



January 2024

FEDERAL STUDENT LOANS

Education Should Enhance Reporting on Direct Loan Performance and Risk

GAO Highlights

Highlights of [GAO-24-106174](#), a report to congressional requesters

Why GAO Did This Study

Over the last 3 decades, the Direct Loan program has grown in size and complexity, with over \$1.3 trillion in outstanding loans as of September 2023. This program provides financial assistance to help students and their parents pay for postsecondary education. GAO was asked to review issues related to Education's Direct Loan program cost estimates.

This report examines (1) the status of Education's planned model for estimating Direct Loan costs; (2) how certain federal and private sector estimation approaches would affect Direct Loan budgetary costs over time; and (3) the extent to which Education provides key information about the performance and risks of the Direct Loan program.

GAO reviewed documentation on Education's current student loan model and plans for its new model. GAO analyzed the potential budgetary impact over time of four approaches for estimating the cost of a selected group of loans. GAO identified relevant reports, reviewed reporting guidance for federal loan programs, and interviewed officials from Education, other agency officials, and stakeholders with relevant expertise.

What GAO Recommends

GAO is making one recommendation to Education to enhance its reporting on the Direct Loan program's performance and risk. Education concurred with GAO's recommendation.

View [GAO-24-106174](#). For more information, contact Cheryl E. Clark at (202) 512-9377 or clarkce@gao.gov, Melissa Emrey-Arras at (617) 788-0534 or emreyarrasm@gao.gov, or Robert F. Dacey at (202) 512-7439 or daceyrf@gao.gov.

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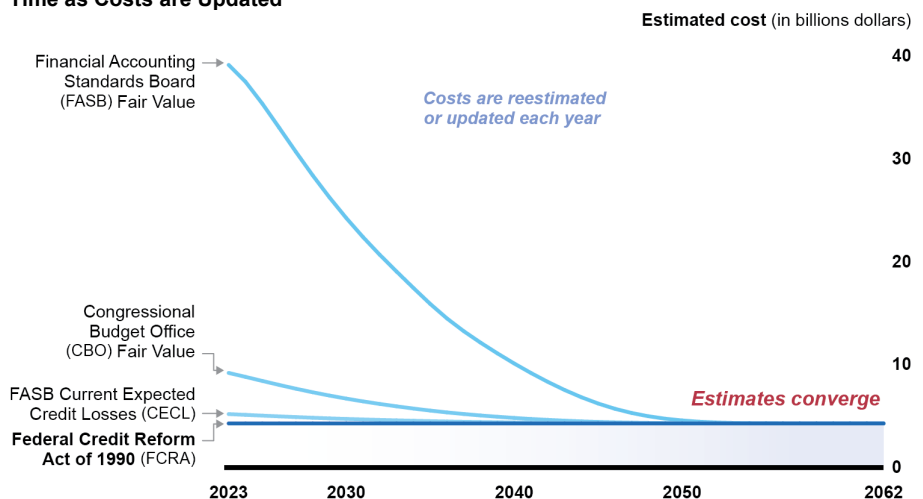
What GAO Found

The Department of Education is designing and testing a new model to estimate future costs of the William D. Ford Federal Direct Loan (Direct Loan) program, which provides financial assistance to students and their parents for postsecondary education. Education aims to begin using the model with the President's fiscal year 2028 budget. Education officials said the new model is being designed to better reflect the complexity of both borrower behavior and the Direct Loan program. Decisions about data, analytical design, technology, and staffing will influence the model's long-term operation and the quality of future cost estimates.

Education is required to develop cost estimates for the President's budget in accordance with the Federal Credit Reform Act of 1990 (FCRA). FCRA reflects Education's borrowing from the Department of the Treasury to finance lending. GAO compared FCRA with three federal and private sector alternative approaches that could be used to develop cost estimates. These approaches were the Congressional Budget Office fair value (federal), Financial Accounting Standards Board (FASB) Current Expected Credit Losses (private sector), and FASB fair value (private sector).

These four approaches do not affect the eventual budgetary costs over time but do result in different initial cost estimates. Estimated initial costs under the non-FCRA approaches will generally be higher than what is initially estimated under FCRA due to a variety of factors, such as the addition of market risk and other risks. Regardless of the approach used, how well an agency is able to predict future cash flows is fundamental to calculating reliable cost estimates.

Illustration of Overall Budgetary Cost Estimates for a Group of Direct Loans Converging over Time as Costs are Updated



Source: GAO analysis of Department of Education Fiscal Year 2023 Unsubsidized Direct Loan Costs. | GAO-24-106174
 Note: The graphic assumes that actual cash flows will equal estimated cash flows over time.

Education publishes information about the Direct Loan program's performance and risks that is generally consistent with guidance, but there are areas where the department could enhance its reporting by expanding the sensitivity analysis to cover a wider range of economic circumstances. Such information is particularly important given the size and complexity of the Direct Loan program.

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Abbreviations

AFR	Agency Financial Report
ASC	Accounting Standards Codification
CBO	Congressional Budget Office
CECL	Current Expected Credit Losses
COVID-19	Coronavirus Disease 2019
FASAB	Federal Accounting Standards Advisory Board
FASB	Financial Accounting Standards Board
FCRA	Federal Credit Reform Act of 1990
FHA	Federal Housing Administration
FSA	Federal Student Aid
HUD	Department of Housing and Urban Development
IDR	Income-Driven Repayment
MMI	Mutual Mortgage Insurance
OMB	Office of Management and Budget
PSLF	Public Service Loan Forgiveness

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January 31, 2024

The Honorable Bill Cassidy, M.D.
Ranking Member
Committee on Health, Education, Labor and Pensions
United States Senate

The Honorable Virginia Foxx
Chairwoman
Committee on Education and the Workforce
House of Representatives

The Honorable Mike Braun
United States Senate

The Honorable Greg Murphy
House of Representatives

Over the last 3 decades, the William D. Ford Federal Direct Loan (Direct Loan) program has grown in size and complexity, with over \$1.3 trillion in total outstanding federal student loans as of September 2023. Every year the Department of Education estimates the federal government’s lifetime costs—sometimes referred to as subsidy cost—of the program for reporting in the President’s budget and for financial reporting purposes.¹ These cost estimates include the budgetary cost for new loans made and updates, or reestimates, for the cost of outstanding loans. Reestimates are informed by changes in economic conditions and actual loan performance, including the extent to which borrowers repay or default on their loans. Cost estimates are also revised to account for programmatic

¹Under the Federal Credit Reform Act of 1990 (FCRA), a direct loan is a disbursement of funds by the federal government to a nonfederal borrower under a contract that requires the repayment of such funds (with or without interest). Under FCRA, Direct Loan cost estimates are included annually in the President’s budget. Cost estimates are calculated based on the net present value of lifetime estimated cash flows to and from the government (excluding administrative costs) associated with these loans. Direct Loan cash flows from the government include loan disbursements to borrowers, while cash flows to the government include repayments of loan principal, interest and fee payments, and recoveries on defaulted loans.

changes to the Direct Loan program, which may result in modifications to the affected loans.²

We reported in July 2022 that Education’s estimates of the program’s cost for loans made from fiscal years 1997 through 2021 increased substantially: shifting from generating \$114 billion in income for the federal government to costing \$197 billion. This swing was driven both by programmatic changes and by reestimates as additional loan performance data became available.³ Education is in the process of developing a new model for estimating costs of the Direct Loan program.

Education develops its cost estimates in accordance with the Federal Credit Reform Act of 1990 (FCRA).⁴ Under FCRA, the President’s budget records the federal government’s estimated lifetime costs of each Direct Loan cohort—or group of loans made in the same fiscal year. Some experts both in and out of the federal government have raised concerns that costs may be underestimated under FCRA and have suggested other approaches that could be used to estimate costs. However, regardless of the approach used, how well an agency is able to predict future cash flows is fundamental to calculating reliable cost estimates.

You asked us to examine issues related to Education’s Direct Loan program cost estimates. This report expands on our July 2022 report and examines (1) the status of Education’s planned model for estimating the cost of Direct Loans, (2) how certain federal and private sector approaches for estimating cost would potentially affect Direct Loan budgetary costs over time, and (3) the extent to which Education reports the performance and risk information of the Direct Loan program.

To address our first objective, we reviewed and analyzed documentation on Education’s current student loan model and plans for its new model.

²A modification is a programmatic change due to federal government action, including new legislation or administrative actions, that directly or indirectly alters the estimated cost of outstanding loans.

³GAO, *Student Loans: Education Has Increased Federal Cost Estimates of Direct Loans by Billions due to Programmatic and Other Changes*, [GAO-22-105365](#) (Washington, D.C.: July 28, 2022).

⁴Pub. L. No. 101-508, tit. XIII, subtit. B, § 13201(a), 104 Stat. 1388, 1388-609 (*classified, as amended, at 2 U.S.C. §§ 661-661f*); OMB Circular No. A-11, *Preparation, Submission and Execution of the Budget*, Section 185, *Federal Credit* (Aug. 11, 2023). Under FCRA, the OMB Director may delegate to agencies, such as Education, the authority to make the required cost estimates. 2 U.S.C. § 661b(b).

Our review of these plans included documents related to two model components currently under development: (1) a cash flow model and (2) a borrower and loan event forecasting model. We also conducted interviews with officials from Education and its contractor to learn more about the status of the new model, key decisions the agency has faced during design, and the planned capabilities of the model.

To address our second objective, we identified and evaluated four approaches that could be used for estimating costs of a group of loans.⁵ We identified these approaches by reviewing literature, which included reports issued by Congressional Budget Office (CBO) and GAO, Financial Accounting Standards Board (FASB) accounting standards, and documents related to the purpose of the federal budget. We interviewed 13 experts, seven stakeholders, and officials at five federal agencies who are knowledgeable about estimating credit program costs to gather information and opinions on federal budgeting and cost estimate approaches.⁶

We analyzed the potential budgetary effect of using the four approaches to estimate the cost of Direct Loans. This analysis was based on Education's estimated cash flows for the fiscal year 2023 unsubsidized Direct Loans.⁷ We obtained the Direct Loan cash flow data from Education, which we validated by comparing the data received to that reported in the fiscal year 2023 President's Budget. We used the same cash flow data to isolate the estimated cost effect of using each approach.

