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## Quarterly Fiscal Policy

**Abstract:** Monetary policy is altered once a month. Fiscal policy is altered once a year. As a potential improvement this article examines the use of feedback control rules for fiscal policy that is altered quarterly. Following the work of Blinder and Orszag, modifications are discussed in Congressional practice and institutions that would facilitate this change.

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Monetary policy is altered about once a month by the Fed. Fiscal policy is changed about once a year by the Congress.

Would a shift from the present annual budget based system to a more technically based quarterly feedback system improve the functioning of fiscal policy? Such a system would involve two major shifts in the way fiscal policy is managed. The first is a political shift with a part of the decision processed moved from the Congress to an expert board. The second is the development of a technical staff for this board with knowledge not only of economics but also of high tech control systems like those used in aircraft.

This kind of a shift of responsibility from the Congress to a technical board for some economic policy decisions was discussed in an article in *Foreign Affairs* in 1997 by Alan Blinder and more recently in 2011 in an article in *The New Republic* by Peter Orszag.

Blinder served on the Council of Economic Advisors and also as Vice Chairman of the Federal Reserve Board during the Clinton Administration. His article was written against the backdrop of serious political attacks on the independence of the Federal Reserve Board.

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In that setting Binder argued that policy decisions with certain characteristics might be more effectively managed by independent boards like the Federal Reserve Board. Those characteristics are: (1) a considerable technical basis, (2) long lags between the policy action and the policy's full effects and (3) situations where the pain from the policy come considerably in advance of the benefits.

Orszag served as the Director of the Office of Management and Budget during President Obama's first term. Thus his article was written at the time of the country's growing political polarization that was resulting in gridlock in the Congress.

Like Blinder, Orszag also discusses the possible movement of responsibility for some aspects of economic policies from the Congress to independent boards. He also pushes into the more recent discussion of automatic policies that are accomplished with the kind of feedback rules that are common in automatic control systems.

In this article we discuss first the technical basis for this kind of a shift in fiscal policy and then the political shift.

## 1 The Technology

From a technical perspective, does the longer interval of years between changes in fiscal policy relative to quarterly or monthly changes in monetary policy matter? Probably not when the economy is functioning smoothly, but it may be a serious problem when there are sudden shocks to the economy like the crisis we experienced in 2008.

Consider the recent situation in the US economy. The economy took a sharp downturn in September of 2008 and it took 6 months before Congress passed the Stimulus Package in February of 2009 and another 6 months to a year before substantial changes in expenditures began to occur. By that time the downward momentum of the U.S. economy was great indeed. Because of the delayed response, the downturn deepened to the point that the recovery was much more difficult.

It seems likely that more frequent but smaller adjustments to fiscal policy would provide a smoother path for our economy. However, to accomplish this, changes would be necessary in the way economists view fiscal policy.

## 2 Fiscal Policy As A Feedback Rule

Economists think of fiscal policy through the eyes of accountants with annual changes in budgets. Yet it would be beneficial if we would rather view govern-

ment expenditures with the kind of automatic feedback policies discussed by Orszag.

Interestingly enough, we economists have already made such a shift with regard to monetary policy by incorporating the “Taylor rule” into our thinking. This rule, named after John B. Taylor of Stanford University,<sup>1</sup> calls for the adjustment of interest rates quarterly or monthly, as a function of the rates of unemployment and inflation. If unemployment has risen, the feedback rule indicates that interest rates should be lowered slightly to stimulate the economy. If inflation has edged up, interest rates should be adjusted upward to slow the economy.

However, we have not yet begun to think of fiscal policy as a feedback rule. This occurs, in spite of the fact that the analogy between monetary and fiscal policy is straightforward. Consider government expenditure. It too could be viewed as a feedback function of unemployment and inflation. As discussed by Kendrick and Amman, when unemployment rises government expenditure would be increased and when inflation moves up government expenditure would be decreased.

This shift from an accounting perspective to a feedback perspective would require another technical shift in our thinking. We need to separate the government expenditure variable in our macroeconomic models into two parts. The first part is the passage of legislation by the Congress authorizing changes in expenditure levels and the second part is payments by the government for purchases of goods and services. The first part might be called “authorization” and the second part “outlays.”

Authorization occurs on the date the President signs the appropriation legislation after passage by the Congress. Outlay occurs on the date when those who provide the goods and services receive payment from the government. There are important lags of the kind considered by Blinder associated with each of these parts.

