bank, the table shows FCRA and fair-value estimates computed from projected obligations (for direct loans), commitments (for guaranteed loans), and cash flows under current law provided by the Administration's Office of Management and Budget and the agency. For student loans and guarantees of single-family mortgages, which are administered, respectively, by the Department of Education and the Federal Housing Administration (within the Department of Housing and Urban Development), the current-law projections were prepared by CBO. To simplify the analysis, the budgetary estimates for the Department of Education are based on the *obligations* that CBO estimates the department will incur each year for student loans rather than on the amount of loan disbursements (which would be the basis for official estimates). Estimates reflecting the timing of loan disbursements would differ slightly from those shown here.

Subsidy costs exclude administrative expenses.

The subsidy rate is the subsidy cost divided by the projected obligations or commitments.

Numbers in the table may not add up to totals because of rounding.

FCRA = Federal Credit Reform Act; * = between -$500 million and zero; ** = between zero and $500 million; † = between -0.05 and zero; ‡ = between zero and 0.05.

a.   Excludes certain smaller programs.

federal loan or loan guarantee—called its subsidy cost—is measured by discounting all of the expected future cash flows associated with the loan or loan guarantee to a present value at the date the loan is disbursed. Those cash flows include the amounts disbursed, principal repaid, interest received, fees charged, and net losses that accrue from defaults. That present value expresses the flows of current and future income or payments in terms of a single number that is equivalent to a lump sum received

or paid today; the value depends on the discount rate (that is, the rate of interest) that is used to translate future cash flows into current dollars. For credit programs to have estimated budgetary savings, the discounted value of the government's cash inflows must exceed the discounted value of its cash outflows.

Under FCRA's rules, the present value of expected future cash flows is calculated by discounting them using the

Figure 1.

Estimated Total Budgetary Costs of Selected Federal Credit Programs Under FCRA and the Fair-Value Approach, 2015 to 2024

(Billions of dollars)
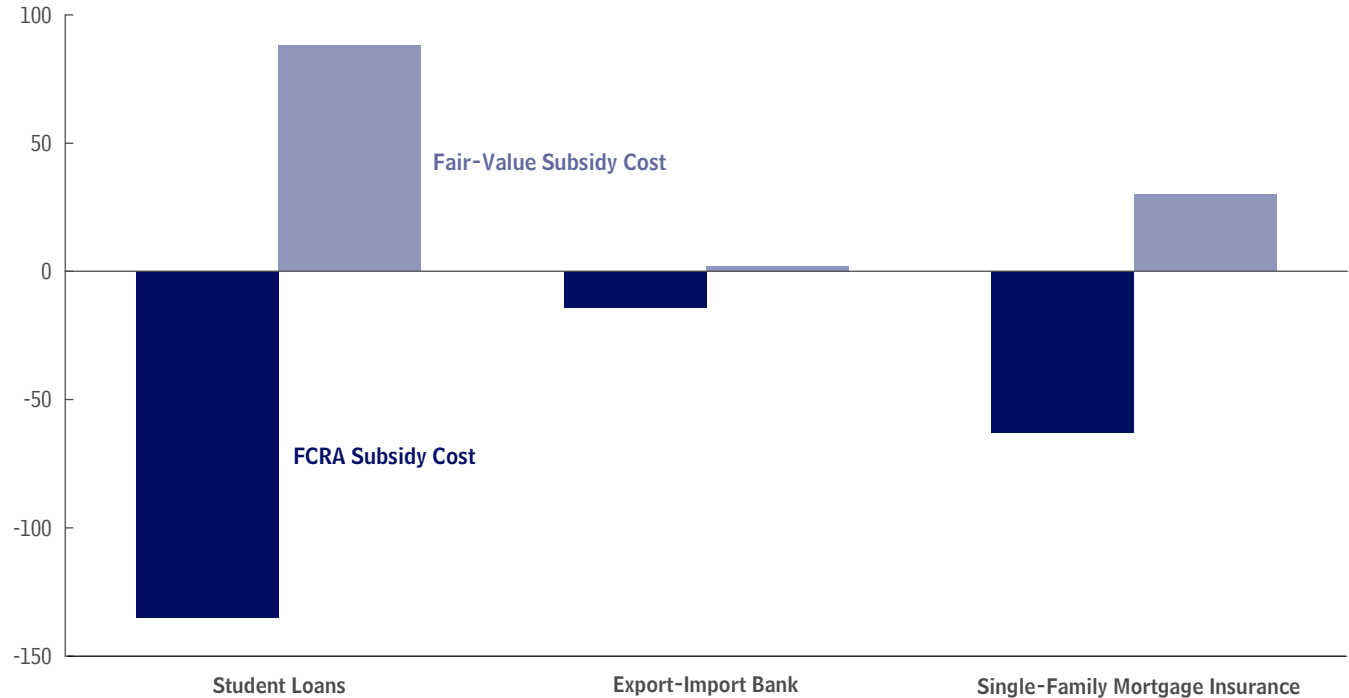
Sources: Congressional Budget Office (for subsidy estimates, using data supplied by agencies) and Office of Management and Budget, *Budget of the U.S. Government, Fiscal Year 2015: Federal Credit Supplement*.