⁵The four approaches were: (1) the Federal Credit Reform Act of 1990 (FCRA), (2) the Congressional Budget Office's (CBO) Fair Value, (3) the Financial Accounting Standards Board's (FASB) Current Expected Credit Losses (CECL), and (4) FASB's Fair Value. FASB's CECL and Fair Value are defined in FASB's Accounting Standards Codification ASC 326, *Financial Instrument Credit Losses* and ASC 820, *Fair Value Measurement*, respectively. We accessed this information on August 29, 2023. FASB establishes financial accounting and reporting standards for private sector entities.

⁶We identified experts, stakeholder groups, and federal agencies based on previous GAO work, research, and referrals. Stakeholder groups included representatives from three credit rating agencies, two financial institutions, and two standard setting organizations. We contacted five federal agencies in addition to Education, including CBO, Congressional Research Service, HUD, OMB, and Treasury.

⁷We used the unsubsidized Direct Loan cash flows for our analysis because Education estimated it to be the largest category of Direct Loans for fiscal year 2023. Unsubsidized Direct Loans are available to undergraduate and graduate school students irrespective of financial need. Borrowers are required to pay all interest on these loans.

For each approach, we selected an illustrative discount rate—the interest rate used to equate amounts that will be received or paid in the future to their value in today’s dollars—consistent with the concepts underlying each approach. We applied these discount rates to Education’s estimated cash flows to illustrate the potential effect of each approach on estimated Direct Loan budgetary costs over time. See appendix I for details regarding the selection of discount rates we used under each approach.

To address our third objective, we identified and reviewed reports on loan performance and program risks of the Direct Loan program from Education, including the Office of Federal Student Aid (FSA). We identified these reports through agency website searches and interviews with Education officials. We assessed the performance and risk information identified in Education’s reports against the Office of Management and Budget (OMB) guidance for agency reporting on federal loan programs.⁸ As a comparison to what Education reports on the Direct Loan program, we reviewed reports and documents from other entities that provide performance and risk information on private or federal loan portfolios. Specifically, we reviewed reports and documents from credit rating agencies,⁹ CBO, and the Department of Housing and Urban Development’s (HUD) Federal Housing Administration (FHA), which operates the Mutual Mortgage Insurance Fund, the largest federal guaranteed loan program.¹⁰

We conducted this performance audit from July 2022 through December 2023, in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

⁸OMB, Circular No. A-129, *Policies for Federal Credit Programs and Non-Tax Receivables* (Washington, D.C.: January 2013).

⁹These nationally recognized credit rating agencies analyze and measure the likelihood of default and provide credit ratings related to debt securities. The Securities and Exchange Commission recognizes the credit rating agencies we reviewed as reliable sources to determine capital charges for different types of debt securities broker-dealers hold, such as a student loan portfolio.

¹⁰HUD’s Mutual Mortgage Insurance Fund provides insurance to lenders for single-family homeowners and is supported by insurance premiums paid by borrowers. 12 U.S.C. §§ 1708(a), 1709.

Background

Direct Loan Program and Repayment Plans

The Direct Loan program provides financial assistance to students and their parents to help pay for higher education. Under the Direct Loan program, Education issues several types of student loans, including loans to undergraduate students, graduate students, and parents of dependent undergraduate students.

A variety of repayment plans are available to eligible Direct Loan borrowers: Standard, Graduated, Extended, and several Income-Driven Repayment (IDR) plans; borrowers may switch among plans throughout the repayment term, depending on eligibility. Borrowers are automatically enrolled in the Standard plan if they do not choose another option and are generally required to make fixed monthly payments over a period of up to 10 years.¹¹ IDR plans are available to Direct Loan borrowers who meet specific eligibility requirements.¹² Monthly payments for IDR plans are based on a borrower's income and family size and extend the repayment period up to 20 or 25 years, depending on the plan. IDR plans also offer forgiveness of the loan's balance at the end of the repayment period.

The Direct Loan program's terms and conditions have changed over time with the addition of new repayment plans and forgiveness options, such as Public Service Loan Forgiveness (PSLF).¹³ Additionally, legislative and

¹¹Eligible borrowers may choose to consolidate their loans, which could extend the repayment period up to 30 years. Consolidation loans are available to eligible borrowers wanting to combine multiple federal student loans into one loan.

¹²As of October 2023, Education offered the following IDR plans: (1) Income-Contingent Repayment, (2) Income-Based Repayment, (3) New Income-Based Repayment, (4) Pay As You Earn, and (5) Saving on a Valuable Education, formerly known as the Revised Pay As You Earn. In July 2023, Education published final regulations governing IDR plans by amending the Revised Pay as You Earn plan and restructuring and renaming the repayment plan regulations under the Direct Loan program. While the effective date of the final regulations is July 1, 2024, the Secretary of Education designated certain regulatory changes for early implementation beginning on July 30, 2023. 88 Fed. Reg. 43,820 (July 10, 2023).

¹³The Public Service Loan Forgiveness (PSLF) program, established by statute in 2007, is intended to encourage individuals to enter and continue in public service by forgiving the remaining balances of Direct Loan borrowers who have made at least 10 years of loan payments while working in qualifying public service jobs and meeting other requirements. The Consolidated Appropriations Act, 2018 provided limited, additional conditions under which borrowers may become eligible for loan forgiveness if some or all of the payments made on Direct Loans were under a non-qualifying repayment plan, which is referred to as the Temporary Expanded Public Service Loan Forgiveness opportunity. In October 2021, Education announced a time-limited waiver so that borrowers can count payments from all federal loan programs or repayment plans toward forgiveness, known as the PSLF waiver.

administrative actions in response to the COVID-19 pandemic temporarily suspended loan payments for borrowers with Direct Loans and other student loans owned by Education. For example, the CARES Act suspended payments due, accrual of interest, and involuntary collections on defaulted loans through September 30, 2020, for most federal student loans.¹⁴ This COVID-19 emergency relief for student loans was extended several times through administrative actions, and the Fiscal Responsibility Act of 2023 required this emergency relief to end on August 30, 2023.¹⁵

Education's Student Loan Model and Cost Estimates

To estimate costs for Direct Loans, Education uses a combination of financial and mathematical computer models that are collectively referred to as the student loan model.¹⁶ Education incorporates available historical data and a variety of assumptions into the model. These assumptions represent the program's terms and conditions as well as various aspects that relate to loan performance, such as how many borrowers will prepay their loans and how many borrowers will default over the life of the loan.

Under FCRA, each year Education estimates the federal government's lifetime cost of a new group of Direct Loans issued in a fiscal year to be reported in the President's budget. For the Direct Loan program, this represents the estimated cost to the federal government of extending credit over the life of the loans.

The lifetime costs are calculated based on the net present value, or the worth in today's dollars, of estimated cash flows made to or from the government over the life of a loan or group of loans.¹⁷ For Direct Loans, these estimated cash flows may include: loan disbursements, repayments of principal, payments of interest, and any other payments such as prepayments, fees, penalties, and recoveries on defaulted loans. An agency's ability to accurately predict these cash flows over the loan term

¹⁴The CARES Act was enacted on March 27, 2020. See Pub. L. No. 116-136, § 3513, 134 Stat. 281, 404-05 (2020). Education implemented this COVID-19 emergency relief for federal student loans retroactive to March 13, 2020, the date COVID-19 was declared a national emergency. Involuntary collections may include wage garnishments and offsets of tax refunds or federal benefit payments.

¹⁵Pub. L. No. 118-5, tit. IV, § 271, 137 Stat. 10, 33-34.

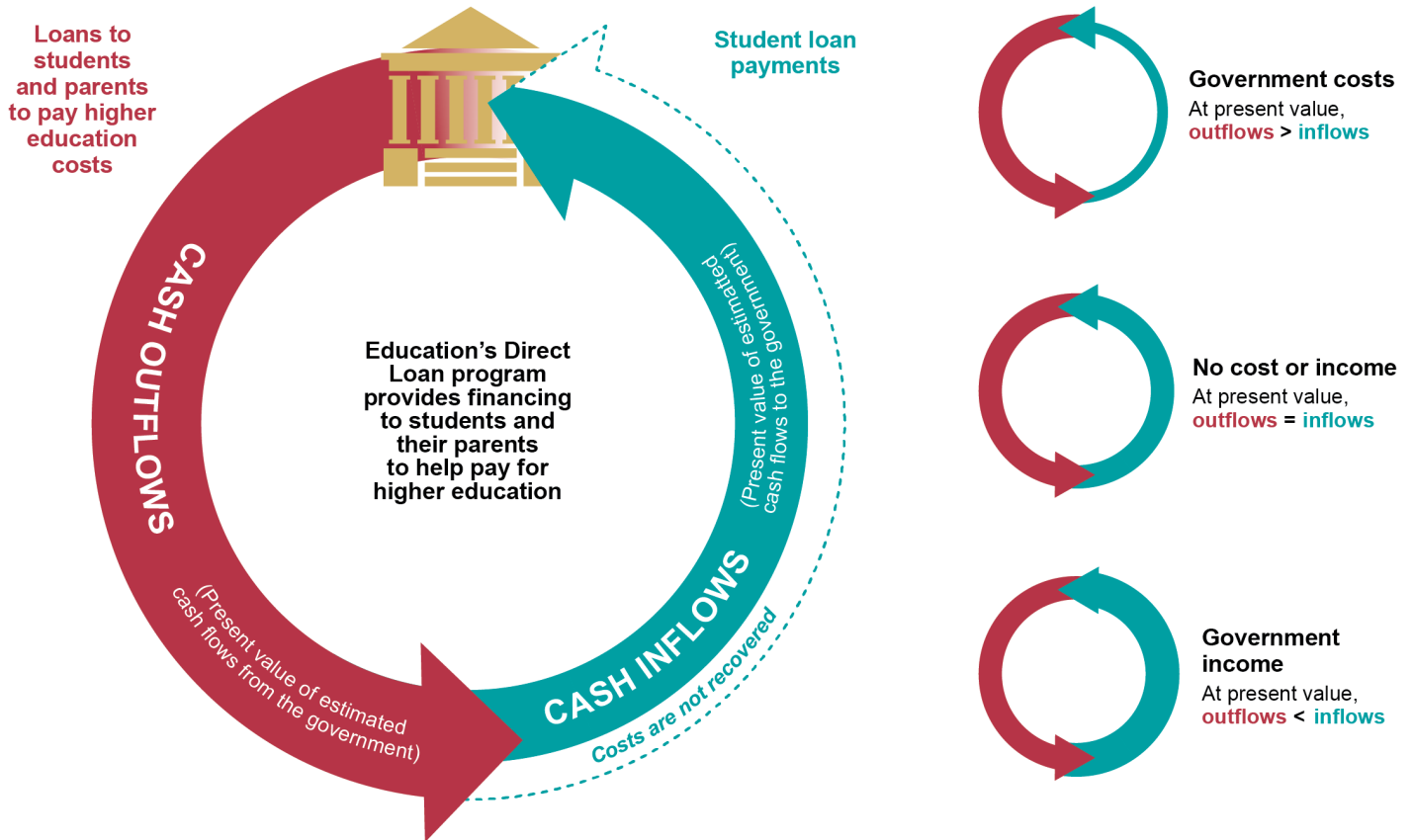
¹⁶For example, one component of Education's current student loan model is a supplementary model to estimate repayment patterns for loans in IDR plans.

