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A PRIMER ON FISCAL STIMULUS

Recent data suggest that economic growth has slowed and most analysts have been ratcheting up the odds that they assign to the possibility of a recession. No one knows if the economy is in a recession or whether a recession will arise. Yet, because of indications of recent weakness in the economy and concerns that a recession, should it arise, could prove to be deeper than recessions of the recent past, consensus opinion seems to have shifted to the policy option of using fiscal policy in an attempt to provide a short-term boost to overall spending in the economy in an effort to lean against the headwinds of an economic slowdown.

This report addresses questions surrounding use of fiscal stimulus measures by responding to the following:

What is fiscal stimulus?

Fiscal policy governs taxes and government spending. Fiscal stimulus refers to stimulation of aggregate demand, and potentially also supply, using contemporaneously deficit-financed increases in government spending and/or reductions in taxes.

Aggregate demand consists of demand for goods and services from consumers, from business in the form of investment demand for things like machines, from government, and from the net of exports sold abroad less imports purchased from abroad. If government spending increases, with all else held constant, aggregate demand for output in the economy will increase. If taxes are cut, with all else held constant, after-tax incomes will rise which will tend to stimulate aggregate demand from those receiving the tax cuts.

How does stimulus differ from automatic stabilizers?

There are elements of fiscal policy that automatically provide fiscal stimulus if economic growth falls or if employment and output decline in the economy. Certain programs have built-in features that ensure more government spending or a lower tax-take by the government in the event of slower economic activity—these features are called "automatic stabilizers." When economic activity and aggregate demand weaken, these stabilizers exert forces into the economy that tend to dampen the weakness by stabilizing demand and output.

Typical examples of automatic stabilizers are unemployment insurance and Food Stamp outlays from the government, which automatically tend to rise when employment and economic activity falls and vice versa. When the economy slips into a recession, for example, unemployment rises. This leads to increases in the number of people receiving unemployment insurance compensation and, consequently, increases in outlays from unemployment insurance programs.

Current discussions of fiscal stimulus are focused on contemporaneously deficit-financed temporary tax cuts and/or additional government spending that can, in principle, serve to temporarily boost aggregate demand *as additions to* the automatic stabilizers already in place. The intent is to further help offset weakness in demand should a recession arise or should growth turn out to be markedly slower. Fiscal stimulus actions correspond to traditional Keynesian-style "demand management" policies designed to fine tune the economy so that it does not stray into recession. The extent to which such fine tuning exercises can be effective or have been effective in the past is a very controversial issue in macroeconomic research, and hard answers have not been established.

What is meant by the often-heard mantra of potentially effective fiscal stimulus: Timely, Targeted, and Temporary?

Ideally, according to Keynesian economic prescriptions, fiscal policymakers could recognize the onset of a recession with pinpoint accuracy and could respond with laser precision by immediately enacting deficit-financed measures consisting of increases in outlays and cuts in taxes that would provide the largest possible boost to aggregate demand per dollar of additional deficit. Then, in the ideal world, the fiscal stimulus would be turned off immediately after the recession threat passes, and the short-run boost to the deficit that was used to finance the temporary stimulus would be paid off in short order. Unfortunately, we do not live in such an ideal world. Rather, there are substantial lags and uncertainties associated with fiscal stimulus measures.

> **Timely:** There are three lags associated with fiscal policy actions designed to provide a boost to aggregate demand if the economy slows significantly.
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> > ***Recognition lag*****—**the time between when economic growth slows significantly or the economy begins to slip into a recession and when fiscal policymakers actually recognize the slowdown.
> >
> > In the current environment, it is too early to tell whether the U.S. economy is in a recession, if a recession will arise at all this year, or if recent indicators suggestive of slower growth in the economy will be followed by worsening conditions. Most are already aware that downside risks point toward a significant slowdown in the economy, so that the need for possible action seems to already have been recognized.

