Douglas J. Elliott
The Brookings Institution
February 23, 2012

Changing the Budget Rules Could Alter How the Federal Government Lends

The federal government is effectively the largest bank in the world. Currently, the federal government lends or guarantees roughly $8 trillion of credit for the private sector, counting Fannie Mae and Freddie Mac, which are wards of the state. Even the traditional programs, such as the Federal Housing Administration, the student loan programs, and the Small Business Administration, have about $2 trillion of exposure. These programs are important to anyone who is a taxpayer, is among the tens of millions of loan recipients, works for an affected company, or participates in the overall economy (remember the impact of the Troubled Asset Relief Program (TARP), for example.) In short, everyone is affected by decisions about federal lending. (See my recent book, *Uncle Sam in Pinstripes: Evaluating US Federal Credit Programs*, for much more detail: http://www.brookings.edu/press/Books/2011/unclesaminpinstripes.aspx).

A proposed law (HR 3581) would change the way that the federal budget calculates the cost of these credit programs, effectively adding a charge to reflect the level of risk of each program, with the amount rising as the level of risk rises. This may seem a purely technical matter, but it will have a significant impact on future decisions about which programs to sponsor, how large they should be, and how they are structured. I, personally, support appropriately reflecting this risk, but there are disagreements among serious analysts. Deborah Lucas and Marvin Phaup lay out the pros at http://web.mit.edu/dlucas/www/papers/CreditReformFinalOut.pdf. A group at the Center for Budget and Policy Priorities has responded with counterarguments at http://www.cbpp.org/cms/index.cfm?fa=view&id=3661 and Marvin Phaup has provided a rebuttal available at http://www.govloop.com/group/budgeteers/forum/topics/proposed-changes-to-federal-budget-process.

The fundamental question revolves around what interest rate to use to calculate the cost in today's dollars of the government's future receipts. The government makes loans today and receives interest payments and principal repayments over a period of as much as thirty years. The only way to make a fair comparison between different loan programs, or between a grant program and a subsidized loan program, is to calculate the cost in today's dollars. And, the only way to do that is to choose an interest rate by which to discount future receipts. The choice of a rate can make a real difference when the effects are accumulated over a number of years; a dollar received ten years from now will be treated as worth 61 cents if the rate is 5 percent but only 39 cents if the rate is 10 percent. (See the appendix for a more detailed explanation, as well as various papers available on the website for the Center On Federal Financial Institutions, a think tank I founded some years back to focus on federal credit programs, www.coffi.org.)

Current law requires that the government's own borrowing rate be used as the interest rate, which may seem intuitively reasonable since it represents the cost of obtaining the funds through Treasury borrowing. However, it does not take into account the risk exposure of taxpayers. Economic theory, followed virtually universally by private sector participants using their own funds, says that the right interest rate should be one that reflects the risk level of the lending, not the cost of obtaining the funds. At heart, this is because private investors are risk averse, demanding a higher return if they are forced to take additional risk. However, a number of analysts argue that the government does not need to be risk averse, principally because the credit programs are small in relation to the size of the government and any cost over-runs can be spread over time. In addition, some argue that the budget is not the appropriate place to reflect any risk aversion that might exist, which they think could be captured better through a cost-benefit analysis or other means.

The technical arguments pro and con are laid out well in the sources I listed above. Putting it more simply, I believe that it would be valuable to use interest rates for the budget that reflect the differing risk levels of the different loan programs. (In fact, this was one of my ten recommendations in *Uncle Sam in Pinstripes* about how to improve these programs.) I believe that taxpayers are risk-averse in their thinking about tax levels, just as they are about other financial decisions. I further believe that federal policymakers effectively treat the interest rate used for budgetary purposes as if this were the true cost of funds for their programs.

Using a rate, as we do now, that does not distinguish between different risks encourages us to offer credit programs with much less regard to their general risk levels and to structure them so that borrowers are not charged different rates depending on how risky they are. Further, this tends to pull the government into lending to the riskiest projects, because there is the greatest implicit subsidy when effectively treating loans as if they were risk-free for budget purposes when the market views them as highly risky[1].

[1] They are not treated as completely risk-free, since expected losses are factored in, but there is no penalty for having a distribution of potential losses that are most severe in an economic downturn, when taxpayers are least able to cope with those losses. This volatility is what economic theory and market practice demand a risk premium to take on.

Appendix: Background on Calculating Federal Budget Costs for Credit Programs[2]

Credit programs are scored on the federal budget using Net Present Value (NPV) techniques, in accordance with economic theory and the practice in the private sector. The central idea of NPV analysis is to estimate all the future cash outflows and inflows related to the activity authorized for a given budget year. Outflows would include the disbursement of loans and payments of administrative expenses. Inflows would mainly consist of principal and interest payments but might also include fee collections and investment income. The flows in each future year would be put on a common basis for comparison, as if they occurred in the present year, by reducing them to reflect the time value of money. If the interest rate (known as the discount rate) is 5 percent, then a payment received in a given year would be treated as worth roughly 95 cents (one dollar divided by the sum of 100 percent and the discount rate of 5 percent). A payment two years out would be worth about 90 cents, and so on. Once all payments and receipts have been put on this common basis, they are simply added up to show the net effect in today's dollars of all activity.