¹⁷The net present value of expected future cash flows over the life of a group of loans is calculated using a discount rate, or an interest rate that is used to equate amounts that will be received or paid in the future to their value in today's dollars.

is fundamental to calculating reliable cost estimates for the President's budget.

Loan programs can result in costs to or income for the government, depending on whether the present value of estimated cash inflows (e.g., principal repayments and interest payments) exceeds the present value of estimated cash outflows (e.g., loan disbursements). Figure 1 illustrates the types of cash flows that affect the costs or income of a group of Direct Loans.

Figure 1: Calculation of Direct Loan Program Costs or Income



Source: Adapted from GAO-22-105365; GAO (icon). | GAO-24-106174

Under FCRA, Education updates, or reestimates, the lifetime cost of loans made in prior years.¹⁸ Reestimates consider actual loan performance as well as revised assumptions about economic conditions and future loan performance. Reestimates may result in increases or decreases in lifetime cost estimates. No group of Education's Direct Loans has finished repaying all of its loans since the start of the program in 1994. Therefore, Education continues to update cost estimates for all loan groups each year for reporting in the President's budget, and actual Direct Loan costs will not be known until the end of the loan terms. Education also updates its cost estimates to reflect any programmatic changes that alter the estimated costs of outstanding loans as they occur.

A number of factors make Direct Loan cost estimates uncertain. Such factors include programmatic changes, insufficient historical data, extended forecasting periods, and sensitivity to economic conditions (e.g., interest rates, wage growth, and unemployment). For example, we previously reported that as of fiscal year 2021, Education estimated that Direct Loans made from fiscal years 1997 through 2021 would cost the government \$311 billion more than originally estimated. The increase in costs were due to both programmatic changes and reestimates using revised assumptions as additional data became available.¹⁹

As part of Education's annual financial statement audit, independent auditors audit the agency's Direct Loan cost estimates.²⁰ After 20 years of unmodified (or "clean") audit opinions, the auditor issued a disclaimer of opinion on Education's fiscal year 2022 financial statements and also on the fiscal year 2023 financial statements.²¹ For fiscal year 2022, the

¹⁸Education performs reestimates twice per year: once to be recorded in Education's financial statements, and once to be reported in the President's budget.

¹⁹Specifically, we found that Education originally estimated that loans made from fiscal years 1997 through 2021 would generate \$114 billion in income for the government. Although actual costs cannot be known until the end of the loan terms, as of fiscal year 2021 these loans were estimated to cost the federal government \$197 billion. See [GAO-22-105365](#).

²⁰Department of Education, *Fiscal Year 2022 Agency Financial Report* (Washington, D.C.: Jan. 23, 2023).

²¹An unmodified (or "clean") audit opinion arises when the auditor concludes that the financial statements are presented fairly, in all material respects. A disclaimer of opinion arises when the auditor is unable to obtain sufficient, appropriate audit evidence to provide a basis for an audit opinion, and the auditor concludes that the possible effects on the financial statements of undetected misstatements, if any, could be both material and pervasive and accordingly does not express an opinion on the financial statements.

auditor found that Education was unable to provide adequate support for underlying data used to develop its cost estimate for proposed broad-based debt relief for borrowers meeting certain criteria, which Education was ultimately unable to implement.²² In fiscal year 2023, Education reversed the inclusion of the proposed debt relief from its cost estimates.

For fiscal year 2023, the auditor identified errors in the underlying data used to develop assumptions used to calculate Education's loan program reestimates.²³ The auditor indicated that management was unable to determine the extent of the impact of these issues on the balance sheet. The auditor also found that Education did not design and implement sufficient controls over the relevance and reliability of certain data used in key assumptions for the cash flow model. Additionally, they found that management did not sufficiently communicate errors in the underlying data internally to those responsible for calculating the reestimates. The auditor recommended that management design and implement controls that require the validation of the relevance and reliability of underlying data used in developing the assumptions related to the reestimates.

In response to the auditor's findings, Education said it agreed with the findings and would make it a priority to implement business processes and controls to resolve the issues raised in the audit. Additionally, Education established a subgroup of the Credit Reform Work Group to discuss specific aspects of the cost estimation process.²⁴ The subgroup reviews portions of the assumption process that may require the use of professional judgement or where there may be a lack of data to fully support the estimate. Specifically, the subgroup gives its members a summary of issues to be discussed in advance of each monthly meeting

²²In August 2022, Education announced plans to forgive up to \$10,000 for single borrowers making less than \$125,000 (or less than \$250,000 for married couples filing jointly) and an additional \$10,000 for eligible borrowers who are Pell Grant recipients. When Education announced the debt relief program, it stated it was relying on authority provided to the Secretary of Education under the Higher Education Relief Opportunities for Students Act of 2003 (HEROES Act). See 87 Fed. Reg. 61,512 (Oct. 12, 2022). In June 2023, the Supreme Court held that the debt relief program was not authorized under the HEROES Act. *Biden v. Nebraska*, 600 U.S. 477 (2023). As a result, Education was not able to implement the program.

²³Department of Education, *Fiscal Year 2023 Agency Financial Report* (Washington, D.C.: Nov. 16, 2023).

²⁴The Credit Reform Work Group was created by the Department of Education to assist in addressing auditor recommendations, such as to formalize and document assumptions used in developing its budgetary cost estimates and to make its estimates more transparent.

and provides the opportunity to discuss and provide formal feedback before a final decision is made on the issues.

Approaches to Estimating Loan Program Costs

Budgeting Prior to the Federal Credit Reform Act of 1990 (FCRA)

Prior to the enactment of FCRA, credit programs—like most other federal programs—were recorded in budget accounts on a cash basis (the expected amount of cash paid out minus the cash received in a given year).

Because a loan guarantee does not require a cash outlay at the time the guarantee is issued, guarantees initially appeared to be of no cost to the federal budget. Conversely, because the entire amount of a direct loan is disbursed and recognized as a budget cost when the loan is made, the cost of direct loans was recorded the same as grants in the federal budget.

Both were inaccurate and provided policy makers with distorted information for comparing credit programs to noncredit programs and to each other. This created a bias in favor of loan guarantees over direct loans because loan guarantees appeared to be less expensive than direct loans regardless of the actual lifetime cost to the government.

Source: [GAO-16-41](#). | [GAO-24-106174](#)

Under FCRA, agencies estimate the costs of loan and loan guarantee programs for the budget. Prior to the enactment of FCRA, direct loan and loan guarantee programs—like most other federal programs—were recorded in the budget on a cash basis, or the expected amount of cash paid out minus the cash received in a given year. The FCRA approach recognized that the actual cost of a direct loan or loan guarantee was not captured by its cash flows in any one year, but rather is the net present value—the worth in today’s dollars—of its cash flows over the life of the loan.²⁵ Therefore, FCRA specified an approach using estimates of expected cash flows, including future principal repayments and defaults, as elements of the cost to be recorded in the President’s budget.

To estimate the net present value of loan repayments in the future, the future payments should be discounted—or valued—to their worth today using an appropriate discount rate. When calculating the net present value of expected cash flows, the discount rates are based on marketable U.S. Treasury securities with similar maturities as the cash flows being discounted.²⁶ In addition, under FCRA, the rate of interest charged on financing account transactions with the Department of the Treasury is the same as the final discount rate used to calculate the net present value of

²⁵Net present value is defined as the worth of future income (or costs) in terms of money paid today. In calculating present value under FCRA for direct loans and loan guarantees (as well as associated reestimates) made in or after 2001, prevailing interest rates of marketable zero-coupon U.S. Treasury securities (with the same maturity from the date of disbursement or reestimate) provide the basis for converting future amounts into their “money now” equivalents.

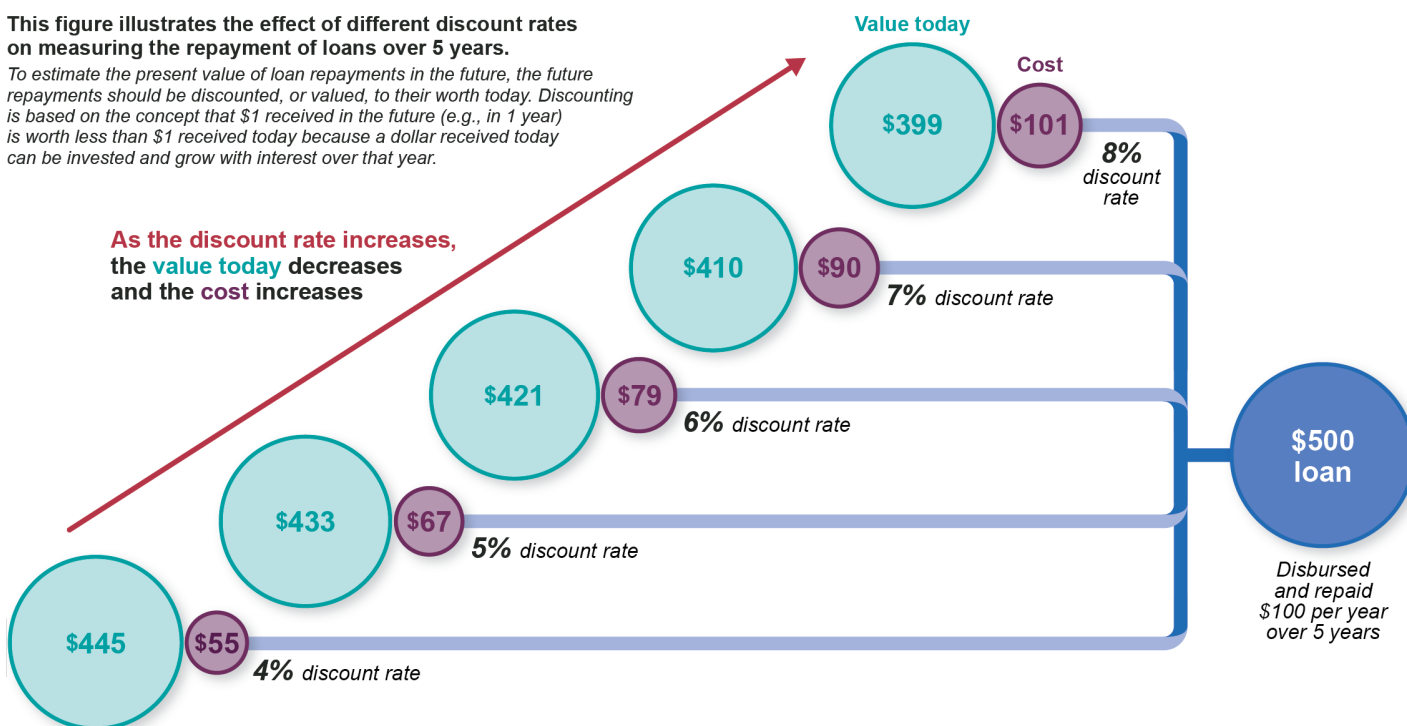
²⁶OMB Circular No. A-11, *Preparation, Submission, and Execution of the Budget*, Section 185, *Federal Credit* (Washington, D.C.: Aug. 11, 2023). For loans made or guaranteed in fiscal year 2001 and thereafter, the discount rate—referred to as a single effective rate—is based on interest rates on marketable zero-coupon Treasury securities with similar maturities from the date of disbursement as the cash flow. For example, a cash flow expected to occur 1 year after the date of disbursement will be discounted at the 1-year zero-coupon Treasury rate. For loans made or guaranteed before fiscal year 2001, the discount rate is based on a disbursement-weighted average of interest rates for marketable Treasury securities with similar maturities as the loans or loan guarantees. Throughout this report, we refer to a singular discount rate.