***Implementation lag*—**the time between recognition of the possible utility of providing fiscal stimulus and actually piecing together, through the legislative process, a stimulus package ready for enactment.

A package could either be enacted once agreed upon by Congress and the administration, or could be agreed upon and placed on hold for actual enactment until some particular threshold, called a "trigger," is met. Possible use of a trigger and candidate triggers are discussed below.

Given such recognition, it may prove prudent from a risk management perspective to prepare for the possible contingency of significantly slower growth or recession in the near future. Thus, it *may* prove prudent to continue deliberations that have already begun and to construct a fiscal stimulus package. Once the package is agreed upon by Congress and the administration, it could either be immediately enacted or enactment could be placed on hold until some particular threshold, called a "trigger," is met that indicates more strongly than current information that the economy warrants fiscal intervention.

***Impact lag*—**the time between enactment of a fiscal stimulus package and actual effects on the economy in the form of such things as increased spending, output growth, and job growth.

According to Fed Chairman Bernanke, in testimony before the House Committee on the Budget on January 17: "To be useful, a fiscal stimulus package should be implemented quickly and structured so that its effects on aggregate spending are felt as much as possible within the next twelve months or so. Stimulus that comes too late will not help support economic activity in the near term, and it could be actively destabilizing if it comes at a time when growth is already improving. Thus, fiscal measures that involve long lead times or result in additional economic activity only over a protracted period, whatever their intrinsic merits might be, will not provide stimulus when it is most needed."

Bernanke's observation highlights the importance of time lags associated with the implementation of fiscal policy actions. If any fiscal stimulus is to be provided, it would be essential that a stimulus package be enacted in very short order—over the next month or two, thereby making the implementation lag very short. For example, if, as some fear, we are already in a recession and the recession were to last 9 months (which is the average duration of the last four U.S. recessions) and if fiscal stimulus is not enacted before summer, then the recession would be over by the time any new fiscal stimulus begins to have its initial effect.

Targeted: For a fiscal stimulus package to be efficient, it should maximize the amount of near-term stimulus to aggregate demand per dollar of increased federal expenditure or lost tax revenue. Alternatively stated, any potentially useful fiscal stimulus package should be designed with components that have the largest "bang for the buck."

The main idea behind targeting in a fiscal stimulus package is a desire to provide more funds to those households, businesses, or government entities that are most likely to immediately spend those funds on goods and services. The greater the amount of spending from recipients of any increased government outlays or from increased disposable income arising from temporarily lower taxes, the greater will be the immediate boost to aggregate demand. With a relatively high amount of such spending, the recipients of that expenditure will, in turn, realize increases in their incomes or profits and will consequently spend more (but probably not all, as some of the receipts will be devoted to savings). That additional spending will, in turn, give rise to more rounds of receipts and spending in a process referred to as the "multiplier effect." The multiplier effect means that it is possible that an additional dollar of government spending or cut in taxes can lead, in the short run, to even more than an additional dollar in aggregate demand in the economy.

With respect to consumers or government entities, the greater the share of any receipts from additional government outlays or increases in disposable income stemming from a temporary tax cut that is devoted to current spending, the larger will be the multiplier effects. In contrast, the greater the share devoted to savings, the smaller will be the multiplier effects. If, for example, household respond to temporary fiscal stimulus measures by increasing their savings, then there is simply a substitution of reduced public savings (from an increase in the government's deficit) for increased private savings, leaving total national savings unchanged and total spending unchanged. With respect to businesses, the greater the responsiveness of investment expenditures to reductions in the after-tax cost of investment projects associated with any temporary investment incentives provided in a fiscal stimulus package, the greater will be the effects on aggregate demand.

The basic Keynesian idea behind fiscal stimulus is to get funds in the hands of those most likely to spend now, to put business incentives in place that are most likely to stimulate investment spending now, and to provide government transfers to states that will lead to greater state spending now (and not simple budget shuffling with spending unchanged). That means, get funds to households with high marginal propensities to consume out of increases in disposable income, provide investment incentives to firms with high propensities to invest in response to decreases in the after-tax cost of investment goods, and possibly get funds to state programs most likely to generate current spending increases.

