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Student Loans: Effects of the Deficit Reduction Act

There is great controversy about how the federal government should calculate its costs for sponsoring student loans. This is particularly important since student loans are provided through two alternative channels, with the federal government lending directly as well as providing guarantees to private lenders. As a result, many observers focus on the comparative budget costs of lending through the two arrangements.

Readers who are not familiar with these programs may wish to start with two earlier papers, "Student Loans: A Budget Primer" and "Student Loans: Modeling Federal Costs," both available at www.coffi.org. The first of these two papers explains generally how the two programs work and how their costs flow through the federal budget. The second walks through COFFI's student loan model in detail and discusses the results of 12 different scenarios which compare the budget costs of the two main loan programs, Direct and Guaranteed (also known as FFEL), and examines how they are affected by various economic factors.

The Deficit Reduction Act, signed into law by President Bush in February 2006, modified some of the parameters of the student loan programs, affecting loans that are granted on or after July 1, 2006. These loans are also affected by provisions in legislation passed in 2002 that were already scheduled to take effect in July. This report first summarizes the major findings from the previous report. It then presents and discusses the results from an updated model which incorporates the changes taking effect in July. In particular, the costs to the federal government of providing Direct and FFEL Loans are recalculated under the 12 previously considered scenarios, in order to highlight the potential impact of the changes on the budget.

COFFI does not normally advocate specific policies. The intent of this paper is to clearly, and neutrally, explain the factors determining federal budget costs under the new terms effective in July.

For convenience, we will generally write as if all student loans were for college education, even though many loans are for students who attend trade schools or graduate schools.

Summary of Original Results

Figure 1 shows the federal government's net budget cost for a hypothetical pool of new loans to entering Freshmen in college, calculated using the earlier version of the model, under the old loan rules. (See "Student Loans: Modeling Federal Costs, on www.coffi.org). The costs are shown for each of 12 scenarios that differ in their assumptions about the economic environment and the performance of the loans. The table shows the cost for each type of loan under each of the two loan channels, Direct Loans and FFEL Loans. Note that we show costs as negative figures, in keeping with normal financial market analyses, which are not always consistent with federal budget analyses.

Figure 1: Federal Budget Benefit/(Cost) of New Student Loans, as % of principal (Prior to DRA)

	Scenario			Unsubsidized Stafford			Subsidized Stafford			PLUS		
	Rate Scenario	Adjustments	Annual Defaults	Direct	FFELP	Diff.	Direct	FFELP	Diff.	Direct	FFELP	Diff.
1	Current		None	13.3	0.5	12.8	-9.0	-19.6	10.6	13.7	2.4	11.2
2	Current		Base	11.5	-1.1	12.6	-10.4	-20.8	10.4	11.4	0.6	10.8
3	Current	All rates +5 pts	Base	-11.0	-21.0	9.9	-35.1	-42.7	7.6	-3.1	-10.9	7.8
4	Current	All rates +5 pts, no caps	Base	9.0	-1.7	10.7	-27.2	-34.7	7.6	8.4	-0.5	8.9
5	Current	T-bill one point up	Base	20.6	0.7	19.9	-6.7	-22.8	16.1	15.9	0.6	15.3
6	Current	CP one point up	Base	11.5	-9.7	21.2	-10.4	-28.2	17.8	11.4	-2.6	14.0
7	Current	Bonds one pt up	Base	2.5	-1.1	3.6	-17.7	-20.4	2.7	6.4	0.3	6.1
8	OMB		Base	10.1	-1.0	11.1	-10.3	-19.4	9.1	10.3	0.6	9.7
9	OMB		Double	8.4	-2.5	10.9	-11.7	-20.6	9.0	9.0	-0.4	9.4
10	OMB	T-bill discount rate	Base	17.1	-1.0	18.1	-4.6	-19.8	15.2	14.3	0.8	13.5
11	OMB	T-bill and CP -1 pt, T-bill disc. rate	Base	17.9	-0.8	18.7	-0.2	-16.4	16.3	15.2	1.1	14.1
12	OMB	T-bill and CP -1 pt, Bond disc. rate	Base	1.5	-0.9	2.5	-14.0	-15.8	1.8	5.8	0.6	5.2

Figures may not add due to rounding

The major findings of this analysis prior to the new legislation were as follows:

- The Direct Loan program costs less under all of the scenarios illustrated.
- Interest rates make a large difference in absolute budget costs.
- Interest rates also have a major effect on *relative* budget costs.
- The Direct Loan cost advantage reverses if long-term interest rates increase sufficiently more than do short-term rates.
- Congress' choice to use long-term rates in discounting cash flows was a major source of variability in federal budget costs for student loans and in the cost differential between the two programs.
- Use of a T-bill discount rate would have increased the budget cost advantage of Direct Loans.
- "Subsidized Stafford" loans cost the government the most and PLUS loans the least.
- Loan defaults affect the two programs in virtually identical amounts.