cash flows when estimating the cost of a credit program.²⁷ For a Direct Loan, as the discount rate increases, the value today of the future loan repayments decreases and the cost of the loan increases. Figure 2 illustrates how the discount rate would affect the value of future loan repayments and the cost for a direct loan.

Figure 2: Effect of Discount Rates on the Value of Loan Repayments and Costs for a Direct Loan

This figure illustrates the effect of different discount rates on measuring the repayment of loans over 5 years.

To estimate the present value of loan repayments in the future, the future repayments should be discounted, or valued, to their worth today. Discounting is based on the concept that \$1 received in the future (e.g., in 1 year) is worth less than \$1 received today because a dollar received today can be invested and grow with interest over that year.



Source: GAO 16-41. | GAO-24-106174

Note: This figure illustrates a simplified example of an interest-free loan and assumes that it performs as required with no defaults.

Various approaches—both federal and private—could be used to estimate the lifetime cost of Direct Loan future cash flows in today’s

²⁷2 U.S.C. § 661d(c). FCRA established two key types of accounts to handle credit transactions: credit program accounts and financing accounts. Among other things, the credit program account, which is included in the President’s budget totals, is used to pay the subsidy cost to the financing account when a direct loan or loan guarantee is disbursed. The financing account, which is nonbudgetary, is used to (1) collect the subsidy cost from the credit program account, (2) borrow from the Treasury to provide financing for loan disbursements, and (3) record the cash flows between the government and the borrower or lender associated with direct loans or loan guarantees over the life of the loan. These cash flows include loan disbursements, default payments to lenders, loan repayments, interest payments, recoveries on defaulted loans, and fee collections.

dollars, using discount rates consistent with the concepts underlying the approaches. Each of these approaches serves a different purpose.

- **FCRA.** This statutorily required approach is used by Education and other federal agencies to calculate the lifetime budgetary cost of a group of loans in today's dollars using a discount rate that reflects the agency's cost for borrowing from Treasury to finance lending. Since 2001, this discount rate has been based on interest rates on marketable U.S. Treasury securities with similar maturities as the cash flows being discounted.²⁸ FCRA cost estimates include an agency's cost to finance its lending. This approach is used to develop cost estimates for reporting in the President's budget. Additionally, federal financial accounting standards for credit reform programs are generally consistent with budgetary accounting under FCRA.²⁹
- **CBO Fair Value.** This approach is used by CBO to estimate the lifetime cost of the government's credit programs by increasing the FCRA discount rate to account for certain market risks.³⁰ The market risk is defined as the financial risk that remains even after investors have diversified their portfolios as much as possible. These financial risks can arise from shifts in macroeconomic conditions, such as productivity and employment, and from changes in expectations about future macroeconomic conditions. The cost under CBO's fair value estimates generally exceeds the FCRA estimates because it reflects

²⁸For example, for loans made or guaranteed since fiscal year 2001, a cash flow expected to occur 1 year after the date of disbursement will be discounted at the 1-year zero-coupon Treasury rate. See OMB Circular No. A-11, *Preparation, Submission and Execution of the Budget*, Section 185, *Federal Credit*, § 185.5 ("How do I calculate the subsidy estimate?") (Aug. 11, 2023).

²⁹The Federal Accounting Standards Advisory Board (FASAB) established the primary accounting standard for federal loan and loan guarantee programs, which is the Statement of Federal Financial Accounting Standards No. 2, *Accounting for Direct Loans and Loan Guarantees*. When FASAB established this accounting standard, it stated that it recognized the value of having the financial accounting support the budget. It also stated that it endorsed the logic underlying FCRA and issued accounting standards for credit programs consistent with budgeting under FCRA.

³⁰CBO defines its fair value approach to "incorporate market risk, the cost associated with the tendency of assets to perform well when the economy is strong and poorly when the economy is underperforming." CBO incorporates market risk using either of two methods, which give the same result: (1) Market Discount Rates and (2) Market Cash Flows. For Market Discount Rates, the discount rate incorporates market risk and is higher than the rate on Treasury securities, whereas for Market Cash Flows, the projected cash flows incorporate market risk. CBO, *Fair-Value Cost Estimation and Government Cash Flows* (Apr. 2021). For the Direct Loan program estimates, CBO uses the Market Cash Flows method. For our purposes, we used the Market Discount Rates method to allow for comparison between all the approaches.

Examples of Factors an Investor would Consider in Determining the Value of Direct Loans

If the Direct Loan portfolio were being held for sale, a potential investor would consider a number of factors when determining a value, or price to pay, for Direct Loans. These factors include

- underwriting performance,
- no cosigners or collateral are required to secure loans,
- long repayment terms and potential loan forgiveness,
- repayment based on income and family size, and
- qualitative data available about borrowers.

Source: GAO analysis of credit rating agency reports and Education's Annual Financial Report. | GAO-24-106174

the additional compensation investors would demand for assuming market risks. CBO provides congressional budget committees with cost estimates for credit programs using both the CBO fair value and FCRA approaches. Additionally, CBO publishes a yearly report on the CBO fair value of federal credit programs, which includes Education's Direct Loan program.

- **FASB Current Expected Credit Losses (CECL).** This private sector approach is used to estimate credit losses associated with investments, such as student loans, that management intends to hold for the foreseeable future or until maturity to present the net amount expected to be collected.³¹ One of the methods that can be used when determining the expected credit losses is the discounted cash flow method.³² The discounted cash flow method under CECL uses a discount rate based on the effective interest rate for a group of loans to determine the value of the loans being held for investment in today's dollars.³³
- **FASB Fair Value.** This private sector approach is used to determine the current value of an asset, which may be applied to loans.³⁴ The value is based on the expected price that would be received when selling an asset or be paid to transfer a liability in an orderly transaction between market participants (see sidebar). When a price for an identical asset or liability is not available, an entity measures fair value using another valuation technique, such as present value

³¹The net amount expected to be collected is calculated as the amortized cost of the loans (the amount at which a loan is originated or acquired, adjusted for applicable accrued interest, accretion, or amortization of premium, discount, and net deferred fees or costs, collection of cash, writeoffs, and foreign exchange), less the estimated credit losses expected to occur.

³²The CECL approach is described in FASB's Accounting Standards Codification (ASC 326, *Financial Instrument Credit Losses*), which we accessed on August 29, 2023. Other methods that CECL allows an entity to use to determine expected credit losses include loss-rate methods, roll-rate methods, probability-of-default methods, or methods that utilize an aging schedule.

³³The effective rate is the rate of return implicit in the loan, that is, the contractual interest rate adjusted for any net deferred loan fees or costs, premium, or discount existing at the origination or acquisition of the loan.

³⁴The Financial Accounting Standards Board has codified fair value measurement and disclosure requirements for private sector entities at Accounting Standards Codification (ASC) 820, *Fair Value Measurement*.

(discounted cash flows).³⁵ The present value technique links future amounts, or cash flows, to a present amount using a discount rate. The discount rate is derived from observed rates of return for comparable assets or liabilities that are traded in the market.

In a 2016 report, we evaluated implications of using cost estimates developed under the CBO fair value approach compared to the FCRA approach for the federal budget.³⁶ In that report, we supported maintaining the FCRA approach for estimating the cost of direct loan and loan guarantee programs since it represented the best estimate of the direct cost to the federal government. We found that it was also consistent with long-standing budget practices based primarily on cash outlays.

We concluded in the 2016 report that cost estimates under the CBO fair value approach may provide useful information for evaluating the costs against the benefits of loan programs. However, the additional market risks recognized under this approach do not reflect additional cash outlays beyond those recognized by FCRA. This adds noncash costs, or a cost that does not represent cash flowing to or from the federal government, into the budget, which is based on cash costs. Further, the use of the CBO fair value approach to estimate costs for the budget would (1) be inconsistent with the budgetary treatment of similarly risky programs; (2) introduce transparency and verification issues with respect to inclusion of a noncash cost in budget totals; and (3) involve significant implementation issues, such as more subjectivity and year-to-year volatility in cost estimates and the need for additional agency resources.

³⁵FASB ASC 820-10-05-1C states that, “when a price for an identical asset or liability is not observable, a reporting entity measures fair value using another valuation technique that maximizes the use of relevant observable inputs and minimizes the use of unobservable inputs. Because fair value is a market-based measurement, it is measured using the assumptions that market participants would use when pricing the asset or liability, including assumptions about risk.”

³⁶GAO, *Credit Reform: Current Method to Estimate Credit Subsidy Costs Is More Appropriate for Budget Estimates Than a Fair Value Approach*, [GAO-16-41](#) (Washington, D.C.: Jan. 29, 2016).