Ideally, to provide the maximum bang for the buck associated with alternative available fiscal stimulus measures, fiscal policymakers could identify those most likely to spend the largest share of a tax cut or additional government benefit and those businesses most likely to boost investment spending in response to temporary investment tax incentives. In practice, however, it is difficult both to identify those most likely to spend and to target funds and tax incentives primarily to those high-propensity spenders and investors.

What household characteristics are believed to be associated with high propensities to consume? What type of business investment spending would most likely increase immediately in response to a decrease in the after-tax cost of investment projects? What form of transfers from the Federal government to the states or what type of infrastructure investments by governments would most likely boost spending quickly? Unfortunately, economists do not have available a precise list of characteristics associated with those most likely to spend the most in response to fiscal stimulus measures. It is believed that households lacking a significant amount of financial assets or borrowing ability that would help them weather economic slowdowns would be most inclined to spend a large fraction of any increase in disposable income. Some evidence exists suggesting that low income households are probably in such a category as, perhaps, are unemployed individuals. For business investment, there is evidence that spending on investment projects that qualify for a tax preference, like accelerated depreciation, responds significantly. Thus, it is important to focus, in directing fiscal stimulus to investment spending, on what investment projects qualify for special tax incentives and what projects, if any, do not.

Temporary: Because fiscal stimulus measures increase government spending and/or reduce taxes, such policies raise budget deficits in the short term. That effect is desirable if short-term stimulus is deemed to be necessary and if the measures lead to increases in aggregate demand that would otherwise not have occurred in a weakening economy. However, higher deficits can lead to slower economic growth in the long run if they are allowed to persist as they exacerbate an already unsustainable fiscal course given existing entitlement spending promises. The longer deficit-financed fiscal stimuli are in place, the greater the addition to longer-term fiscal pressures. Another argument for making fiscal stimulus temporary on the business investment side is that tax incentives designed to stimulate investment spending may not prove to be as stimulative in the near term if businesses delay their spending within the tax-preferred stimulus timeframe.

Should a stimulus package be constructed with implementation tied to a triggering event?

As discussed earlier, to minimize the implementation lag associated with temporary fiscal stimulus measures, a stimulus package could be designed within the legislative process and then be placed waiting in the wings for immediate enactment should a particular threshold be crossed that indicates that the economy is in or is highly likely to slip into a recession. Then, when the threshold is crossed, a trigger is pulled that immediately enacts any government spending increase and/or tax cuts contained in the package that has been waiting on the shelf.

There are two possible advantages to a trigger. One is the utility of minimizing the implementation lag. If it becomes clearer that the economy is in or on the brink of recession, spending stimuli will be immediately put to work. This increases the likelihood that fiscal stimulus will occur around when it is needed, and not later on down the road when the economy is recovering on its own and when demand stimulus can actually prove destabilizing by adding to inflationary and budget pressures. A second possible advantage is to boost confidence of consumers and investors now, even before the triggering event, by effectively proclaiming through policy action that Congress and the administration are aware of signals of economic weakness and stand ready to act quickly. Though there is no evidence to corroborate this view, it may be that greater confidence today will help boost consumer and business confidence, leading to greater aggregate spending and demand than would otherwise occur in the absence of the confidence-boosting contingency fiscal stimulus plan. (It should be noted that similar confidence arguments can be made for the usefulness of extending the tax relief enacted in 2001 and continued in 2003—greater confidence today that taxes will not rise in the future can boost spending today).

There are also disadvantages to a trigger. One is that fiscal stimulus could be triggered prematurely and unnecessarily. That is, the trigger could send out a false signal. If soon after a stimulus package is enacted the economy turns toward more positive and robust growth independently, then the effects of fiscal stimulus could take place in a period in which stimulus is not necessary and is, perhaps, destabilizing by exerting excess demand and inflationary pressures into the economy.