Notes: For the Export-Import Bank, the figure shows FCRA and fair-value estimates computed from projected obligations (for direct loans), commitments (for guaranteed loans), and cash flows under current law provided by the Administration's Office of Management and Budget and the agency. For student loans and guarantees of single-family mortgages, which are administered, respectively, by the Department of Education and the Federal Housing Administration (within the Department of Housing and Urban Development), the current-law projections were prepared by CBO. To simplify the analysis, the budgetary estimates for the Department of Education are based on the *obligations* that CBO estimates the department will incur each year for student loans, rather than on the amount of loan disbursements (which would be the basis for official estimates). Estimates reflecting the timing of loan disbursements would differ slightly from those shown here.

Subsidy costs exclude administrative expenses.

FCRA = Federal Credit Reform Act.

rates on U.S. Treasury securities with similar terms to maturity. For instance, the yield on a Treasury security maturing in one year is used to discount cash flows one year from disbursement, a two-year rate is used for cash flows two years from disbursement, and so on.

In contrast, under the fair-value approach, estimates are based on market values—market prices when those prices are available or approximations of market prices when directly comparable figures are unavailable—which more fully account for the cost of the risk the government takes on. In particular, the fair-value approach accounts for the

cost of market risk, which FCRA procedures do not. Market risk is the component of financial risk that remains even after investors have diversified their portfolios as much as possible; it arises from shifts in macroeconomic conditions, such as productivity and employment, and from changes in expectations about future macroeconomic conditions. The government is exposed to market risk when the economy is weak because borrowers default on their debt obligations more frequently and recoveries from borrowers are lower. When the government extends credit, the associated

market risk of those obligations is effectively passed along to taxpayers, who, as investors, would view that risk as having a cost. Therefore, the fair-value approach offers a more comprehensive estimate of federal costs.[4]

Although there are many techniques to approximate fair values, a standard method for estimating the market value of a direct loan or loan guarantee (adopted for the analysis here) is to discount the expected cash flows to the present using market-based discount rates. In that case, the only difference between FCRA and fair-value estimates stems from the choice of discount rates. The estimates of cash flows, including the net amount lost through defaults, are the same in both approaches, but the difference in discount rates means that those cash flows are valued differently. The difference between the FCRA and fair-value discount rates can be interpreted as the additional compensation that investors would require to bear the risk associated with federal credit.

How would the results under the two approaches differ? The cost of a direct loan reported in the federal budget under FCRA procedures is lower than the cost that private institutions would assign to similar credit assistance on the basis of market prices. Specifically, private institutions would generally calculate the present value of expected future cash flows by discounting them using the expected rates of return on private loans (or securities) with similar risks and maturities. Because the expected rates of return on private loans exceed the rates on Treasury securities, the discounted value of borrowers' expected payments is smaller under this alternative approach, which implies a larger cost for issuing a loan.

Similar reasoning implies that the cost of a loan guarantee calculated using the fair-value approach would be higher than its cost as estimated under FCRA. When it provides a loan guarantee, the government bears the losses resulting from a default on the loan and any market risk associated with those losses. Because of that government commitment, a lender places more value on a loan with a guarantee than on the same loan without a guarantee. The difference in value between them is the "fair value" of the guarantee, which reflects the higher losses that an investor would expect on a loan without a guarantee and the higher discount rate that an investor would require to

compensate for the market risk associated with such a loan. Under FCRA, the expected losses, but not the value of the market risk, would be included in the cost. Because a loan without a guarantee has more market risk than the same loan with a guarantee, assigning a cost to market risk through the use of the fair-value approach results in a higher estimated cost for the guarantee.

