



CENTER ON
FEDERAL FINANCIAL
INSTITUTIONS

734 15TH STREET, NW
SUITE 502
WASHINGTON, DC 20005
WWW.COFFI.ORG

The Center On Federal Financial Institutions (COFFI) is a nonprofit, nonpartisan, non-ideological policy institute focused on federal insurance and lending activities.

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Douglas J. Elliott
202-347-5770
douglas.elliott@coffi.org

Student Loans: A Budget Primer

Students and their parents borrow over \$50 billion a year through the federal government to finance college, trade school, and graduate school education. These loans are critical to opening the doors of academia to poorer students and to enabling many middle class students to attend elite universities.

The federal government ensures wide access to these low-interest rate loans through two channels. It lends directly to students through schools participating in the William D. Ford Direct Student Loan program ("Direct Loans".) It also guarantees loans made by private sector lenders through the Federal Family Education Loan (FFEL) program, ("Guaranteed Loans".) These guarantees cover repayment of 98-100% of principal and interest and a guaranteed interest rate spread over an index of the lenders' borrowing costs.

Educational lending is the only major credit program where the federal government competes in substantial measure with itself by both lending directly and assisting private sector lending for the same purpose. Since the inception of Direct Loans as a pilot program in 1992, the existence of parallel mechanisms has resulted in a constant tension between proponents of the two approaches. Some advocate channeling all lending through the Direct Loan program, others want to use only the Guaranteed Loan program, while still others believe that using two channels ensures a form of competition that improves both.

This paper explains the basics of the programs and the methodology used to determine their federal budget costs. A companion paper, "Student Loans: Modeling Federal Costs," available at www.coffi.org, moves beyond this to provide a numerical analysis of the cost differential. COFFI does not normally advocate specific policies. The intent of our papers is to clearly, and neutrally, explain the sources of cost differences between the two channels for providing student loans.

It is important to note that budget cost is only one policy consideration. There are many segments of the financial markets where the government could provide loans directly at below market rates, while maintaining a low budget cost. (This is because the government uses federal borrowing rates, the lowest in the world, in its budget calculations.) Yet Congress usually chooses to stay out of the lending business. When it does enter, it generally provides guarantees rather than direct loans, even though direct loans might have lower budget costs.

Student Loan Programs: The Basics

This section explains the fundamental structure of the two federal credit programs supporting student loans. The explanation is based on current law and does not refer to the various proposals under consideration.

Why do the federal student loan programs exist?

There are a number of reasons why the federal government has facilitated loans for higher education for the last several decades:

The importance of higher education. There is a strong consensus, backed by extensive statistical analysis, that both the country and individuals benefit from a significant investment in higher education. The economy benefits from well-educated “knowledge workers” and the individuals concerned earn a considerable premium for their skills.

The accelerating expense. Although higher education remains a sound investment for individuals, costs have been rising consistently faster than general inflation and now represent a major hurdle for an increasing number of potential students.

Access problems. Prior to the advent of federally sponsored lending, it was very difficult for many students to borrow for college. Lending to a student is a potentially risky bet on the future, since most students begin with little income or collateral, have scanty or non-existent credit records, and need to spread repayment over many years. Parents often had greater borrowing capacity, but many lacked either the capacity or the willingness to take out significant loans.

Financial institutions are much more willing to make unsecured consumer loans today, albeit at rates reflective of the default risk. However, many students would not meet the lenders’ criteria for loans at a reasonable rate of interest, due to lower skills, poverty, or other factors. It seems likely that a large number of students in college today would be unable to attend without a federally sponsored lending program.

Borrowing costs. Federal sponsorship substantially reduces the interest rate many students would otherwise face. First, the government absorbs the risk of loan default. Second, it uses its ability to borrow dollars at, literally, the lowest rates of any entity in the world to hold down borrowing rates. Third, less creditworthy students or parents are usually charged the same rates as more creditworthy borrowers. This is a significant cross-subsidy for students with weaker credit prospects, which would include a large proportion of those potential students who are on the fence about attending college.