What should be used as a trigger? The most publicized possible signals have been proposed recently by Harvard economists Martin Feldstein and Lawrence Summers. Feldstein proposed that a fiscal stimulus package could be enacted if the change in payroll employment reported by the Bureau of Labor Statistics (BLS) declines for three consecutive months or declines on net over a three month period. An alternative trigger, advanced by Dr. Summers, would give the Executive Branch the right to trigger stimulus based on their assessment of economic conditions. The Congressional Budget Office (CBO) has also identified, as a possible trigger, an increase of 0.4 percentage points over 12 months in the three-month moving average of the unemployment rate.[1]

It is reasonable to ask how Feldstein's proposed three-consecutive-months with reported declines in payroll employment would have fared as a trigger in past recessions. That is, had fiscal stimulus been triggered upon receipt of information from the BLS that payroll employment declined in three consecutive months, would stimulus have begun around the time of recession? The answer depends on which data are used. The BLS typically revises data as new information becomes available, so the trigger would have to be defined to include data revisions or not. For example, if we hypothetically receive a report in March that payroll employment fell in February and January and then receive a report in April that March's payroll employment fell, but February was revised to now show a gain, does that count as three consecutive months of reported payroll employment declines?

Suppose we define the trigger to include all data revision (except for "benchmark revision" which would not be available to policymakers in a timely fashion), so that as-reported, and inclusive of revisions to past data, a report of three consecutive months with payroll employment declines is required to trigger stimulus. Using this criterion for recent periods of recession (the recessions of January 1980 – July 1980, July 1981 – November 1982, July 1990 – March 1991, and March 2001 – November 2001), fiscal stimulus would have been triggered as follows:

Stimulus Triggered (3 Consecutive Months of Declines in Payroll Employment reported in Beginning of the Following Month)	Date of Onset of Recession (NBER Dating)	Lag Between Onset and Trigger
May 1980	January 1980	4 Months
December 1981	July 1981	5 Months
September 1990	July 1990	2 Months
October 2001	March 2001	7 Months
April 2003	No Recession	False Trigger

As the table shows, the best performance of the trigger would have been to institute fiscal stimulus two months after the recession of July 1990 – March 1991 began. In that case, stimulus would have been implemented when the economy was already in recession at the beginning of September 1990. The economy recovered, independently from any fiscal stimulus package, in March 1991.

As the final row of the table shows, it is possible to receive false triggers. In the case in point, the trigger would have been pulled at the beginning of April 2003 at a time of economic expansion, at least according to NBER recession dates. However, fiscal stimulus

[1] See "Options for Responding to Short-Term Economic Weakness," January 2008, CBO, available at http://www.cbo.gov/ftpdocs/89xx/doc8916/01-15-Econ_Stimulus.pdf .

was in fact in place: fiscal stimulus actions taken in association with tax relief that began in 2001 and continued in 2003 seemed well timed and helped keep the economy out of recession in 2003.

Should stimulus be paid for now or later?

For a temporary stimulus to have the greatest chance of success in stimulating aggregate demand, it should be deficit financed in the very short term. If, to pay contemporaneously for fiscal stimulus, some taxes are raised or some government spending is cut, those actions will work against the intent of providing fiscal stimulus to boost aggregate demand. However, deficit financing of temporary fiscal stimulus adds to the government's deficit which requires, for long-run budget balance, some offsetting spending cuts or tax increases in the future.

While contemporaneous deficit financing of fiscal stimulus runs counter to a strict notion of pay-as-you-go (PAYGO) budgeting, some have argued that existing informal PAYGO "rules" allow for violation of the PAYGO principle in emergency events, with the possibility of a recession evidently qualifying as an emergency. Others argue that informal PAYGO "rules" allow for a temporary deficit that would arise from short-term fiscal stimulus if any addition to the overall deficit is resolved within a five year window using spending cuts or tax hikes within that window.

How much stimulus should be provided?