Education Is Facing Key Decisions in its Design of a New Model to Produce Direct Loan Cost Estimates

Education Is Testing and Designing Model Components and Aims to Use the New Model for the Fiscal Year 2028 Budget

Education is testing and designing components of a new model to replace the current model it uses to produce official estimates of the cost of Direct Loans.³⁷ Education officials said they aim to use the new model for the estimates to be reported in the President's fiscal year 2028 budget. According to the budget request for Education for fiscal year 2024, the new model is expected to be highly complex, and development relies on a combination of Education, interagency, and contractor support. The new model comprises two components that were at different stages of development as of August 2023: (1) a cash flow model that generates cost estimates and (2) a microsimulation model to forecast borrower and loan events.³⁸

- **Testing a new cash flow model.** Education officials said they are testing a new borrower-based cash flow model to generate cost estimates for Direct Loans, based on a yearly updated sample of borrowers. Since 2015, Education has been working with analysts from the Department of the Treasury under an interagency agreement to develop the new cash flow model. The cash flow model accounts for activities that occur during the life of a loan, such as loan disbursement, repayment of principal, and payment of interest and fees. It processes these activities to calculate cash flows and generate cost estimates. To validate the new model, Education officials stated that they are using prior year data to compare the new cash flow model to Education's existing student loan model.

³⁷Education plans to use the new model to estimate the cost of Direct Loans, while continuing to use the current student loan model to estimate costs of the Federal Family Education Loan (FFEL) program, according to Education officials. The SAFRA Act terminated the authority to make or insure new Federal Family Education Loans on June 30, 2010. Pub. L. No. 111-152, tit. II, § 2201, 124 Stat. 1029, 1074 (2010). The current model will be updated on an as-needed basis.

³⁸Education refers to the new cash flow model as the Servicer Emulator and the microsimulation model as the Event Generator.

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- **Designing a new model to forecast borrower and loan events.** Education and a contractor are designing a new microsimulation model to forecast Direct Loan borrower and loan events that may affect loan repayment, to generate information that will feed into the cash flow model. Borrower events would include changes in characteristics such as borrower employment status, income, and household size, which may affect loan events such as collections, forbearance, and default. In September 2020, Education contracted with a private research institute to develop the new forecasting model. The contractor completed a final design report in August 2022, and Education officials are working with contractor staff to review, revise, and refine the design. Education officials said they have been providing administrative and technical guidance to help overcome challenges and to stay informed about the progress of the work, including through monthly meetings, technical meetings, and other communications as needed. A technical working group of public and private sector experts in modeling, tax policy, and student loans is reviewing the contractor's design documents, according to Education.³⁹

Education officials said they expect the contractor's next report on the status of its work to include further changes to the microsimulation model and plans for implementing it. Officials stated that before finalizing the model design, they will obtain and consider feedback from the technical working group, Education's own staff, and another contractor providing independent validation of the model.⁴⁰

Once the microsimulation model is ready to be implemented, Education officials said they will work to integrate it with the new cash flow model. They described plans to test the new model by running it for the fiscal year 2027 budget, while continuing to use the current model to produce cost estimates for that year.⁴¹ Officials said they would make any needed changes based on those test results, and they aim to fully implement and use the new model for the estimates in the fiscal year 2028 budget.

³⁹According to the contract for the microsimulation model, the role of the technical working group is to provide guidance on the project and assist with conceptual, design, and implementation issues over the life of the contract.

⁴⁰Education officials reported that they have shared documentation on the new cash flow model with the contractor for independent validation. They said they plan to complete the independent validation process before implementing the new model.

⁴¹Education officials said they expect the testing process for the fiscal year 2027 budget to begin in the fall of 2025.

Education is Considering Key Decisions about Model Design and Support

As Education develops the new model, officials face key decisions about data, analytical design, technology, and staffing. How Education decides to address certain design features will affect how it approaches technology and staffing decisions. These decisions will help determine the long-term operation and governance of the model. They include:

- **Data.** Education officials and contractor staff said they are exploring possible data sources, considering the advantages and disadvantages of these data, and working to refine data sets to inform their decisions about the use of new data in the model. In addition to continuing to rely on Education's student loan data, Education and the contractor are exploring the possible use of additional data sources to supplement or replace existing sources, as required under the contract. They are considering using data from various public surveys as well as federal administrative sources. Education officials told us that key considerations include the type and breadth of data available, whether the source covers borrowers, and data reliability. Once Education selects data sources, the contractor is required to develop necessary projections for key variables based on those data, including Direct Loan borrowers' incomes, loan payments, and household characteristics.
- **Analytical design.** Education officials and contractor staff identified a number of challenges related to modeling borrower behavior and to forecasting. For example, contractor staff identified the model's 40-year forecast horizon as a continuing challenge, noting that it forecasts further than any model the contractor has developed before. They stated that beyond a 10- to 20-year period, forecasting errors start to accumulate and become more problematic. In addition, Education officials said they need to determine how many loans are appropriate to include in the model to achieve the level of precision needed for the cost estimates. Contractor staff and Education officials said they were working together to address these and other design challenges.
- **Technology.** The server capacity and other information technology requirements of the new model will likely be substantial, and Education officials said they need to ensure the model can be run within tight timeframes. They said the new model likely will require more server capacity than the existing model, and operational tests so far have reinforced that it requires fast processing and robust storage capacity. These requirements affect specific aspects of the model, such as run time, sample sizing, and the appropriate specificity of data. Education officials said that while it is too early to make major decisions or system upgrades, they are working to ensure that the

required information technology infrastructure is available to run the model and that the model is not overly complex to run.

- **Staffing.** Education officials told us they are considering how to adjust their staffing to independently operate the new model, but need to further develop the model before making such decisions. The contract for the new model states that the model design and implementation should allow Education staff to run the model, make changes, produce outputs, and create reports. Both Education officials and contractor staff said they intend to develop a model that can be independently operated by Education in the long-term. Education officials noted that although their staff have the skills needed to run the new model, doing so will likely take more time than the current model. Contractor staff noted that the training it plans to provide to Education staff once the model is complete, as required by the contract, will be important for preparing Education staff to independently run the model.⁴²

Plans for Enhanced Model Capabilities Include Analysis Based on Individual Borrowers and Assessment of Program Changes

Education officials said they expect the new model to provide additional capabilities and flexibility to better reflect the complexity of both borrower behavior and the Direct Loan program. We found that planned capabilities of the new model include analysis based on individual borrowers, new functions to better reflect borrower behavior, and enhanced ability to assess proposed program changes.

Analysis Based on Individual Borrowers

Education is designing the new model to forecast borrower and loan events using a sample of individual borrowers as the basis of calculation, rather than applying assumptions across groups of loans. According to Education, its current model groups loans by general characteristics, such as loan type and cohort (a group of loans made in the same fiscal year) and applies assumptions to produce cost estimates. In addition, the current model does not fully account for the relationships between borrower characteristics, such as income level or marital status, and borrowers' ability to make loan payments. This makes it difficult to estimate repayment patterns that are strongly related to borrower characteristics.

Education officials said they determined, in consultation with OMB, that the new model could improve the flexibility and effectiveness of its

⁴²The contract also requires the contractor to provide some technical support in running the model, such as testing and addressing idiosyncratic data.

estimates. For example, the current model projects that loans for various groups of borrowers will enter repayment at fixed times, depending on when students enrolled in school. We found that the new model instead would allow repayment timing to vary for each borrower and loan, based on dozens of borrower input variables. For example, once Education selects data sources, subject to data availability, the new model could use data about a sample borrower's age, school, degree level, and other characteristics to estimate when the borrower will begin loan repayment. Education officials said they also expect the new model to allow more sophisticated modeling, such as how borrowers' degree attainment, employment, and earnings predict repayment.

New Functions

Education officials said the new model would add functions intended to better reflect borrower behavior and actions. For example, in November 2016 we found that the current model does not incorporate repayment plan switching to reflect borrowers moving between plans.⁴³ We recommended that Education complete efforts to incorporate repayment plan switching into the agency's new model and conduct testing to help ensure that the model produces estimates that reasonably reflect trends in IDR plan participation. In response to our recommendation and as part of this review, Education provided documentation describing its plans for the new model to have the functionality to incorporate repayment plan switching over the life of the loan, including switching into and out of IDR plans. In addition to incorporating repayment plan switching, Education expects the new model to include additional functions and flexibility to better meet its needs.

Assessment of Program Changes

Education officials said they expect the new model to allow for more detailed analyses of proposed Direct Loan programmatic changes and to enhance Education's capability to estimate the potential impact of such changes on loan costs. Specifically, this would include identifying borrowers affected by programmatic changes and examining the potential effects on those borrowers and on costs. Design documents show that the model is being developed to incorporate possible scenarios such as changes in borrower eligibility, minimum or maximum payments, or loan forgiveness terms.

In contrast, the current model has limited flexibility in addressing complex and changing program rules, according to Education. Education also

⁴³GAO, *Federal Student Loans: Education Needs to Improve Its Income-Driven Repayment Plan Budget Estimates*, [GAO-17-22](#) (Washington, D.C.: Nov. 15, 2016).