Why are there two programs?

The FFEL Guaranteed Loan program began operations in 1965. Its design was inspired in part by a number of existing guaranteed lending programs sponsored by various states using state or non-profit guaranty agencies. In addition, the federal budget rules in force at the time helped shape the decision to set it up as a guaranty program, rather than as a direct lending operation. These budget rules would have made any direct lending program appear very costly in its early years, since every dollar lent to a student would have raised the budget deficit by one dollar, with this effect reversed when students eventually repaid their loans.

The Federal Credit Reform Act of 1990 was passed in order to allow a fairer budgetary comparison of direct lending, guarantees, and grants across all government programs.

Partly as a result, Congress established direct lending for student loans as a pilot program in 1992, with wider operations starting in 1994. The original intention of the sponsors was that Direct Loans, which were viewed as cheaper for the government, would eventually replace Guaranteed Loans. However, supporters of the guaranty program fought back and, over time, an uneasy truce has developed, with both programs remaining in place. Currently, roughly three-quarters of new non-consolidation loans are issued under the FFEL program with Direct Loans making up the other quarter.

One reason for maintaining two programs is that some experts argue that the competition between them results in greater benefits for the borrower and increases the overall efficiency of each program. Schools have a choice when participating in the federal student loan program; they can either administer the disbursement of funds directly to students from the federal government or they can work through a guaranteed lender. Usually schools choose to participate in only one of these programs, although they may choose to be in both. While individual students can receive both Direct and Guaranteed Loans, they can not receive both types for the same period of enrollment in the same school.

What types of loans are available?

Both programs provide the same types of loans, specifically Subsidized and Unsubsidized Stafford loans to students and PLUS loans to parents. The difference between the two types of Stafford loans is simple. For Subsidized Stafford loans, awarded on the basis of financial need, the government pays the interest while a student is enrolled in school and during a short “grace period” following graduation, currently 6 months. (Under certain circumstances, such as economic hardship, this grace period is extended further.) Interest on Unsubsidized Stafford loans, on the other hand, is not paid by the government and continues to accumulate while in school as additions to principal, unless the student chooses to pay interest during this period. It is important to bear in mind that the use of the term “subsidized” in this context is not directly related to the calculations of “subsidies” that determine the federal budget cost of credit programs. Both Subsidized and Unsubsidized Stafford loans may result in a subsidy cost on the federal budget.

PLUS loans are available to parents for the funding of their child’s education and, as with Stafford loans, can be provided directly by the government or through a guaranteed lender. Unlike Stafford loans, interest is always charged on PLUS loans.

How much can a student or parent borrow?

Figure 1 illustrates the borrowing limits for students under the Stafford loan program.

Figure 1. Borrowing Limits for Stafford Loans

Years	Dependent Undergraduate Students	Independent Undergraduate Students	Graduate/Professional Students
1 st Year	\$2,625	\$6,625—No more than \$2,625 of this amount may be in subsidized loans.	\$18,500—No more than \$8,500 of this amount may be in subsidized loan.
2 nd Year	\$3,500	\$7,500—No more than \$3,500 of this amount may be in subsidized loans.	Same as Above
3 rd & 4 th (each)	\$5,500	\$10,500—No more than \$5,500 of this amount must be in subsidized loans.	Same as Above
Maximum Total Stafford Debt	\$23,000	\$46,000—No more than \$23,000 of this amount may be in subsidized loans.	\$138,500—No more than \$65,500 of this amount may be in subsidized loans. The graduate debt limit includes Stafford Loans received for undergraduate study.

Source: US Department of Education, Student Financial Aid Guide, 2004-2005

PLUS loans have different rules. The yearly borrowing limit is equal to the cost of attendance minus any other financial aid the student receives. As an example, if a student's cost of attendance is \$10,000, and he receives \$4,000 in financial aid, his parents may borrow up to \$6,000. "Cost of attendance" is defined broadly. It may include tuition and fees, on- or off-campus housing and board, and allowances for supplies, books, loan fees, and transportation. When applicable, cost of attendance may also include dependent care or reasonable costs of study-abroad programs.