There is no correct answer. A better question might be, What magnitude of current government spending and/or tax cuts would provide a significant boost to aggregate demand measured, say, by the size of the stimulus package relative to the size of the overall U.S. economy?

Most stimulus packages under current debate range, roughly, between $50 billion and $150 billion. President Bush, on January 18, proposed fiscal stimulus of around $145 billion.

The current annualized dollar value of the Nation's total output of goods and services, GDP, in the 3rd quarter of last year (the latest period of data availability) was close to $14 trillion. To simplify matters, suppose that the entire amount devoted to fiscal stimulus was comprised of additional government outlays. Additional government outlays of $50 billion and $150 billion represent, respectively, around 0.36% and 1.1% of GDP.

If, hypothetically, GDP was raised in one quarter of a year by $50 or $150 billion because of a fiscal stimulus, then the fiscal stimulus would have led to a respective annualized increase of around 1.4% or 4.4% in GDP. This result assumes a short-term fiscal multiplier of one—a $1 increase in government spending would increase GDP in the short run by the full $1. According to the CBO's January 2008 report: "Estimates using econometric models suggest that an assumption that a dollar's worth of stimulus at a time of economic weakness produces roughly a dollar's worth of additional economic activity is about the right order of magnitude." The result also assumes a full impact occurring within a quarter of a year, which is unlikely. To the extent that aggregate demand was to increase, it would likely be spread out over a much longer period.

Why not let the Fed handle the slowdown?

The conventional wisdom is that the implementation lag—the time between recognition of a slowdown or recession and implementation of a policy response—is shorter for monetary policy than for fiscal policy. The Fed's monetary policymaking committee meets regularly—eight scheduled times per year—and can meet by teleconference at any time.

That committee, called the Federal Open Market Committee (FOMC), is capable of changing monetary policy by cutting its target for short-term interest rates at a moment's notice. By contrast, the legislative process necessary to construct, deliberate, and enact any fiscal policy action involves a much longer time lag. So, why not let the Fed alone, with its superior ability to act in a rapid fashion to incipient signals of economic weakness, take care of current economic difficulties? Three reasons have been offered:

1. The current environment includes financial markets that have been substantially disrupted by uncertainties and heightened risk aversion in the aftermath of the sub-prime mortgage market meltdown. Despite repeated injections of funds into the financial system by the Fed and central banks abroad, financial market participants seem to still have a heightened amount of risk aversion and seem unusually hesitant to lend. Thus, even with ample liquidity, the credit channel of monetary policy—through which lowering of interest rates leads to increased lending and increases in interest-sensitive spending—seems impaired relative to previous instances with economic slowdowns. No one would argue that fiscal stimulus measures would resolve most of the credit-market difficulties facing the Fed. The argument is simply that the Fed's effectiveness may currently be temporarily muted relative to other times.
2. There are two broad instruments available to economic policymakers: monetary policy and fiscal policy. Monetary policy is already being employed to help counter signs of an apparent slowdown in economic activity. The Fed has cut its targets for short-term interest rates significantly since last summer and has injected large amounts of credit into the economy. From a risk management perspective, given a risk of a slowdown in the economy, policymakers may wish to diversify across available policy instruments. This means use of fiscal policy in addition to the already-at-work monetary policy actions.
3. While monetary policy has a shorter implementation lag than stimulative fiscal policy, the reverse is arguably true with respect to impact lags. That is, some argue that fiscal stimulus actions, once implemented, will more rapidly lead to increases in the economy's aggregate demand than any increases that derive from the Fed lowering short-term interest rates and, eventually, stimulating interest-sensitive spending.

What stimulus options are available?

In general, fiscal stimulus measures include those directed at:

> ***Households***—tax cuts (or "rebates") or increases in transfer payments from the government (e.g., Food Stamps or unemployment insurance benefits).
>
> ***Businesses***—tax cuts designed to stimulate business investment spending or cuts in corporate income taxes.
>
> ***Government***—government purchases of goods and services (e.g., infrastructure spending) or increases in Federal transfers to state and local governments.