In recent years there has been much discussion focusing on “shovel ready projects” to shorten the outlay lag. However, much less attention has been given to the authorization lag, and it is the thesis of this paper that we must shorten that lag by casting fiscal policy in a feedback framework.

Consider a very simple macroeconomic model which (1) has only output and inflation as indicators of the performance of the economy and (2) includes Samuelson’s accelerator<sup>2</sup> principle for investment. Such a model could also include fiscal policy in the form of government spending authorizations and

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1 Taylor (1993, 1999) and Phillips (1954).

2 Samuelson (1939) and Stiglitz (1966).

monetary policy in the form of the interest rate (see articles by Chow and Abel about similar models). Applying control theory methodology to a quarterly model with this structure would yield a feedback rule in which authorizations and the interest rate are functions of output and employment. However, instead of authorizations being changed once a year, as is the current practice, the model results would indicate that they should be altered every quarter.

It seems obvious that small changes in authorizations made each quarter would do a better job of smoothing the ups and downs in the economy than our present system of annual changes. However, it is not obvious that the present Congress would be able or willing to implement such changes. For this let's consider the kind of political shifts in responsibility for some parts of economic policy as discussed by both Blinder and Orszag.

### 3 Modification of the Current Fiscal Policy System

First a pipeline of infrastructure and other projects would be developed. Each project in the pipeline would have a priority number assigned by the Congress.

The rate of release of projects from the pipeline would be determined by a new agency which might be called the Fiscal Timing Authority (FTA).<sup>3</sup> When the economy is hit by a downward shock this authority would sharply increase the rate of release of projects from the pipeline. When the economy becomes overheated with the threat of inflation, the rate of release of projects would be decreased. So the Congress would still determine an annual sum for projects put into the pipeline; however, the FTA would determine the quarterly release of projects from the pipeline. However, the FTA would not be allowed to alter the order of the projects in the pipeline – this would be entirely a Congressional responsibility.

With these modifications to the Congressional budget system, we would have in place a quarterly fiscal policy system that would hold the promise of smoothing out the sharper fluctuations in the economy.

### 4 Would Changing to Quarterly Fiscal Policy Help?

We have done some experiments, which we report on in an article by Kendrick and Shoukry, with a simple econometric model of the economy like the one men-

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<sup>3</sup> We are indebted to Douglas Dacy, Peter Orszag and Mike Cragg for comments on earlier drafts of this paper.

tioned above. This is a model with output and inflation as state variables and authorizations and the interest rate as policy variables. Also, the model includes a separation between authorizations and outlays. The focus of our work was entirely on the fiscal policy side with little or no attention to monetary policy at this early stage of the work.

We contrasted annual fiscal policy runs with quarterly fiscal policy runs and found, as expected, that the quarterly policy did a better job of stabilizing the economy. However, we went on to do a second round of experiments that produced a result that we had not fully anticipated.

We modified the experiments so that the annual and quarterly scenarios produced roughly the same stabilization of output. We then computed how much total government debt changed over the period covered by the model. We found that the debt increase with the quarterly policy was less than its increase with the annual policy. In a time when there is so much concern about increases in government debt, this was a welcomed result indeed.

## 5 Concluding Comments

In times of rapid macroeconomic change it would seem useful for both fiscal and monetary policy to be modified frequently. This is true for monetary policy with almost monthly meetings of the Federal Open Market Committee. It is not true for fiscal policy which mostly dances to the rhythm of the annual Congressional budget cycle.

However, the development of a pipeline of infrastructure projects with project priorities set by the Congress, coupled with the creation of a Fiscal Timing Authority (FTA) which would regulate the speed of release of projects from the pipeline, could be used to move fiscal policy to a quarterly basis. The FTA would use a quarterly feedback rule for fiscal policy analogous to the Taylor rule which is already used in monetary policy discussions. This would most likely result in small but frequent changes in government expenditure on infrastructure and other projects that could be used to smooth out fluctuations in the economy.

The United States has led the world for many years in the application of feedback control systems. The guidance system of the lunar lander permitting it to settle softly on the moon more than 40 years ago is an example. Also, the feedback control systems in passenger planes smooth the flights we take through stormy skies many, many times every day. Surely we can do a better job of stabilizing the economy than we are presently doing with the accounting-based Congressional annual budget cycle.

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