Description of New Provisions

The Deficit Reduction Act included a number of alterations to both the Direct and Guaranteed Loan programs. In addition, certain changes were already scheduled to take effect in July based on legislation passed in 2002. The following changes have been incorporated, and their impact on the absolute and relative costs of the two programs are discussed below:

- The borrower's rate is now fixed at 6.8% for all Stafford loans, and 8.5% for all PLUS loans. The legislation only switched FFEL PLUS loans to the new rate, but this was apparently an oversight, and we presumed for our analysis that the new rate would ultimately apply to Direct PLUS loans as well.
- The origination fee has been lowered to 0% for FFEL Loans and 1% for Direct Loans. These rates are set to be lowered incrementally from their current levels (3% and 4%) over the next five years. The updated model reflects the final rates, which will be effective starting in 2010. The rebate for on-time payments has been eliminated.
- The government now ensures lenders earn exactly their guaranteed interest rate (the commercial paper rate for financial institutions + fixed spread), regardless of whether it is above or below the borrower rate. Under the old law, the government promised a payment to make up for a loan spread that was insufficient, but allowed lenders to keep the benefit of loan spreads that were greater than the promised level. Under the new law it is now a two way street, with payments from the lenders to the government in cases where the loan spread exceeds the promised level.
- The portion of a defaulted loan repayed to the lender by the government is decreased, from 98% to 97%.

New provisions such as expanded eligibility and increased loan limits do not affect the model, since it is run on a "per dollar loaned" basis. Others, such as changes to consolidation rules and the teacher repayment program, and the slight lowering of exceptional performance repayment, are also not applicable since they affect provisions that were not included in the original model for the sake of simplicity. A full list of the model's assumptions can be found in the previous paper.

Summary of Updated Results

Figure 2 shows the results for the same 12 scenarios under the new provisions taking effect in July. As before, it is assumed that all loans are taken out by college freshmen, but this time based on the rules that will apply beginning July 2006 (though origination fees reflect their final target levels, in 2010). The outcome of each scenario is described in detail below, noting similarities and differences to the previous results.

Figure 2: Federal Budget Benefit/(Cost) of New Student Loans, as % of principal (After DRA)

	Scenario			Unsubsidized Stafford			Subsidized Stafford			PLUS		
	Rate Scenario	Adjustments	Annual Defaults	Direct	FFELP	Diff.	Direct	FFELP	Diff.	Direct	FFELP	Diff.
1	Current		None	20.0	4.7	15.3	-7.9	-20.5	12.6	18.3	7.4	10.9
2	Current		Base	18.0	3.1	15.0	-9.4	-21.7	12.4	15.8	5.4	10.4
3	Current	All rates +5 pts	Base	-21.5	-31.1	11.6	-39.8	-49.4	9.7	-7.0	-15.7	8.7
4	Current	All rates +5 pts, no caps	Base	-21.5	-31.1	11.6	-39.8	-49.4	9.7	-7.0	-15.7	8.7
5	Current	T-bill one point up	Base	18.0	3.1	15.0	-9.4	-21.7	12.4	15.8	5.4	10.4
6	Current	CP one point up	Base	18.0	-5.8	23.8	-9.4	-29.1	19.7	15.8	0.9	14.9
7	Current	Bonds one pt up	Base	8.5	2.7	5.8	-16.7	-21.5	4.7	10.6	4.9	5.7
8	OMB		Base	18.0	4.4	13.7	-9.4	-20.5	11.1	15.8	6.6	9.3
9	OMB		Double	16.2	2.8	13.3	-10.8	-21.7	10.8	14.2	5.3	8.9
10	OMB	T-bill discount rate	Base	25.6	4.7	20.9	-3.6	-20.7	17.2	20.0	7.0	13.1
11	OMB	T-bill and CP -1 pt, T-bill disc. rate	Base	37.0	14.9	22.2	5.2	-12.9	18.1	26.0	12.4	13.6
12	OMB	T-bill and CP -1 pt, Bond disc. rate	Base	18.0	13.2	4.8	-9.4	-13.4	3.7	15.8	11.0	4.8