Controversy focuses on what discount rate to use. The rate matters a great deal since most federal credit programs lend money for many years at a time. A dollar received ten years from now will be treated as worth 61 cents if the discount rate is 5 percent but only 39 cents if the discount rate is 10 percent. Such a difference accumulated over all the cash flows can take a program from appearing profitable or only modestly costly to looking very expensive. For example, TARP was lambasted at its inception as a costly give-away to the banks, based on a budget treatment that used discount rates in the 12 percent range, reflective of what the market would have charged at the time. If we use a discount rate of 3 percent, roughly the government's cost of funds, the bank portion of TARP would actually make money for the taxpayers under the same cash flow assumptions. (In actuality, the cash flows from this portion of TARP were much more positive than expected, leading to a likely profit even using the higher discount rate.)

The Credit Reform Act prescribes the use of the federal government's borrowing rate for most programs, but a significant majority of the economists analyzing this issue in recent years would prefer to use a rate tied to the risk of the lending, just as the private sector does. Much of the academic thinking in the 1970s and 1980s, which substantially influenced the Credit Reform Act, followed the logic of Kenneth Arrow and Robert Lind. Among their key arguments for using a risk-free rate, essentially the government borrowing rate, are that any credit losses from a program would be extremely small in relation to the totality of the federal budget and would matter even less when using the government's taxing authority, and consequent borrowing ability, to spread any costs over time.[3]

More recent academic thinking, argued perhaps most clearly by Deborah Lucas and Marvin Phaup,

---

[2] This section is taken, with minor modifications, from *Uncle Sam in Pinstripes: Evaluating US Federal Credit Programs*.

[3]. Arrow and Lind (1970).

focuses on the systematic risk to taxpayers that credit programs represented. A key theoretical reason for using a risk-related discount rate is that taxpayers and policymakers are believed to have an asymmetric response to good and bad surprises concerning the cost of credit programs. Credit losses are quite correlated with the economy as a whole, which means that these programs cost taxpayers most at the times when they are least able to deal with the added expense. On the other hand, low credit losses come at a time when taxpayers are relatively flush and could have absorbed higher taxes. Thus taxpayers should charge a risk premium, just as private sector investors do for stocks or other more volatile investments. A related practical issue is that if the private sector charges for risk but the government does not, then government programs will tend to pick up the riskiest credits, exacerbating the cost and volatility for taxpayers.[4]

Putting aside the choice of a discount rate, the accrual methodology required by the Credit Reform Act is strongly supported by virtually all budget experts. It is much better suited to credit provision than the cash accounting basis that is used for essentially all other federal purposes and was used for credit provision before the Credit Reform Act. The Credit Reform Act enshrined net present value analysis as the basis for budgeting for federal lending programs because it eliminated or reduced a number of errors encouraged by cash budgeting.[5] All of the errors center on sacrificing the long term for the short term.

Cash budgeting unfairly discourages federal lending. Lending $1 billion today with the expectation of getting it back in five years, plus an appropriate rate of interest, may be an excellent policy choice. However, cash budgeting makes the federal deficit $1 billion worse in the first year, followed by a $1 billion windfall five years later. Political realities generally make this unattractive.

Cash budgeting also creates incentives to destroy economic values by, for example, favoring actions that raise a great deal of cash up front. For instance, packaging government loans with an economic value of $1 billion and selling them to the private sector for $500 million would actually look good for the federal budget in the near term under cash budgeting. (This example does not mean loan sales are always bad. The point is that even bad ones could be appealing under cash accounting.) It is worth remembering that a major reason President Johnson sold the first shares in Fannie Mae to investors in the 1960s was to bring in cash, thereby reducing the budget deficit.

---

[4]. Lucas and Phaup (2010); CBO 2004. Some of the other academic analysis relevant to this key question is found in Moszoro and Bednarek (2010) and Bosworth, Carron, and Rhyne (1987).

[5]. The next few paragraphs are taken from the author's earlier paper, "Measuring the Cost of the TARP" Elliott (2009). That paper itself drew from another of the author's papers, "Budgeting for Federal Credit Programs: A Primer" (Elliott 2004). It has considerably more detail on the Credit Reform Act and why it was adopted.

Cash budgeting heavily favors loan guarantees over direct lending, regardless of the true economics. There are times when direct lending may be the better policy choice, but cash budgeting will always make a guarantee look less costly in the near term. After all, there is no initial outlay when a guarantee is provided; indeed, there may be a guarantee fee paid to the government.

Net present value analysis looks at the totality of the expected cash flows, whether they occur in the near term or many years out. This enables an integrated decision that appropriately discounts future benefits and costs, without ignoring them totally, as cash budgeting was wont to do. There is no artificial five- or ten-year horizon that can be gamed by politicians or bureaucrats. All future cash flows are taken into account, to the extent possible.

The downside of NPV analysis is that it requires estimates of future cash flows, potentially going out for many years. Government analysts may be wrong about either the amounts or the timing of those cash flows, just as private sector analysts often make mistakes. Nonetheless, it is better to make a well thought out guess than to ignore the future altogether. Fortunately, in the case of a program like the capital injections into banks, there are often good publicly traded proxies that can be used to provide a check on the results of the net present value analysis. For example, when TARP was created many large banks already had preferred stock or similar instruments with some of the characteristics of the preferred stock being purchased by the government. Over time, the government could also sell off some its bank investments as a way to establish a clear private market valuation. Admittedly, private market valuations are based on guesses as well. The difference is that market prices are based on a weighting of all the estimates out there, and there is a strong monetary incentive for the analyses to be accurate. If enough investors conclude based on their projections that a security is overvalued or undervalued, then the price will move back to a fairer valuation.