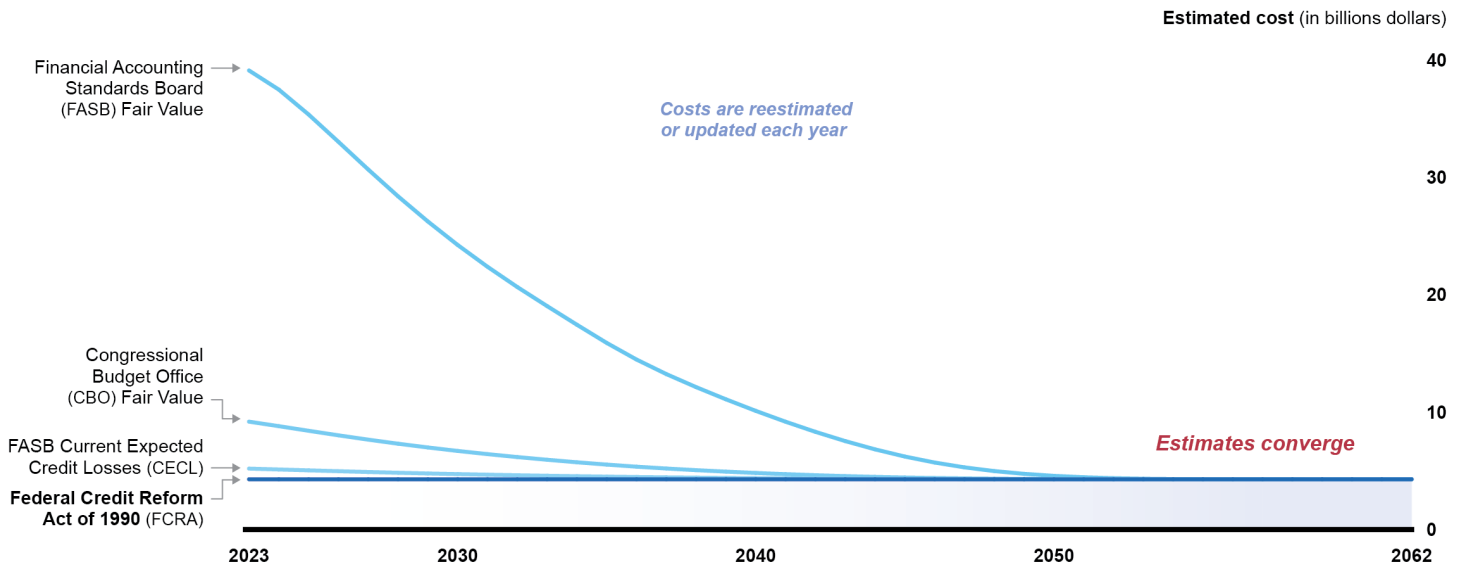
noted that it is difficult to estimate and report to policymakers the distributional effects on borrower behavior of proposed programmatic changes. For example, although the current model uses income as an input, it cannot predict the impact that proposed programmatic changes will have on borrowers of different income levels, or whether proposed policies will be more beneficial to high or low-income borrowers. Education stated in the contract statement of work that it is nearly impossible to provide information about the potential costs of programmatic changes using the current model assumptions and applying those assumptions uniformly across loan groups.

Approaches for Estimating Direct Loan Program Costs Will Eventually Result in the Same Budgetary Costs over Time, Although Initial Estimates Will Generally Vary

The four approaches for estimating costs of the Direct Loan program that we examined will eventually result in the same budgetary costs over the lifetime of the loans. The actual lifetime budgetary cost will be determined based on actual cash flows to and from the government, which are not affected by the estimation approaches. However, estimated initial costs under the non-FCRA approaches will generally be higher than what is initially estimated under FCRA due to a variety of factors, such as the addition of market risk and other risks, which increase the discount rates under the non-FCRA approaches.

As shown in figure 3, the initial cost estimates vary under each of the approaches due to the different discount rates applied to Education's estimated cash flows. These discount rates vary by approach due to the inclusion of different factors when estimating the cost of future cash flows in today's dollars. However, the effect of the additional discount rate factors for non-FCRA approaches declines over the lifetime of the loans. Consequently, the budgetary costs for the non-FCRA approaches will decline until they eventually converge to equal the FCRA budgetary cost. In addition, if the actual cash flows equal the estimated cash flows, the lifetime cost under non-FCRA approaches would be reduced over time through annual reestimates, generating income.

Figure 3: Illustration of How Various Estimation Approaches Will Eventually Result in the Same Budgetary Costs over Time for a Group of Direct Loans Not Being Held for Sale



Source: GAO analysis of Department of Education Fiscal Year 2023 Unsubsidized Direct Loan Costs. | GAO-24-106174

Notes: We used the unsubsidized Direct Loan cash flows for our analysis because Education estimated it to be the largest category of Direct Loans for fiscal year 2023 (Education estimated loan volume to be \$46,224 million). Unsubsidized Direct Loans are available to undergraduate and graduate school students irrespective of financial need. Borrowers are required to pay all interest on these loans. We used the same cash flow data to isolate the effect of using each approach to reestimate the cash flows annually. These are not necessarily the same cash flows that might be calculated under the private sector approaches. The discount rates are different under each approach and were calculated consistent with the concepts underlying each approach. However, while the FASB fair value approach is used to determine what an investor would pay to purchase a group of loans, the discount rate we used for the FASB fair value approach was a hypothetical and is not meant to represent what an investor would pay to purchase a group of Direct Loans. Also, to isolate the effect of using each approach, we assumed that the costs under each approach would include the estimated interest cost paid to Treasury, as calculated under FCRA.

Based on our review of literature and discussions with experts related to the four approaches for estimating the cost of Direct Loan future cash flows in today's dollars, the following are some additional observations on each approach.

- **FCRA.** This federal government approach uses the government's cost of borrowing as the discount rate. Under FCRA, if the actual cash flows equal the estimated cash flows, then the lifetime cost would not change over time. This is because the discount rate reflects the federal government's actual borrowing cost and incorporates into the cost calculation an agency's cost of financing its lending. As the federal budget has for decades represented a system of cash

accounts, FCRA was designed to reflect only the budgetary cost associated with estimated cash flows between the federal government and the nonfederal borrower or lender. Some experts we interviewed agreed that matching the discount rate to the federal government's cost of borrowing funds, as is done under FCRA, ensures cost estimates look purely at government cash flows. These experts added that noncash costs are not appropriate when the federal government is not subjected to such costs in its cash flows, such as liquidity cost, and can borrow at a lower rate than the private sector.⁴⁴

- **CBO fair value.** This federal government approach takes the discount rate under FCRA and adds market risk as a premium to the rate.⁴⁵ Under CBO fair value, if the actual cash flows equal the estimated cash flows, then the lifetime cost would be reduced over time as such market risks are not realized. Some experts we interviewed agreed that federal credit programs have additional risk, such as market risk that the government takes on from shifts in macroeconomic conditions, such as productivity and employment. In such a case, the federal government is said to be merely absorbing risks and not accounting for the risk in the cost estimation process.

In our 2016 report, we found that proponents of including additional market risk have generally viewed the federal government as a pass-through to a collection of taxpayers who bear the cost of risk. Also, some of the costs that may be reflected in the market risk might be significant to an individual investor but not relevant to the federal government, such as a more or less favorable tax treatment or liquidity. However, the use of the CBO fair value approach to estimate costs for the budget would, among other things, be inconsistent with the budgetary treatment of similarly risky federal programs and involve significant implementation issues, such as the need for additional agency resources. Further, market risk can be volatile as investor's views may change based on prevailing interest rates and other economic factors.

- **FASB CECL.** This private sector approach is conceptually like FCRA in that it requires a calculation of expected credit losses, which can be

⁴⁴Liquidity cost represents the compensation to investors for holding an asset that may be more difficult to sell quickly than Treasury securities of a corresponding maturity. The federal government is enduring and can avoid insolvency through exercise of its sovereign power to levy taxes and its easier access to credit through the Treasury securities market.

⁴⁵Market risk is defined as the financial risk that remains even after investors have diversified their portfolios as much as possible. These financial risks can arise from shifts in macroeconomic conditions, such as productivity and employment, and from changes in expectations about future macroeconomic conditions.

based on estimated discounted cash flows. However, under the CECL approach, the discount rate is based on the loan's effective interest rate; therefore, it is generally higher than the FCRA rate that reflects the federal government's cost of borrowing.⁴⁶ If the actual cash flows equal the estimated cash flows, then the lifetime cost estimate will be reduced over time if the CECL discount rate exceeds the FCRA rate. This is principally due to the difference between CECL's use of the effective interest rate for the loans and interest cost at which the federal government borrows, which is the FCRA discount rate.

- **FASB fair value.** This private sector approach values an asset by determining what the expected price would be received when selling the asset in an orderly transaction between market participants. If the actual cash flows equal the estimated cash flows, then the lifetime cost would be reduced over time as additional costs that an investor would consider in its investment are not realized. In addition, there could be additional volatility, both for cost or income, which could be affected by changes in prevailing interest rates and other economic factors. Hypothetically, while under FCRA federal agencies estimate the costs of loan and loan guarantee programs for the budget, if the federal government were holding a group of loans for sale, which is not the case for Direct Loans, the FCRA approach would estimate a value that would be similar to a FASB fair value. This is because cash flows under the FCRA approach would reflect estimated sale proceeds, which is similar to the FASB fair value approach.

FCRA was enacted with the intent of improving the accuracy of the cost of federal credit programs reported in the budget. The concepts that currently underlie the federal budget date back to a 1967 report.⁴⁷ The report identified major purposes of the budget, which included processes to propose programs to advance policy goals and to propose expenditures and revenues intended to promote stability and growth in the macroeconomy. In practice, OMB has observed that the budget

⁴⁶The effective rate is the rate of return implicit in the loan, that is, the contractual interest rate adjusted for any net deferred loan fees or costs, premium, or discount existing at the origination or acquisition of the loan.

⁴⁷United States. President's Commission on Budget Concepts, and D. M. Kennedy. *Report of the President's Commission on Budget Concepts* (Washington, D.C.: Oct. 1967). The commission was appointed by the President on March 3, 1967. It was formed as a bipartisan commission to conduct a thorough and objective review of budget concepts and to address long-standing questions about the budget presentation and the treatment of individual accounts within the budget.

Preparing Reliable Credit Program Cost Estimates

To prepare reliable credit program cost estimates, federal agencies must, among other things

- document the procedures and information used in developing cost estimates;
- document the cash flow model and methodologies used;
- accumulate sufficient, relevant, and reliable data on which to estimate cash flows; and
- develop and document assumptions that represent management's judgment of the most likely circumstances and events.

Source: *Federal Financial Accounting and Auditing Technical Release 6: Preparing Estimates for Direct Loan and Loan Guarantee Subsidies under the Federal Credit Reform Act.* | GAO-24-106174

supports decisions about which programs to fund and at what level, given that government spending must be supported by tax revenues or debt.

When the non-FCRA approaches are used to estimate costs, the higher initial estimated cost would increase the initial budget authority required for a given volume of loans compared to that under FCRA.⁴⁸ This would temporarily increase the federal budget deficit through the effect on outlays.⁴⁹ The federal budget deficit has significance in policymaking and in analyzing the economy.

We reported in 2016 that the underlying concepts and purpose of the federal budget informed our support for the use of the FCRA approach for estimating the cost of credit programs for the budget, and we continue to support that view. The inclusion of noncash costs would depart from the concept of cash expenditures and revenues that currently underlie the federal budget.⁵⁰ Additionally, the accuracy of estimated noncash costs cannot be objectively assessed, and under a fair value approach, it would be difficult to verify the reasonableness of a noncash cost because it does not correlate to any cash flow of the program. The reliability of estimated cash flows is fundamental to calculating cost estimates under the four approaches (see sidebar).