The Department of Education's Student Loan Programs

The Department of Education offers a number of different types of loans to help students and their families finance postsecondary education. Its four largest loan programs are:

- subsidized Stafford loans (available only to undergraduate students, the government pays the interest while the borrower is in school);

- unsubsidized Stafford loans (available to undergraduate and graduate students, the borrower pays interest while in school);

- graduate PLUS loans (available to graduate students who have reached borrowing limits for other federal direct loans); and

- parent PLUS loans (available to parents of dependent students).[5]

CBO estimates that, under current law, total loan volume for those four programs will increase from $103 billion in 2015 to $133 billion in 2024.[6] Spending for those programs is classified as mandatory; lending levels are limited only by per-borrower limits established in the Higher Education Act, and the programs are not subject to the annual appropriation process.

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

5. For additional information on student loan programs, see David P. Smole, *Federal Student Loans Made Under the Federal Family Education Loan Program and the William D. Ford Federal Direct Loan Program: Terms and Conditions for Borrowers*, Report for Congress R40122 (Congressional Research Service, January 16, 2014).

6. For additional discussion of CBO's projections, see Congressional Budget Office, *CBO's April 2014 Baseline Projections for the Student Loan Program* (April 2014), www.cbo.gov/publication/44198.

All together, those four programs are projected to produce a net gain (a negative subsidy) to the government totaling roughly $135 billion over the 10-year period under the FCRA approach but a net cost (a positive subsidy) of roughly $88 billion using the fair-value approach (see footnote 2 for more information on those projections). Both values exclude administrative costs. Thus, accounting for those programs on a fair-value basis would increase the estimated subsidy costs by about $223 billion over the next 10 years. According to CBO's estimates, the combined subsidy rate—that is, the total cost or savings divided by the total amount disbursed—for those programs over the 10-year period would be negative 11.5 percent under the FCRA approach; by contrast, using the fair-value approach, the combined subsidy rate would be positive 7.5 percent.

On a FCRA basis, three of the four largest student loan programs would have a negative subsidy and thus have the net effect of lowering the deficit in each year of the 10-year projection period; only the subsidized Stafford loans are projected to have a positive subsidy cost (see Table 2).

The subsidy cost would be higher for all four programs under the fair-value approach, although two of them—the PLUS loan programs—would continue to show a negative subsidy. In principle, negative fair-value subsidies should be rare as they represent a profitable opportunity for private-sector institutions to offer credit on more favorable terms. A negative fair-value subsidy may arise for some types of student loans because the federal government has tools to collect from delinquent borrowers that private lenders do not have, giving federal programs an advantage over private-sector lenders.[7]

The Export-Import Bank's Loan, Loan Guarantee, and Insurance Programs

The Export-Import Bank provides direct loans, loan guarantees, and credit insurance to foreign and domestic entities to support the export of U.S goods and services. Ex-Im Bank's programs are subject to the annual appropriation process, and hence, are classified as discretionary. Annual appropriation bills provide funding to cover the subsidy cost, if any, of that lending. In addition, Ex-Im Bank's authorizing legislation limits the total dollar amount of loans, loan guarantees, and insurance that the bank can have outstanding at any given time.[8] That exposure was approximately $114 billion at the end of fiscal year 2013, which is $16 billion below its authorization of $130 billion for that year.

For its analysis, CBO computed subsidy costs for Ex-Im Bank using the bank's projection of cash flows and the Office of Management and Budget's discount rates—thus, the subsidy costs match those reported in the Federal Credit Supplement.[9] For its fair-value estimates, CBO used the same cash flows but added a risk premium to the discount rate. Those risk premiums were estimated on the basis of the default projections underlying the cash flows. Because its baseline for Ex-Im Bank shows a stream of negative subsidies (using the FCRA approach) that remain constant from year to year, CBO estimated only the 2015 subsidies and applied those costs to each year of the 10-year projections.