How does the Direct Loan program work?

Schools who choose to participate in the Direct Loan program serve as the intermediary between the student borrower and the Department of Education. Students are notified of their eligibility for all federal aid through completion of the Free Application for Federal Student Aid (FAFSA). Eligible students are required to sign a Master Promissory Note (MPN) through their school which details the requirements of the loan agreement as well as a promise to repay the Department of Education. Principal and interest is repaid directly to the Department of Education.

How does the Guaranteed Loan program work?

Students enrolled in schools participating in the FFEL Guaranteed Loan program generally borrow from private lenders recommended by that school. Loans are disbursed to the student by the bank or other financial institution and repaid, with interest, to that lender. Private lenders are protected from 98-100% of the principal and interest lost in the case of borrower default and from 100% of the loss if a student dies, is disabled, or is eligible for “teacher loan forgiveness.” The government also guarantees that the floating rate paid by the student will always be at least a certain spread over an index of the lenders’ borrowing costs (specifically, the rate on 90 day commercial paper issued by financial institutions). “Special Allowance Payments” are made to the lenders if the borrower’s interest rate does not cover that spread.

The Guaranteed Loan program employs a structure using “Guaranty Agencies” that is unique among federal lending programs. Guaranty agencies are non-profit organizations, often set up by a state, which administer the federal loan guarantee. Their main purposes are to:

- Ensure lender compliance with regulations and due diligence requirements
- Track borrowers and the status of their loans
- Try to reduce the likelihood of a loan default when a borrower is struggling
- Increase the probability that the borrower will resume payment if he or she does default

Guaranty Agencies also manage any guarantee payments to lenders after a default. These payments are made from funds belonging to the federal government that are managed by the Guaranty Agency. The federal government then reimburses these funds for 95% of guarantee payment costs, plus certain specific expenses. Guaranty Agencies also receive “default aversion fees” for certain delinquent loans that are restored to good standing, as well as a share of collections on defaulted loans. Finally, they also receive processing and account maintenance fees to compensate them for certain administrative expenses.

Are borrowers treated the same under both programs?

For the most part, borrowers are treated similarly under the two programs. For example, regardless of whether loans are made through the Direct or Guaranteed Loan program, borrowers are subject to the same interest rates, interest subsidy periods, and deferral options.

There are some differences, however. The most obvious may be variations in the origination fee charged to borrowers. The Direct Loan program charges 3% on Stafford loans and 4% on PLUS loans. (Some FFEL lenders have sued to force the rate to be 4% for both types, arguing that the Education Department exceeded its authority in reducing the rate for Stafford loans.)

FFEL lenders, on the other hand, generally charge 3% for both types of loans. Guaranty Agencies can charge an additional 1% fee, but often waive the requirement.

Repayment options differ between the two programs. The standard repayment schedule is 10 years in both cases, but the programs also offer other options with longer maturities, payments that rise over time to reflect anticipated higher incomes, and/or payments that directly reflect changes in borrower income. The terms of these options sometimes differ between the two programs in significant ways.

The two programs also provide different incentives to encourage prompt payment. The Direct Loan program provides an up-front interest rate rebate of 1.50% of principal, which is forfeited if a borrower fails to make the first 12 monthly payments on time. (Most borrowers do fail that test.) Borrowers also receive an interest rate reduction of 0.25% for agreeing to automatic electronic payments on their loans. FFEL lenders offer a range of incentives for prompt payment, with most providing a modest interest rate reduction for borrowers who maintain a perfect repayment history for a period of time. Many lenders also provide incentives for automatic electronic payments.

Some experts ascribe the advent of various improvements in borrowing terms, such as the rebates for prompt payment, to the existence of competition between the Direct and Guaranteed Loan programs. Many also argue that the competition between the programs has led to improved services levels.

What are the government's costs in the Direct Loan program?

The federal government's budget costs are based on a comparison of the cash that flows into and out from the government over the life of a given year's authorized lending. (The mechanism is explained in considerably more detail in the next section.) Major federal cash flows include:

Outflows

New lending. The Direct Loan program disbursed about \$12 billion in new loans for the 2003-4 year.