A detailed description of alternative particular measures, along with comments on their uses in the past and on their potential usefulness in combating recession, is contained in the January 24, 2008 JEC Senate Republican Staff Report entitled: "Overview of Alternative Stimulus Options."

What do we know from experience about the effectiveness of fiscal stimulus?

Temporary fiscal stimulus measures enacted during the 1960s and 1970s are widely regarding as having been ineffective at best, and potentially were destabilizing. As the CBO's recent report points out, research suggests that "...fiscal policy in the 1960s and 1970s was poorly timed and, in some instances, destabilizing."

Most studies of purely temporary, one-time changes in taxes indicate that they have had, at best, a moderate effect on household consumption. For example, studies of the 1975 tax rebate suggest that less than 25 percent of the rebate was used for consumption spending in the quarter that it was received.

The most recent experience with a form of fiscal stimulus occurred earlier in this decade. In 2001, 90 million households received around $30 billion in tax rebates. This amount came between July and September 2001 when the government mailed income tax rebates of $300 for individuals and $600 for married couples. In fact, rather than mere one-time tax rebate checks, those payments are better thought of as "prebates," or advanced recognition of lowered tax liabilities associated with provisions of the Economic Growth and Tax Relief Reconciliation Act (EGTRRA) of 2001, which reduced the lowest tax bracket from 15 percent to 10 percent on taxable income up to $6000 for single filers, $12000 for joint filers, and $10000 for heads of households.

EGTRRA was enacted in June 2001, but the change in the lowest tax rate was applied retroactively to income that was earned from the beginning of 2001. Under EGTRRA, the reduced tax bracket corresponding to the prebates was scheduled to remain at 10 percent through 2010. Consequently, the prebates ***were not*** one-time tax cuts but, rather, represented part of a longer-term tax reduction and, therefore, larger increase in households' lifetime after-tax wealth than would be associated with a one-time deficit-financed tax rebate.

A recent study by David Johnson, Jonathan Parker, and Nicholas Souleles (2006) analyzes data on household spending surrounding the 2001 prebate checks and finds that households spent about one-third of their prebates in the quarter they were received and another third in the following quarter.[2] Moreover, low-income households spent a significantly larger fraction of their rebates than households on average.

Another study by Sumit Agarwal, Chunlin Liu, and Souleles (2007) analyzes credit card data and finds that households initially used some of their prebates to pay down credit card balances, but soon thereafter increased their spending by significant amounts.[3]

According to the research cited above, there *can be* a significant near-term consumer spending response to tax rebate checks. It bears repeating, however, that the 2001 experience was with tax prebate checks tied to a longer term tax cut for households than would be the case if a one-time, deficit financed, tax rebate check is offered to households. Theory and evidence suggests that such a one-time fiscal stimulus measure is likely to be significantly less effective than the consumption responses to the prebate checks of associated with long-term tax relief that was associated with EGTRRA.

Turning to business investment, in 2001 the government enacted so-called "bonus depreciation," which was a temporary tax incentive for business investment. Including the

[2] David Johnson, Jonathan Parker, and Nicholas Souleles, "Household Expenditure and the Income Tax Rebates of 2001," *American Economic Review*, 96(5), December 2006.

[3] Sumit Agarwal, Chunlin Liu, and Nicholas Souleles, "The Reaction of Consumer Spending and Debt to Tax Rebates—Evidence from Consumer Credit Data, forthcoming in the *Journal of Political Economy*.

additional bonus depreciation measures enacted in 2002 and 2003, companies were allowed to immediately deduct 50 percent of any investment made between September 11, 2001, and the end of 2004.