If Ex-Im Bank's activity in 2015 matches the President's budget request for that fiscal year, CBO estimates that $37.6 billion in new loans would be made or guaranteed in the bank's six largest credit programs, with savings totaling $1.4 billion on a FCRA basis and costs totaling $0.2 billion using the fair-value approach. Thus, the 10-year effects would be savings of $14 billion using FCRA methodology and costs of $2 billion using the

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7. The same collection tools are used by the government for Stafford programs, but those programs have a positive fair-value subsidy because Stafford borrowers generally pay lower rates of interest and are less likely to fully repay their loans than PLUS borrowers.

8. For further information about Ex-Im Bank's programs, see Shayerah Ilias, *Export-Import Bank: Background and Legislative Issues*, Report for Congress R42472 (Congressional Research Service, May 22, 2012).

9. The FCRA subsidy estimates in this report differ only slightly from CBO's April 2014 baseline.

Table 2.

Estimated Annual Loan Volume and Budgetary Costs of Selected Federal Credit Programs Under FCRA and the Fair-Value Approach, 2015 to 2024

(Billions of dollars)

Program Name	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total, 2015- 2024
					FCRA Subsidy Cost						
					Department of Education						
Subsidized Stafford Loans (Undergraduate Students)	1	2	2	3	3	3	3	3	3	3	26
Unsubsidized Stafford Loans (Undergraduate and Graduate Students)	-10	-9	-8	-8	-8	-8	-8	-9	-9	-9	-86
PLUS Loans (Graduate Students)	-3	-3	-3	-3	-4	-4	-4	-4	-4	-5	-38
PLUS Loans (Parents of Dependent Students)	-4	-4	-4	-3	-4	-4	-4	-4	-4	-4	-38
Total, Department of Education[a]	**-16**	**-15**	**-13**	**-12**	**-12**	**-12**	**-13**	**-14**	**-14**	**-14**	**-135**
					Export-Import Bank						
Export Financing	*	*	*	*	*	*	*	*	*	*	-3
Long-Term Guarantees	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-12
Medium-Term Guarantees	*	*	*	*	*	*	*	*	*	*	*
Medium-Term Insurance	*	*	*	*	*	*	*	*	*	*	*
Short-Term Insurance	*	*	*	*	*	*	*	*	*	*	*
Working Capital Fund	*	*	*	*	*	*	*	*	*	*	*
Total, Export-Import Bank	**-1**	**-1**	**-1**	**-1**	**-1**	**-1**	**-1**	**-1**	**-1**	**-1**	**-14**
					Federal Housing Administration						
Single-Family Mutual Mortgage Insurance Fund	-8	-8	-8	-7	-7	-5	-5	-5	-5	-5	-63
					Fair-Value Subsidy Cost						
					Department of Education						
Subsidized Stafford Loans (Undergraduate Students)	7	7	8	8	8	8	8	8	9	9	80
Unsubsidized Stafford Loans (Undergraduate and Graduate Students)	4	4	4	4	4	4	4	4	4	4	40
PLUS Loans (Graduate Students)	-1	-1	-1	-1	-1	-1	-1	-1	-2	-2	-13
PLUS Loans (Parents of Dependent Students)	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-19
Total, Department of Education[a]	**8**	**8**	**9**	**9**	**9**	**9**	**9**	**9**	**9**	**10**	**88**
					Export-Import Bank						
Export Financing	*	*	*	*	*	*	*	*	*	*	-1
Long-Term Guarantees	**	**	**	**	**	**	**	**	**	**	2
Medium-Term Guarantees	**	**	**	**	**	**	**	**	**	**	**
Medium-Term Insurance	**	**	**	**	**	**	**	**	**	**	**
Short-Term Insurance	**	**	**	**	**	**	**	**	**	**	**
Working Capital Fund	**	**	**	**	**	**	**	**	**	**	**
Total, Export-Import Bank	**	**	**	**	**	**	**	**	**	**	**2**
					Federal Housing Administration						
Single-Family Mutual Mortgage Insurance Fund	1	2	2	2	3	4	4	4	4	4	30

Table 2.   **Continued**

Estimated Annual Loan Volume and Budgetary Costs of Selected Federal Credit Programs Under FCRA and the Fair-Value Approach, 2015 to 2024

(Billions of dollars)