Principal and interest payments on federal borrowing. As with any lender, the government must obtain cash before it can lend it. Most of this money is ultimately obtained by borrowing in the financial markets, although a portion may come from taxes. The actual cash flows occur outside of the Education Department, but are charged back indirectly through the discount rate mechanism explained below.

Administrative expenses. The government incurs direct expenses and also makes payments for outsourced services.

Inflows

Principal and interest payments from borrowers. The large majority of borrowers do repay their loans on time, including required interest payments. Others miss payments which are partially or fully recovered over time.

Origination fees. The government charges an up-front fee of 3-4% on the principal amount of new loans, as described above.

These inflows and outflows are identical in nature to those for a private sector consumer lender. For public policy reasons, the government's loan terms, including interest rates, are generally more favorable than in a purely private sector program. However, most of the financial techniques used to analyze private lending retain their applicability here.

How are the costs recorded on the federal budget?

A much fuller discussion of budget issues is contained in "Budgeting for Credit Programs: A Primer," available at www.coffi.org. We confine discussion in this paper to the bare bones needed to understand the key issues.

Government programs are normally budgeted on a cash basis, which was the technique used for student loans and other federal credit programs until the Federal Credit Reform Act of 1990 (FCRA) took effect. Under this method, new lending would have the same negative effect on the budget deficit as would an outright grant of the loan amount. On the other side, repayment by a borrower would have the same positive impact as collecting that amount in taxes.

Cash basis accounting is inappropriate for financial institutions making long-term commitments. In the federal government's case, it distorted decision-making by encouraging actions that brought in money up-front even at the expense of high future costs. For example, selling off a pool of existing loans was always positive for the budget in the short run, even if the sale price were far below the true value.

FCRA changed federal budget procedures to a sounder economic basis akin to what is used in the private sector. The net cost of the lending authorized each year is calculated by forecasting the amount and timing of all cash flows associated with that lending. Future cash flows are converted into their equivalents in today's dollars, called their "present value," using an interest rate called a "discount rate." The aggregate present value of all the cash inflows is compared to the value of the cash outflows. If the outflows are greater, then the difference is shown as a "subsidy cost" on the federal budget with the same effect as a grant or a purchase of supplies. If the inflows are greater, then there is a "negative subsidy", with the same effect as tax revenue.

The key point is that federal budgeting for student loans and other credit programs reflects the net effect of all future cash payments to and from the government related to a year's lending. Looking at the payments over less than the full period can be highly misleading and can encourage bad policy choices. Economists, policymakers, and financial market participants may argue about the implementation details, but there is a strong consensus on the general principle of discounting all cash flows relating to a year's lending.

There is one exception under FCRA to the present value method. Congress chose to keep administrative costs on a cash basis and not to include them formally in the subsidy figures. The administrative costs are in the federal budget, but are not projected into the future and are not automatically consolidated into the subsidy costs. The lack of future projections is an analytical flaw, but not necessarily a severe one for programs like student loans, where administrative costs are a low percentage of the total costs and are relatively stable. The Office of Management and Budget (OMB) and the Education Department have provided special analyses that provide the expected net present value of administrative expenses. These figures can be added to the subsidy levels to estimate the full budget costs of the loan programs.

What are “discount rates” and “present values”?

There are many times when one needs to compare payments or receipts that fall into different time periods. Economists, accountants, and financial markets generally calculate “present values” to make these comparisons. A dollar received today is worth more than one received in ten years, principally because one could earn interest and have considerably more than one dollar in ten years. (Economists and psychologists also note other aspects of human nature that lead us to prefer value today over value in the future.)

Each payment or receipt is “discounted” to an equivalent value in the present moment (present value) by using (1) a factor based on the number of years before money is exchanged and (2) an interest rate called a “discount rate.” Decisions can then be based on the “net present value,” calculated by subtracting the present value of cash payments from the present value of receipts. For example, a payment of \$1,000 in 2 years, discounted at 5%, has a present value of \$907.