There is evidence that the bonus depreciation for business investment that was passed in 2002 and then increased in 2003 was effective in increasing investment. Christopher House and Matthew Shapiro (2007), for example, do find a positive effect of bonus depreciation on investment, and conclude that: "Capital that benefited substantially from the policy—namely equipment with long tax lives—saw sharp increases in investment." [4] However, the study go on to say that: "Because the policy was narrowly focused on a small subset of investment spending, the authors find that it had only modest effects on aggregate employment and output, despite the stark effects on the composition of investment." These results do *not*, as CBO's report on fiscal stimulus options suggests, provide evidence that bonus depreciation measures or allowing for expensing of business investment provide only "relatively modest" or "very modest" effects. Rather, the results point to a need to carefully construct business investment incentives (e.g., carefully craft eligibility requirements) to provide for the largest possible investment response.

What about making tax cuts permanent?

Extending the pro-growth tax relief that began in 2001 and continued in 2003 is highly desirable, especially if matched with policies in the future to rein in health care costs and to stem the growth of government spending through reform of the system of unsustainable promises contained in the Nation's entitlement programs.

A channel through which extending tax relief today can lead to increased economic activity today is an expectations channel. To the extent that households and businesses currently believe that taxes will be raised in the future, current spending will tend to be dampened because households and businesses are forward looking—they take into account not only current tax rates in deciding current actions, but also what they expect their taxes to be in the future. If extension of tax relief today causes people to change their expectations from higher taxes in the future to no tax increases in the future and this leads them to perceive that their lifetime wealth is higher, then current spending will rise. Expectations about the Nation's long-run fiscal picture is also important as, potentially, is resolution of uncertainty today concerning what tax rates are likely to be in the future.

In any case, most have compromised on resolving the issue of extending pro-growth tax relief or instituting a significant tax increase at some future time. Independent of the pro-growth merits of extending tax relief that began in 2001 and continued in 2003, resolution of whether or not to extend the relief will likely be made largely separate from decisions about fiscal stimulus.

What are the arguments against implementation of a fiscal stimulus package?

If stimulus is provided and the economy turns out not to weaken as expected, then the stimulus can be counterproductive and destabilizing. Stimulus to an already reviving economy can produce excess demand pressures which, in principle, can ignite further inflation pressures in the economy. And the process of trying to bring down that inflation later would lead the Fed to increase interest rates more than otherwise would have been the case. The result could be inflation pressures and additions to the Federal government

[4] Christopher House and Matthew Shapiro, "Temporary Investment Tax Incentives: Theory with Evidence from Bonus Depreciation," forthcoming in the *American Economic Review*.

deficit, leading to further fiscal pressures in a budget that already faces significant long-run pressures because of unsustainable entitlement spending promises.

A second argument against fiscal stimulus is that there is no agreement among economists, and no strong empirical evidence, which would suggest that a short-term fiscal stimulus program is at all effective in stimulating aggregate demand to a degree necessary to thwart a recession. Proponents of short-term stimulus rely often on theoretical possibilities that have not received overwhelming support from empirical evidence.

What are some of the administrative delays associated with alternative measures of rebating taxes to households or cutting their tax rates?

Should Congress decide to provide short-term tax relief to households in the form of rebates on income or payroll taxes or through tax rate reductions, there will be administrative lags associated with either the Internal Revenue Service (IRS) and/or Social Security Administration (SSA) determining exactly to whom rebate checks should be written.

If rebates are contingent on a household having incurred some tax liability, there is a question as to what the tax base would be (e.g., rebate to those who have payroll tax liabilities or to those who have income tax liabilities). A rebate based on income tax liability alone would, arguably, reach fewer families likely to spend it than a rebate based on payroll tax liability. Many low-income households incur no income tax and, even though they incur payroll tax liabilities, they might be ineligible for a rebate if a rebate is based on income tax liabilities alone.

Rebates based on income tax information could be relatively easily administered. The IRS has readily accessible information on the income tax liability of each household that files a return. With that information, the IRS could calculate rebate amounts and send them to addresses or directly into bank accounts. The rebates issued in 2001 were issued relatively quickly and with few administrative snags.