⁴⁸Budget authority is defined as the authority provided by federal law to incur financial obligations that will result in immediate or future outlays involving federal government funds.

⁴⁹The federal budget deficit is the amount by which the federal government's cash flows of budget outlays exceed its budget receipts for a given period, usually a fiscal year. Outlays are a measure of government spending made to liquidate a federal obligation. While outlays are generally equal to cash disbursements, they may also be recorded for cash-equivalent transactions. Under credit reform, the amount of the credit subsidy cost is recorded as an outlay when a direct loan or loan guarantee is disbursed; however, the amount of the disbursed loan that is expected to be repaid by the borrower does not represent an outlay, rather a means of financing.

⁵⁰GAO, *Credit Reform: Current Method to Estimate Credit Subsidy Costs Is More Appropriate for Budget Estimates Than a Fair Value Approach*, [GAO-16-41](#) (Washington, D.C.: Jan. 29, 2016).

Education Reports on Several Aspects of the Direct Loan Program’s Performance and Risks, but Does Not Report on Certain Performance and Risk Information

Education publishes information about the Direct Loan program’s loan performance and risks that is generally consistent with Appendix D of OMB Circular No. A-129, but there are areas where it could enhance its reporting.⁵¹ Education officials told us the Agency Financial Report (AFR) and the Congressional Justification of Budget are the primary reports it uses to provide information on the Direct Loan program’s loan performance and risks.⁵² Although both of these reports are required by law and prepared pursuant to implementing OMB guidance, they have different objectives and generally cover distinct aspects of the Direct Loan program.⁵³

- **Agency Financial Report.** This annual report includes information that is useful for informing Congress, the President, other external stakeholders, and the American people on how Education used federal resources to advance its mission during the fiscal year. The AFR includes information on the Direct Loan program’s loan performance and certain risks. For example, the AFR provides 5-year trend data on loan principal outstanding, interest accrued, and payment status of the loans. The AFR also provides a general qualitative discussion of inherent risks that make estimating Direct Loan program costs difficult.
- **Congressional Justification of Budget.** This annual report reflects the President’s Budget request for the Department of Education. The Congressional Justification includes information on the Direct Loan program and loan performance. For example, the Congressional Justification provides a summary of estimated future loan volume, average loan amount, and costs by type of loan; income levels by loan type; loan volume by type of institution; and lifetime default and recovery rates by loan type.

Appendix D of OMB Circular No. A-129 provides federal agencies with guidance on effective reporting for data-driven decision making, which is

⁵¹For purposes of this report, we define “loan performance” as the cost or result of issuing loans, which includes loan cost, volume, and value. Additionally, we define “risk” as any exposure to danger, harm, or loss.

⁵²Education’s FSA also publishes Direct Loan program information in its Annual Performance Report, Strategic Plan, program targeted Fact Sheets, and on its website. The information provided by FSA includes various reports about the federal student loan portfolio on its website, such as information about the distribution of the loan portfolio by borrower age, debt size, location, and school type.

⁵³For the AFR, see OMB Circular No. A-136, *Financial Reporting Requirements* (May 22, 2023). For the Congressional Justification, see OMB Circular No. A-11, *Preparation, Submission and Execution of the Budget* (Aug. 11, 2023).

necessary to support strong credit program management and oversight.⁵⁴ Specifically, the guidance defines key objectives of effective reporting as including:

- **Targeted Reporting.** Reports are tailored for the intended audience and include relevant data related to the audience’s responsibilities.
- **Findings and Proposed Actions.** Reporting includes whether program performance is meeting expectations and identifying emerging issues. Graphics, tables, and trend analysis that compare performance over time and against expectations and other information can provide critical context for understanding program performance.
- **Policy Goals.** Reporting includes performance indicators that may be used to track the program’s performance to achieving policy goals.
- **Portfolio Performance Risks.** Programmatic and financial risks should be identified, as well as information on how the agency will handle such risks. This may include reporting on portfolio concentrations in geographic areas, market risks that can affect credit performance, or other external factors that can affect the program, such as market shifts.
- **Administration Risks.** Reporting covers administrative risks specific to the program, including operational risks. This may include trend reporting on costs of origination, servicing, and managing the portfolio, or reporting on any operational interruptions.

Education’s Direct Loan program reporting in its AFR and Congressional Justification is generally consistent with the above key objectives for effective reporting per OMB Circular No. A-129 guidance.⁵⁵ However, apart from the key objectives for effective reporting, the circular’s appendix D also states that reports will vary based on program characteristics. Further, it states that where a certain function, loan, or loan type merits greater management attention is not covered by existing reports, a program may need to develop new reports to make sure program staff and leadership are appropriately informed.

Given the size of the Direct Loan program and the complexity of its repayment terms, we reviewed various documents—from both the private

⁵⁴OMB, Circular No. A-129, *Policies for Federal Credit Programs and Non-Tax Receivables*, Appendix D, *Effective Reporting for Data-Driven Decision Making* (Washington, D.C.: Jan. 2013).

⁵⁵For our analysis of Education’s Direct Loan program reporting, we reviewed its fiscal year 2022 AFR and its fiscal year 2023 Congressional Justification.

sector and federal government—that describe information and analyses that could be used to enhance Education’s reporting of Direct Loan program performance and risks. Our review found that information reported by these other entities is useful and effective in describing its respective program or loan portfolio. Additionally, we identified the following examples of areas in which Education’s reporting of Direct Loan program performance and risk information could be enhanced.

- **Performance Factors.** Education currently reports on some performance factors in its AFR and Congressional Justification but could enhance its reporting by including such factors as graduation rates, borrower ratio of income to monthly payments, or borrower unemployment rates. In its AFR, Education describes some performance factors, which includes 5-year trends in outstanding principal and accrued interest and portfolio payment status (e.g., dollar amount of the portfolio current on repayments, in a grace period, or in deferment or forbearance). Additionally, its Congressional Justification includes information on IDR plans, such as a table on the estimated ratio of loan payments to initial principal balance for IDR plans, and a general discussion on changes to IDR enrollment as a percentage of all Direct Loans. Education’s FSA also reports on several segments of data, which includes tables for the program segregated by age, debt size, location, and school type.

However, additional performance factors can be used to better understand certain program trends and risks, and Appendix D of OMB Circular No. A-129 states that reporting should cover performance indicators to track a program’s progress toward achieving policy goals. For example, credit rating agencies analyze borrower graduation rates, which can be an indicator of future default rates. Additionally, credit rating agencies analyze trends in borrower data, such as the ratio of borrower income to monthly loan payments to understand a borrower’s ability to repay student loans. A credit rating agency official told us unemployment rates are a key driver for analyzing student loans. Analyzing additional performance factors helps convey necessary information to the appropriate parties to help understand how the program is performing at large.

- **Credit Risk Concentration.** Education currently reports some information on credit risk concentrations in its AFR and Congressional Justification, but it could enhance its reporting in areas that describe

risk concentrations in more detail.⁵⁶ In its AFR, Education describes areas of risk concentration, such as 5 years of historical data on the payment status of Direct Loans, such as the percentage of loans in repayment, grace period, forbearance, and delinquency. Additionally, the Congressional Justification provides some credit risk concentration information, which includes a section describing the percent of borrowers participating in IDR plans compared to the total Direct Loan program volume.

However, we found that other entities analyze credit risk concentrations at a more detailed level and Appendix D of OMB Circular No. A-129 states that reporting on certain concentrations can be beneficial in managing portfolio performance risks. For example, credit rating agencies analyze if a student loan portfolio has concentrations amongst borrower degree type, type of education institution, or geographical location of borrowers. Analyzing such credit concentration areas helps determine if a portfolio may have a greater risk of default within the respective areas.

- **Administrative Risk.** Education currently reports high-level information on administrative risks in its AFR and Congressional Justification, but it could enhance its reporting on trend data for administrative risks.⁵⁷ In the AFR, Education reports on the operational risks in administering and servicing student loans that may impact the cost estimates. Additionally, in its Congressional Justification, Education describes the servicing cost to administer its federal student aid programs.

However, Education does not provide trend data on costs of origination, servicing, and managing the Direct Loan program, which is defined in Appendix D of OMB Circular No. A-129 as a part of analyzing administrative risks. For example, CBO reports extensively on the qualitative and quantitative administrative risks to the Direct Loan program, which includes analyzing the sensitivity of the program to administrative costs. Analyzing administrative risks further may help Education identify areas where unintended costs are incurring for the program and taxpayer dollars can be better used.

⁵⁶Concentration risk is defined as the potential for solvency-threatening losses from a loan portfolio concentrated in an investment, product, service, or industry.

⁵⁷Administrative risk includes risks specific to operating a program, which includes reporting on the costs of origination, servicing, and managing of a portfolio of loans.

-
- **Sensitivity Analysis.** Education currently reports high-level results of some sensitivity analyses in its AFR and Congressional Justification, but it could enhance its reporting with more detailed and extensive sensitivity analyses. In its AFR, Education reports the sensitivity analysis results on the impact of changing default collections and states that costs are sensitive to changes in unemployment and wage growth, among other things. Additionally, in its Congressional Justification, Education reports on the sensitivity analysis results of the impact of changing incomes for borrowers in IDR.

However, it does not report on the impact on costs related to unemployment and wage growth. OMB Circular No. A-94 states that sensitivity analyses are beneficial for analyzing and understanding uncertain program estimates.⁵⁸ For example, we found this type of analysis in HUD's Federal Housing Administration's (FHA) centralized report on its Mutual Mortgage Insurance (MMI) Fund, which is the largest federal guaranteed loan program. This FHA MMI Fund report includes several sensitivity analyses to demonstrate program performance under a wide variance of economic circumstances.⁵⁹ By enhancing its reporting on sensitivity analyses, Education might identify additional areas and scenarios in which the Direct Loan program is susceptible to such changes in assumptions or economic factors.

Federal Housing Administration's (FHA) Mutual Mortgage Insurance (MMI) Fund Actuarial Report

HUD's FHA is required by law to annually contract for an independent actuarial analysis of the MMI Fund, which provides a centralized report containing performance and risk information required for oversight of the fund.^a

The FHA's MMI Fund report provides a background on the fund, assesses the fund's economic net worth, and provides a detailed qualitative discussion of the portfolio risks. Additionally, the report includes additional analyses to evaluate program performance and macroeconomic risks. For example, the report:

⁵⁸OMB Circular No. A-94 serves to promote social welfare through well-informed decision-making by the federal government, which includes guidance on how to treat uncertainty. Specifically, OMB states that since uncertainty is basic to many analyses, its effects should be analyzed and reported, such as using a sensitivity analysis to explain how sensitive a program can be under major assumption variations. OMB Circular No. A-94, *Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs* (Nov. 9, 2023).