Figures may not add due to rounding

Key Points

The major impact of the new rules on budget costs of the loan programs are as follows:

- The Direct Loan program has immediately become more profitable, mostly due to the switch to a fixed rate that is higher than the floating rates assumed in most of the scenarios. This could be temporary if current rates prove to be lower than future average rates. Of course, the effect could also be stronger than shown if future average rates are lower than in the current environment.
- The Guaranteed Loan program also becomes more profitable, since the government now keeps any interest collected above the guaranteed rate to lenders and the fixed interest rates are higher than the floating rates were projected to be.
- Under both November 2005 actual and OMB mid-year 2005 projected rates, the difference between the two programs has grown slightly for Stafford loans and decreased slightly for PLUS loans, but is generally about the same as before.
- The short-term T-bill rate no longer affects the profitability of any of the loan types.

- Rises in the CP rate and the long-term bond rate can significantly increase the costs of the Guaranteed and Direct programs, respectively, even more so than before since borrower rates are fixed, preventing an offset from increased revenue. This is similar to the effect of caps under the old rules.
- Defaults still do not hurt the profitability of either program substantially.
- There is no longer a strong case for using the T-bill rate as the basis for the discount rate, since loan rates are no longer on a floating rate basis.

Individual Scenario Results

Scenario 1

The first scenario assumes all relevant interest rates remain at November 2005 levels indefinitely and that there are no loan defaults. Under these conditions, both student loan programs are basically profitable, as they were under the old rules. They are more profitable than before due to the simple fact that the new fixed rates charged to borrowers are higher than those based on November's T-bill rates plus the borrower spread (used under the old method). Subsidized Stafford loans remain the exception to profitability, since the cost of four years of the federal government absorbing the interest costs is sufficient in all of our scenarios to offset the interest rate spread earned on the basic loan. Subsidized Direct Loans are slightly less costly than before, indicating that the extra revenue collected after graduation exceeds any change in lost interest while the student is in school. Subsidized FFEL Loans are slightly more costly to the government than before since it is paying for four years of interest at a higher rate and only receives a portion of the extra interest after graduation. PLUS loans are more profitable than before under both Direct and Guaranteed programs due to the new higher fixed rate.

The budget cost of Direct Loans is cheaper than for Guaranteed Loans by 11-15% of the original principal amount under the various loan types. The main driver of this differential is the spread between the rate charged to borrowers and the discount rate used for federal budget purposes, which is based on the government's own, lower, borrowing costs. This difference between programs is very similar to what it was under the old rules. This is because even though the government now forgoes more revenue than before when it does not lend directly, some of this loss is offset by lenders' returns above the guaranteed rate, which are now returned to the government rather than kept by the lenders.

Scenario 2

As was the case under the old rules, factoring in loan defaults only reduces the profitability by a point or two, with little effect on the cost differential between the programs. The absolute impact is low because recovery rates are so high for college loans. The *relative* impact is much lower still, since the federal government absorbs virtually all of the default cost under both programs, either directly or through guarantee payments. The base level of defaults is assumed to be 12% over the life of Stafford loans and 15% over the life of PLUS loans. The majority of defaults are projected to occur in the first three repayment years. These assumptions are not updated from the earlier model since new default rates are not yet available and are difficult to predict.

Scenario 3

As was the case before, a massive rise in all interest rates would be very expensive for the federal government. Instituting fixed rates to student and parent borrowers has effectively the same impact as the caps on the variable rates under the old system, which is to limit the government's ability to collect revenue when rates rise, without limiting its costs.

If all rates roughly doubled, by rising a uniform 5 percentage points, then college loans would become unprofitable to the tune of 7-49% of the original principal amount. An Unsubsidized Stafford loan made through the Direct program now swings 40 points, from 18% positive to a negative 22% budget cost. (Guaranteed Loans move by 34 points.) These swings are even larger than under the old rules, because the borrower rates are fixed at levels that are lower than the caps in the old rules.

Subsidized Stafford loans are still hit worst, since the cost of foregoing interest payments entirely for the in-school period rises when interest rates increase. These are also more costly under the new rules than the old ones.

Even after a doubling of interest rates, Direct Loans would remain cheaper than Guaranteed Loans, by 9-12 points, slightly greater than before.

Scenario 4

In the previous analysis, Scenario 4 demonstrated that it was the caps and not the absolute rate rises themselves which contributed to the loan programs' unprofitability. However, under the new rules, the results for Scenarios 3 and 4 are identical since the borrower rates are always fixed, and thus capping the rates no longer has meaning.