It tends to be easier to understand this by reversing the process. If we put \$907 today into savings account earning 5% per year, it will grow to a value of \$1,000 in 2 years. That is, \$907 earns \$45 in interest at 5% and totals \$952 at the end of year 1. \$952 earns \$48 in interest and equals \$1,000 at the end of year 2. The mathematics can become complicated, but the logic always remains that of a present value growing at an interest rate for some number of periods to equal the ultimate target amount.

The level of the discount rate is critical to calculating the net present value of future cash flows. Broadly, Congress considered two ways to choose this rate when applied to loans. It could be: (a) the interest rate a prudent lender would demand on a specific loan or (b) the cost of money to the lender. The first approach produces different discount rates for different borrowers, reflecting their relative risks. The second approach discounts everyone’s loans the same. Under FCRA, Congress chose the second method and uses the government’s cost of money, for a borrowing of the same maturity as the cash flow, as the discount rate for all loans and loan guarantees.

What happens when estimates change over time?

Loans that are made this year will generate cash flows many years into the future. The best estimate of the ultimate federal cost of these loans will change as new information comes in, primarily in the form of revised interest rates and of better estimates of the likely default rate on principal and interest payments. Prepayment rates can also have a large effect and may be difficult to predict.

Interest rate changes have two direct impacts. First, students are generally charged a floating rate, which means that expected interest payments will change. Second, the final discount rate is not set until 90% of the authorized loans have been dispersed, making a dollar of future receipts or payments larger or smaller in net present value terms. As with other federal credit programs, the combination of these effects can be substantial and both student loan programs have experienced significant reestimates over the years.

The federal budget reflects these reestimates as increases or decreases in the total cost of the program when the reestimates are made. See “Budgeting for Credit Programs: A Primer,” at www.coffi.org, for considerably more detail.

How are Guaranteed Loan costs recorded on the federal budget?

The budget methodology for Guaranteed Loans is identical to that for direct loans. Estimates are made of the amount and timing of future cash inflows and outflows and present value techniques are used to determine the net cost in today's dollars.

What are the government's cash flows for Guaranteed Loans?

The government's cash flows under the Guaranteed Loan program differ considerably from those for Direct Loans, since the government's role is as a backstop, rather than as a lender.

Outflows

“Special allowance” payments under the interest rate guarantee. The government guarantees lenders that they will receive a certain spread over an index approximating their cost of funds. Sometimes this requires the government to top up the interest received from borrowers.

Interest payments on Subsidized Stafford loans for current students. The federal government picks up the interest payments on Subsidized Stafford loans for borrowers who are still in school or are in a grace period.

Death or disability discharge. The government pays off the loans when students and former students die or become severely disabled.

Teacher loan forgiveness. Under certain circumstances, the government will pay off the student loans of people who go into teaching.

Payments on defaulted loans. The government is required to reimburse Guaranty Agencies for the defaulted loans that they have taken over from the original lenders. See below for offsetting cash flows related to the portion of the losses absorbed by lenders and Guaranty Agencies.

Fees to Guaranty Agencies. The government pays various fees in recognition of administrative costs incurred by the Guaranty Agencies.

Default aversion fees to Guaranty Agencies. The government pays Guaranty Agencies a fee for helping bring seriously delinquent loans back into good standing.

Administrative expenses. The federal government faces costs for coordinating with and monitoring lenders and Guaranty Agencies.

Inflows

Recoveries on defaulted loans. Some borrowers who have defaulted eventually make part or all of the payments they owe.

Origination fees. Lenders pay the government a fee of 3% of the principal amount of new loans.

Loan fee from lenders. Lenders also pay the government an up-front fee of 0.5% of the principal amount when a loan is originated.

Guaranty Agency share of defaults. Guaranty Agencies are generally required to absorb 5% of the loss from loan defaults, offset by reimbursement of certain specific default-related expenses. This is actually a direct reduction of the government's cash outflows, but is shown here as a separate inflow for explanatory convenience.