Program Name	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total, 2015–2024
					Total Loan Volume						
					Department of Education						
Subsidized Stafford Loans (Undergraduate Students)	28	28	29	30	31	32	33	33	34	35	314
Unsubsidized Stafford Loans (Undergraduate and Graduate Students)	57	59	60	62	64	66	67	69	71	73	647
PLUS Loans (Graduate Students)	8	9	9	10	10	11	11	12	13	13	107
PLUS Loans (Parents of Dependent Students)	10	10	10	10	10	11	11	11	11	12	106
Total, Department of Education[a]	**103**	**106**	**109**	**112**	**115**	**119**	**122**	**126**	**129**	**133**	**1,174**
					Export-Import Bank						
Export Financing	3	3	3	3	3	3	3	3	3	3	30
Long-Term Guarantees	25	25	25	25	25	25	25	25	25	25	246
Medium-Term Guarantees	**	**	**	**	**	**	**	**	**	**	2
Medium-Term Insurance	**	**	**	**	**	**	**	**	**	**	2
Short-Term Insurance	7	7	7	7	7	7	7	7	7	7	67
Working Capital Fund	3	3	3	3	3	3	3	3	3	3	30
Total, Export-Import Bank	**38**	**38**	**38**	**38**	**38**	**38**	**38**	**38**	**38**	**38**	**376**
					Federal Housing Administration						
Single-Family Mutual Mortgage Insurance Fund	150	185	207	223	238	231	245	249	251	253	2,232

Sources: Congressional Budget Office (for subsidy estimates, using data supplied by agencies) and Office of Management and Budget, *Budget of the U.S. Government, Fiscal Year 2015: Federal Credit Supplement* (for commitments and obligations).

Notes: For the Export-Import Bank, the table shows FCRA and fair-value estimates computed from projected obligations (for direct loans), commitments (for guaranteed loans), and cash flows under current law provided by the Administration's Office of Management and Budget and the agency. For student loans and guarantees of single-family mortgages, which are administered, respectively, by the Department of Education and the Federal Housing Administration (within the Department of Housing and Urban Development), the current-law projections were prepared by CBO. To simplify the analysis, the budgetary estimates for the Department of Education are based on the *obligations* that CBO estimates the department will incur each year for student loans, rather than on the amount of loan disbursements (which would be the basis for official estimates). Estimates reflecting the timing of loan disbursements would differ slightly from those shown here.

Subsidy costs exclude administrative expenses.

The subsidy rate is the subsidy cost divided by the projected obligations or commitments.

Numbers in the table may not add up to totals because of rounding.

FCRA = Federal Credit Reform Act; * = between -$500 million and zero; ** = between zero and $500 million.

a. Excludes certain smaller programs.

fair-value approach, a difference of $16 billion.[10] The average subsidy rate under the FCRA approach is estimated to be negative 3.8 percent for all of the bank's programs combined, whereas the average fair-value subsidy rate is estimated to be positive 0.4 percent.

Each of Ex-Im Bank's six largest credit programs would generate a negative or zero budgetary cost on a FCRA basis, CBO estimates. The subsidy cost would increase for all programs under the fair-value approach but would be less than 1 percent for most of them. CBO's fair-value estimate for the Export Financing direct loan program is still negative. That negative fair-value subsidy estimate could arise because of obstacles that prevent private entities from making loans on the same terms or because CBO's estimates understate the true subsidy cost because they exclude the program's administrative costs from subsidy cash flows or because the methods CBO used to estimate risk premiums are not precise.

The Federal Housing Administration's Single-Family Mortgage Guarantee Program

Through its single-family mortgage guarantee program, FHA administers mortgage insurance programs that provide guarantees for first-time home buyers and other borrowers who might otherwise find it difficult to obtain a mortgage. Under the terms of its insurance programs, FHA agrees to reimburse a mortgage lender for the unpaid balance of a loan and any accrued interest if a borrower defaults on the scheduled mortgage payments. The annual appropriation process limits the amount of new

mortgage guarantees that FHA can make and their associated budgetary costs. In preparing its baseline projections, CBO made detailed 10-year projections of the budgetary effects of FHA's mortgage guarantees on a FCRA basis.[11]