Scenarios 5-7

As before, varying the three individual rates by one point each, while holding the others constant, produces divergent effects, depending on which rate is moved.

Under the old rules, an increase in the T-bill rate raised the interest rate paid by the student, buoying the federal profitability considerably compared to Scenario 1, particularly for Direct lending. However, under the new rules changes in the T-bill rate do not affect profitability whatsoever for any of the loan types under either program. As mentioned, the rates charged to the borrower are now fixed rather than tied to this rate.

Raising the commercial paper rate for financial institutions by one point, without changing other rates, would have no effect on the budget cost of the Direct Loan programs, but would make Guaranteed Loans more expensive. A higher commercial paper rate raises the level of the minimum guaranteed interest rate promised to lenders, increasing the need to make Special Allowance Payments to them. The impact on Stafford loans is similar to before – a one point CP rise makes the loans become more costly by 7-9%. The PLUS loans decrease in profitability by 4.5%, which is a larger drop than under the old rules (previously 3.2%) because additional payments to the government under the new "two way street" provision are forgone. However, the PLUS loans now remain profitable against a one-point CP rise, since the new PLUS borrower rate is high enough to cover the increased guaranteed rate to lenders. Further rises in the CP rate would continue to decrease the profitability of all loan types.

Finally, moving the basket of zeroes up by one point without a change in short term rates would act on federal budget costs by resulting in a one point rise in the discount rate. As under the old rules, this would have much more effect on Direct Loans, since federal cash outflows occur almost entirely in the first year while the inflows are spread over many years. (Guaranteed Loan cash flows are more evenly spread as a percentage of total cash flows.)

A one-point rise in the discount rate lowers the profitability of Direct Loans by 7-17% but has very little effect on FFEL Loans, thereby decreasing the difference in profitability between the two programs. If November rates otherwise remained in effect throughout the period, a 1.7 point rise in the discount rate would make Direct and Guaranteed Stafford loans roughly equal in cost to the government (previously 1.4 points). PLUS loans remain more profitable as Direct Loans than as Guaranteed Loans – it takes a roughly 2.3 point rise in the discount rate for these to break even (previously 2.4 point). This is because PLUS loans pay off more quickly, and are therefore less affected by discount rates, and because the profit differential is greater to start with for PLUS loans.

In the last 50 years, the spread has been above the cross-over point for Stafford Loans about 26% of the time (down slightly from 30% under the old rules) and above that for PLUS loans about 10% of the time (9% previously). (This calculation uses the spread between the month-end interest rate on the 10-year T-bond, as a proxy for the basket of zeroes, and the 91-day T-bill rate, adjusted for the average CP spread over Treasuries.) This is only a very rough indicator of probability, since the conditions of the last 50 years will certainly not repeat themselves precisely. It should be emphasized that under the new rules, it is only the relationship between the discount rate and the CP rate that determines the relative costs of the programs. The T-bill rate, though it tends to move with the CP rate, is no longer relevant in itself.

Scenario 8

OMB projections are likely to be more accurate than merely projecting present rates forward for the next 14 years, therefore the remainder of our scenarios use OMB rate projections. Although more updated interest rate projections are now available, the same ones used in the previous analysis (from mid-year 2005) are used here for the sake of comparing the rule changes. As noted before, there will almost certainly be more rate movement in reality than in OMB's projections, but it is difficult to know the timing and direction of these variances.

As under the old rules, the base OMB case, with our standard default assumptions, shows profitability patterns similar to those with current rates shown in Scenario 2. Direct Loans are exactly the same since the borrower rate is fixed and the same discount rate is assumed. Guaranteed Loans are slightly more profitable due to the lower CP rate. This makes the cost differential between Direct and Guaranteed Loans about a point and a half lower, but not dramatically different, and shows the same pattern of cost differentials across loan types as with Scenario 2.

Scenario 9

The change in rules does not affect the impact of changes in the default rate. A doubling of the annual default percentage still reduces profitability by only 1-2% of the original principal amount. This factor is virtually identical for all types of loans and both lending programs, since private lenders and Guaranty Agencies still absorb only small amounts of the default risk, leaving the government with a similar net cost of defaults between the two programs. As a result, the cost differential moves by less than half a point when defaults double.

Scenarios 10-12

In the previous paper, Scenarios 10-12 were used to demonstrate the potential effects of basing the discount rate on short-term T-bills, rather than long-term bonds. This debate is no longer relevant since the borrower rate is no longer tied to the T-bill rate.