Lender share of loan defaults. Lenders are required to absorb 2% of the loss from loan defaults, which reduces the federal government's net cash outflows. Lenders meeting certain quality criteria are exempt from this charge.

The timing of cash flows is very different between the Direct and Guaranteed Loan programs. The major outflow for Direct Loans, the lending itself, comes at the beginning and is offset in future years by cash inflows. The Guaranteed Loan program, on the other hand, generates up-front fees which tend to more than offset early costs. However, later years produce costs for defaults and special allowance payments that considerably outweigh any cash inflows to the government. This difference in timing means that the effect of discount rate changes can differ quite sharply between the two programs.

Should the discount rate be determined on a floating rate basis?

The student loan program is unusual among federal lending programs in that the borrower generally pays a floating rate. (The rate is reset once a year, based on the relevant 91-day T-bill rate.) This has raised the analytical question as to whether it would be more appropriate to use a discount rate based on short-term interest rates, rather than using a rate based on the final maturity of the loan. There was little or no discussion in Congress of this issue when the Federal Credit Reform Act of 1990 was passed, in part because there were no significant floating rate lending programs at that point. (Student loans were still offered on a fixed rate basis.) There has been discussion of this issue periodically since then, including in the early days of the Direct Loan program, but no action has been taken.

As noted above, Congress has chosen to use the government's cost of funds as the basis for the discount rates used. Congress further chose to define the cost of funds not as the actual borrowing rate experienced by the Treasury Department for a particular program, but as the borrowing rate that eliminated any interest rate risk on a fixed rate loan. That is, the rate on a 10-year government borrowing is used as the discount rate for a payment 10 years in the future, even if the likelihood is that the Treasury Department would finance the 10 years through a series of shorter term borrowings that were rolled over. This is consistent with the views of financial economists, regulators, and financial markets as to the lowest risk way to finance a future payment.

Similar logic would suggest that the lowest risk way to finance a floating rate lending program would be to borrow at a floating rate with similar characteristics. That is, funding the student loan program through 91-day T-bills would produce future interest costs that would most closely match the expected interest receipts. (The most precise match would have to take account of the fact that the rate is a 91-day rate, but it is only reset once a year. The best fit might therefore be an instrument a bit longer than the 91-day T-bill, although not as long as the 1-year T-bill.)

This funding pattern might not intuitively seem to be the lowest risk choice, since the cost of funds would be considerably more variable than locking in a long-term fixed rate. However, this looks at only one half of a linked equation. Congress presumably cares about the net cost of the program, which is determined by the **difference** between the lending rate and the cost of funds. This difference is highly volatile today, since long-term bond rates can move significantly differently from the 91-day T-bill rate. Using the same rate for both would eliminate this source of volatility.

Congress appears to view the discount rate as if it were the actual underlying cost of funds. On that basis, evaluating the floating rate student loan program by using a long-term fixed rate is equivalent to a private lender borrowing long-term and lending short-term. Lenders sometimes do this for pieces of their overall portfolio as an explicit interest rate bet, but it is considered irresponsible if applied as a consistent strategy to the whole firm. This type of asset-liability mismatch was a major contributor to the Savings & Loan crisis.

For a private lender, this mismatch would produce major swings in profitability. For the government, the mismatch between the bases for determining the discount rate and the interest rate paid by students has produced similar swings in the budget cost of student lending.

How do Consolidation Loans affect federal costs?

Students, and former students, who have multiple loans have an option to consolidate them into one loan. (They may also “consolidate” a single large loan into a new consolidated loan.) Many borrowers have found this attractive both for the administrative convenience and because they are allowed to lock in a fixed rate and possibly a longer maturity. This has been especially true with the low fixed rates available in recent years.

The budget cost of a consolidation loan is often quite different from the cost of the original loan, due to differing interest rates, maturities, fees, and other loan terms. (Generally, the government’s cost is substantially higher for the consolidation loan.) However, the core budgeting concepts are the same: annual cash inflows and outflows are projected for the life of the loan and these cash flows are then discounted back to a net present value.