⁵⁹The FHA's MMI Fund report uses stress tests, sensitivity analyses, and stochastic simulations to quantitatively assess program risks. These analyses included testing alternative economic forecasts to estimate ranges of reasonableness, such as examining the impact of changes in interest rates and unemployment rates on the program's cash flows.

-
- Uses the President's economic forecast assumptions to provide an actuarial estimate of the program and test alternative economic forecasts for stress-testing and sensitivity analysis to estimate ranges of reasonableness.
 - Illustrates the sensitivity of forecasts to economic uncertainty and other forms of forecast error.

Source: GAO analysis of the Federal Housing Administration's Mutual Mortgage Insurance Fund Actuarial Report. | GAO-24-106174

^a12 U.S.C. § 1708(a)(4).

Education officials stated that they follow statutory and OMB reporting requirements when determining what Direct Loan information to report. However, since Education's Direct Loan program has over \$1.3 trillion in total outstanding federal student loans and is the largest federal direct loan program, policymakers and the public would benefit from additional information beyond what is currently reported. Education may be missing opportunities to help inform policymakers on relevant Direct Loan program performance and risk information to consider when implementing reforms and guiding policy, and opportunities to inform the public on how taxpayer dollars are supporting the program.

Conclusions

Education administers the federal government's largest direct loan program, and its substantial growth and changes in cost estimates over the last 3 decades makes it especially important that the agency help Congress and the public better understand the full scope of estimated program costs. As Education develops its new model to produce Direct Loan cost estimates, its key decisions about data, analytical design, technology, and staffing will help determine the long-term operation of the model and the quality of future cost estimates.

For federal budgeting purposes, no matter which of the four estimation approaches we analyzed is used, each approach will eventually show the same actual lifetime budgetary costs. This is because the eventual actual lifetime budgetary cost will be determined based on actual cash flows to and from the government, which are not affected by the approaches. However, we continue to believe that the current FCRA approach is appropriate to estimate credit program costs for the budget. The construction, use, and interpretation of the federal budget as a system of primarily cash accounts have been the norm for decades. Cost estimates prepared under the fair value approaches would not be consistent with federal budgeting practices of recognizing expected cash or cash-equivalent spending. Further, the inclusion of noncash costs would depart from the concept of cash expenditures and revenues that currently underlie the federal budget. How well an agency is able to predict future

cash flows compared to eventual actual cash flows is fundamental to calculating reliable cost estimates under all of the approaches.

As Education works to improve the quality of its cost estimates, it could also help policymakers and the public better understand Direct Loan program performance and risk information to allow for effective oversight by enhancing its reporting. Currently, Education reports performance and risk information for the program in its AFR and Congressional Justification, both of which are required by law to be prepared and submitted to Congress. The Direct Loan program information in these reports is generally consistent with Appendix D of OMB Circular No. A-129. However, given the size and complexity of the Direct Loan program, Education could enhance its reporting on performance factors, credit risk concentration, administrative risk, and sensitivity analyses. Specifically, these potential areas for enhancing reporting would further inform policymakers on relevant performance factors and risk information, in addition to informing the public on how taxpayer dollars are supporting the Direct Loan program.

Recommendation for Executive Action

The Secretary of Education should enhance Education's reporting on its Direct Loan program performance and risk information. Enhanced reporting should include further reporting of sensitivity analyses and other factors, such as performance information, credit risk concentrations, and administrative risks. (Recommendation 1)

Agency Comments

We provided a draft of this report to the Department of Education for review and comment. In its comments, reproduced in appendix II, Education concurred with our recommendation and stated that the department would assess possible enhancements to reporting on the Direct Loan program performance and risk information. We also provided draft sections of this report to CBO for review and comment. CBO provided technical comments, which we incorporated, as appropriate.

As agreed with your offices, unless you publicly announce the contents of this report earlier, we plan no further distribution until 30 days from the report date. At that time, we will send copies to the appropriate congressional committees, the Secretary of Education, and other interested parties. In addition, the report will be available at no charge on the GAO website at <http://www.gao.gov>.

If you or your staff have any questions about this report, please contact Cheryl E. Clark at (202) 512-9377 or clarkce@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found

on the last page of this report. GAO staff who made key contributions to this report are listed in appendix III.

Cheryl E. Clark

Cheryl E. Clark
Director, Financial Management and Assurance

Melissa Emrey-Arras

Melissa Emrey-Arras
Director, Education, Workforce, and Income Security

Robert F. Dacey

Robert F. Dacey
Chief Accountant

Appendix I: Discount Rates Used for Our Analysis of the Budgetary Impact of Estimation Approaches

We analyzed the potential impact on budgetary costs over time by applying the four approaches on Education’s estimated cash flows.¹ These cash flows were developed by Education using the Office of Management and Budget’s (OMB) online Credit Subsidy Calculator, which is the discounting tool that OMB requires agencies to use for calculating credit subsidy costs for post-1991 direct loans and loan guarantees. The Calculator is based on the economic and technical assumptions underlying the President’s budget for the fiscal year in which the federal funds will be obligated. Specifically, we adjusted the discount rate consistent with the concepts underlying each approach (see table 1).

Table 1: Discount Rates Under Selected Estimation Approaches

Approach	Discount Rate Description
Federal Credit Reform Act of 1990 (FCRA)	We used the discount rate from the Department of Education’s Direct Loan cash flows supporting the fiscal year 2023 President’s Budget. Under FCRA, for direct loans made since 2001, the discount rate is based on marketable U.S. Treasury securities with similar maturities from the date of disbursement as the cash flows being discounted.
Congressional Budget Office (CBO) Fair Value	We used the FCRA discount rate and added a market risk premium that we obtained from CBO officials to approximate CBO’s fair value estimate for the unsubsidized Direct Loan program. This added market risk is the cost associated with the tendency of assets to perform well when the economy is strong and poorly when the economy is underperforming.
Financial Accounting Standards Board (FASB) Current Expected Credit Losses (CECL)	We used the discounted cash flow method, consistent with the concepts in the CECL accounting standard, due to its similarities to the FCRA approach. Under this approach, the discount rate is equal to the effective interest rate of the underlying loans. ^a
FASB Fair Value	Because this approach provides information on the current value of an asset based on market prices, we tried to identify a comparable asset with market data. However, based on our discussions with stakeholders from credit rating agencies and financial institutions, we determined that because of the complex nature of Direct Loans (e.g., some repayments based on income), we could not identify a reasonable comparable asset with market data. As a result, we developed a hypothetical discount rate based on the results of private sector sales of student loans guaranteed by Education that took place between fiscal years 2013 and 2023. Our calculation is for illustrative purposes only and is not a calculation of what we think an investor would pay to purchase a group of Direct Loans.

Source: GAO analysis of federal law and implementing guidance, CBO reports, and private-sector standards related to estimation approaches. | GAO-24-106174

^aA loan’s effective interest rate is defined as the contractual interest rate adjusted for any net deferred loan fees or costs, premium, or discount existing at the origination or acquisition of the loan.

Note: For the analysis, we made the following simplified assumptions: (1) we assumed that the discount rate was used to estimate the original cost of the group of loans and that the rest of the curve is illustrating the removal of the noncash costs for each approach, and (2) we assumed that the borrowing cost for each approach would be based on the amount that the Department of Education would pay to borrow from the Department of the Treasury under FCRA requirements.

¹The four approaches were: (1) the Federal Credit Reform Act of 1990 (FCRA), (2) the Congressional Budget Office’s (CBO) Fair Value, (3) the Financial Accounting Standards Board’s (FASB) Current Expected Credit Losses (CECL), and (4) FASB’s Fair Value. FASB’s CECL and Fair Value are defined in FASB’s Accounting Standards Codification ASC 326, *Financial Instrument Credit Losses* and ASC 820, *Fair Value Measurement*, respectively.

**Appendix I: Discount Rates Used for Our
Analysis of the Budgetary Impact of Estimation
Approaches**

We applied these discount rates to Education's estimated cash flows for unsubsidized Direct Loans for fiscal year 2023 to illustrate the impact on budgetary costs over time. We assumed the actual cash flows would not differ from estimated cash flows to isolate the impact of applying the four approaches. Our analysis also applied the interest cost under the Federal Credit Reform Act of 1990 (FCRA) to each approach, using the current FCRA process for determining the program's estimated cost of borrowing based on interest rates of marketable U.S. Treasury securities.

Appendix II: Comments from the U.S. Department of Education



UNITED STATES DEPARTMENT OF EDUCATION

THE UNDER SECRETARY

January 12, 2024

Ms. Cheryl Clark
Director Financial Management and Assurance
United States Government Accountability Office
441 G Street, NW
Washington, DC 20548

Dear Ms. Clark:

Thank you for providing the U.S. Department of Education (Department) with a draft copy of the U.S. Government Accountability Office's (GAO's) report titled, "Federal Student Loans: Education Should Enhance Reporting on Direct Loan Performance and Risk, GAO-24-106174." We appreciate the opportunity to comment on the draft GAO report.

Recommendation: The Secretary of Education should enhance Education's reporting on its Direct Loan program performance and risk information. Enhanced reporting should include further reporting of sensitivity analyses and other factors, such as performance information, credit risk concentrations, and administrative risks.

Response: The Department concurs with the recommendation. We will assess possible enhancements to our current reporting on the Direct Loan program performance and risk information. When evaluating possible enhancements to its financial reporting, the Department will continue to follow any guidance distributed by the Office of Management and Budget and the U.S. Department of the Treasury.

Sincerely,

A handwritten signature in black ink that reads "James Kvaal".

James Kvaal

400 MARYLAND AVE. SW, WASHINGTON,
DC 20202
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Appendix III: GAO Contacts and Staff Acknowledgments

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Staff Acknowledgments

In addition to the contacts named above, Marcia Carlsen and Debra Prescott (Assistant Directors), Benjamin Netto DeYoung and Christopher Klemmer (Analysts in Charge), Daniel Flavin, Marissa Jones Friedman, Gina Hoover, Karissa Robie, Jeff Tessin, and Anthony Tufo made key contributions to this report. Additional assistance was provided by James Bennett, Elizabeth Calderon, Lawrance Evans, Hedieh Fusfield, Susan J. Irving, Jessica Orr, and Adam Wendel.

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