Under current law, the volume of new mortgages guaranteed by FHA's single-family mortgage guarantee program is projected to grow from approximately $150 billion in fiscal year 2015 to approximately $250 billion in fiscal year 2024. With such an increase, approximately $2.2 trillion in single-family mortgages would be guaranteed by FHA over the 2015–2024 period. Assuming no changes in the current laws governing that program, CBO projects that the FCRA subsidy would be negative $63 billion over that 10-year period and that the subsidy rate would be negative 2.8 percent on a FCRA basis. By contrast, CBO estimates that the fair-value subsidy cost would be positive $30 billion over the 10-year period and that the fair-value subsidy rate would be positive 1.3 percent. Accounting for FHA's single-family mortgage guarantee program on a fair-value basis would increase the program's estimated subsidy costs by approximately $93 billion over the 2015–2024 period.

FHA's single-family mortgage guarantee program shows a negative subsidy in each year of the 10-year period on a FCRA basis. However, the program's contribution to reducing the deficit would decline over the period, according to CBO's analysis. The negative subsidy rate would fall from 5.3 percent in 2015 to 2.0 percent in 2020 and subsequent years. The subsidy rate would be less negative for two main reasons. First, CBO expects FHA to reduce its fees from their present, historically high levels as the value of its capital reserve account recovers from recent losses.[12] Second, CBO expects some borrowers with relatively high credit scores to return to

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10. The small positive overall fair-value subsidy cost for Ex-Im Bank's programs in this report differs from CBO's estimate in June 2012 for loans to be made in 2013, which CBO projected to have a negative fair-value subsidy cost. That difference stems mainly from the selection of a higher discount rate for the long-term loan guarantee program. A higher discount rate associated with greater market risk generates a larger difference between the FCRA and fair-value estimates. Although the type of credit and loan maturity associated with the long-term guarantee program did not change, the reported amount of projected defaults increased from 2013 to 2015. In the 2013 Federal Credit Supplement, the Administration reported an expected default rate of 1.35 percent, no recoveries, and a default subsidy cost (net of recoveries) of 1.29 percent for the long-term guarantee program. In the 2015 Federal Credit Supplement, expected defaults increased to 6.12 percent, recoveries increased to 66.93 percent, and default subsidy costs increased to 1.91 percent.

11. For additional discussion of FHA's single-family mortgage insurance program, see Congressional Budget Office, "FHA's Single-Family Mortgage Guarantee Program: Budgetary Cost or Savings?" *CBO Blog* (October 21, 2013), www.cbo.gov/publication/44628; and *Accounting for FHA's Single-Family Mortgage Insurance Program on a Fair-Value Basis* (attachment to a letter to the Honorable Paul Ryan, May 18, 2011), www.cbo.gov/publication/41445.

12. For additional discussion of FHA's capital reserve account, see Congressional Budget Office, "How FHA's Mutual Mortgage Insurance Fund Accounts for the Cost of Mortgage Guarantees," *CBO Blog* (October 22, 2013), www.cbo.gov/publication/44634.

the private market as the housing market recovers from the financial crisis that began in 2007. Nonetheless, CBO projects that FHA's volume of new loan guarantees would rise over the 10-year period as the overall mortgage market grows.

The annual fair-value costs are projected to increase over time as FHA reduces borrowers' fees and more lower-cost loans receive private-sector guarantees. Partly offsetting those factors, CBO anticipates that the market risk premium for the program will fall over time, reflecting an expected reduction in the compensation private investors require for market risk because of the recovery in the housing market and the normalization of conditions in the financial markets. On net, the fair-value subsidy rate is projected to rise from 0.7 percent in 2015 to 1.7 percent in 2024.

Administrative Costs
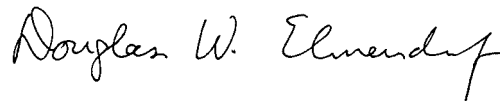
Under FCRA accounting, the administrative expenses of federal credit programs are not included in the subsidy costs but instead are accounted for separately on a cash basis. To maintain consistency between the FCRA and fair-value estimates and because CBO did not have access to the additional data required to estimate those costs for all three programs, CBO's fair-value estimates also exclude federal administrative costs.

However, comprehensive fair-value estimates of subsidies for credit programs would incorporate certain administrative expenses, such as servicing and collection costs, that are essential to preserving the value of the government's claims (rather than accounting separately for those costs on a cash basis). Those expenses can differ significantly among credit programs.