If a rebate is based on income taxes, one way to provide more rebate money to low-income families would be to issue refundable income tax rebates. For example, a rebate of a fixed size could be distributed to all households who filed returns, independent of whether they actually ended up with a tax liability. Such a rebate would still be based on income tax return information and would be relatively easy to administer. According to the Keynesian notion of fiscal stimulus, a refundable rebate would be particularly effective by putting more money in the hands of households that have high propensities to consume than a rebate based solely on payments to those who had positive income tax liabilities.

It may not be possible to issue tax rebates based on 2007 income tax returns until toward the end of the second quarter of 2008 at the earliest. Basing the rebates on 2006 tax returns could speed implementation of a rebate-stimulus process but would also increase the number of recipients whose addresses and circumstances have changed.[5]

The process of sending rebate checks out, by itself, also takes time. According to the CBO: "…in 2001 it took about 10 weeks to issue all the rebates, and a similar delivery time should

[5] An alternative to basing rebates on income tax returns, rebates could be based on those who are currently receiving W-2 forms, though this could be administratively more difficult. The main advantage to such an alternative would arise only if one is very concerned about missing, through the rebate process, some households who did not file income tax returns in the past but are nonetheless earning income.

be expected now, although a larger proportion of them might be delivered more quickly via direct deposit."

There are a number of possible stimulus-oriented ways of reducing tax rates, including temporary across-the-board cuts in income tax rates or a "payroll tax holiday" that would cancel employee payroll tax withholding during a specific period. One advantage of such proposals is that they increase weekly take-home pay which, some argue, tends to be spent somewhat more readily than one-shot rebates.

According to Keynesian theory, across-the-board reductions in income tax rates could have less of a stimulative effect than some alternative measures because they provide larger dollar-values of tax reductions for upper-income taxpayers. Those upper-income taxpayers get greater reductions because they have much larger tax liabilities. However, the Keynesian story goes, they are also less likely to spend the additional money.

A payroll tax holiday applied to employees' shares of the tax could direct more of the tax reduction to households who are more likely to spend it, and could reach taxpayers who would not qualify for a rebate on the basis of income tax liabilities. Suspending the employers' portion of the tax for a short period of time would be unlikely to alter wages very much in the short run and, so, would not alter consumers' resources very much.

Any rate reduction aimed at lowering tax withholding for a specific period would probably involve more administrative difficulties than changing withholding tables for the entire tax year. Tax withholding tables can be changed relatively easily, but any change in withholding takes time for employers—especially smaller ones—to implement. Turning withholding on and off introduces more possibilities of error and, because significant penalties can arise from failure to remit the proper amount of payroll taxes, payroll administrators may take a significant amount of time in ensuring that payroll tax changes are undertaken properly. That time would delay impacts of the stimulus.

Another disadvantage of the holiday approach is that only workers employed at the time of the holiday would receive the benefit. Even if a worker had been employed for the previous 11 months, that worker would receive nothing if unemployed in month of the tax reduction. Workers who have already reached the taxable maximum for Social Security taxes would also be differentially affected. Modifications to the proposal to deal with some of these issues could delay its implementation.

With respect to government spending on infrastructure, public works involve long start-up lags. Large-scale construction projects of any type require years of planning and preparation. Even those that are "on the shelf" generally cannot be undertaken quickly enough to provide timely stimulus to the economy.

Incentives for new business investment or reductions in the corporate tax rate are relatively easy to administer. Changing the statutory tax rate applied to corporate income is easy. However, there is no strong evidence that a cut in the corporate tax rate, even if permanent, would provide a temporary large boost in aggregate demand that is the objective behind the Keynesian-style demand-management types of fiscal stimulus currently under debate. Providing businesses with accelerated depreciation or expensing of investment in the year it is made would be much more promising for a temporary demand boost. Implementation lags would involve determination and delineation by Congress, and subsequently the Treasury and IRS regarding tax rules, of what investments qualify for the investment stimulus measures and the period over which the measures are to be in place.