

Monetary Aspects of, and Implications for, Federalism

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Thank you for inviting me to present “Monetary Aspects of, and Implications for, Federalism” at this Hoover Perspectives on Federalism Conference. This is a very important conference and a key topic. I have testified several times in recent years before the House Budget Committee and the Senate Budget Committee, and this paper touches on some of the ideas that I presented at Committees of the House of Representatives in March 2023 (see Taylor (2023a) and Taylor (2023b)). I start with the federal budget, and this leads naturally to a discussion of monetary policy issues.

The State of the Federal Budget

Consider two tables drawn directly from Budget of the U.S. Government for Fiscal Year 2024 as submitted in March 2023. Table 1 shows the growth rate of real GDP from 2021 through 2031 in both year over year and 4th quarter to 4th quarter percentages. Note the rebound from the pandemic in 2021. However, there is very little growth after that for the next ten years by either measure. The average is only about 2 percent per year.

Table 1. Growth Rate of Real Gross Domestic Product (Real GDP)

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
% change, year/year	5.9	1.8	0.6	1.5	2.3	2.1	2.0	2.0	2.1	2.2	2.2
% change, Q4/Q4	5.7	0.2	0.4	2.1	2.4	2.0	2.0	2.0	2.1	2.2	2.2

Source: Table S-9 Economic Assumptions, *Budget of the U.S. Government*

Table 2 shows the total federal budget for the same period, both in billions of dollars and as a percent of GDP. Outlays and receipts continue to grow as does the deficit in billions of dollars. As a percent of GDP, receipts, outlays, and the deficit remain high. Receipts and outlays show virtually no decline. Thus, the fiscal state of the union is not good. Efforts need to focus on reducing budget totals with the ultimate aim of a balanced budget.

Table 2. Budget Totals in Billions of Dollars and Percent of GDP

Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Receipts	4,897	4,802	5,036	5,419	5,773	6,080	6,400	6,669	6,953	7,264
Outlays	6,273	6,372	6,883	7,091	7,294	7,589	8,003	8,205	8,639	9,040
Deficit	1,376	1,569	1,846	1,671	1,521	1,509	1,604	1,536	1,686	1,776

Budget totals as a percent of GDP:

Receipts	19.6%	18.2%	18.5%	19.1%	19.5%	19.7%	19.9%	19.9%	19.9%	19.9%
Outlays	25.1%	24.2%	25.3%	24.9%	24.6%	24.6%	24.9%	24.5%	24.7%	24.8%
Deficit	5.5%	6.0%	6.8%	5.9%	5.1%	4.9%	5.0%	4.6%	4.8%	4.9%

Source: Table S-1, Budget Totals, *Budget of the U.S. Government*

In various congressional hearings, I showed that basic economic theory and empirical models imply that high federal government debt has a cost: it reduces real GDP and real income per household compared to what these would be with lower debt levels. A re-examination of the issues yields the same results. Hence, there is a need for a fiscal consolidation strategy in which government spending grows more slowly than GDP, and government spending is thus reduced as a percentage of GDP.

Formal model simulations with such a fiscal consolidation show that the impact on real GDP would be positive in both the short run and the long run. Real GDP increases throughout the model simulation, with the benefits rising over time. Even in the short-run, the consolidation of government finances is found to boost economic activity in the private sector sufficiently to overcome the reduction in government spending. Consumption and output increase at the start with further increases later on. Investment rises by only a little in the short run, but by more in the longer run.

The economic rationale for these positive results is straightforward: With a gradually phased-in and credible budget plan, households can take into account future reductions in government spending and higher expected future incomes. Businesses will also be able to adjust. Given a reduction in tax rates in later years, they would also face more favorable conditions for production, investment and work effort. To reap these positive benefits, it is essential that the tax and budget plan be credible.

There is another policy response which would work better in the future. In testimony entitled “The State of the Economy and Principles for Fiscal Stimulus” which I gave before the Senate Committee in November 2008, I recommended a specific type of fiscal policy, and followed up in Taylor (2010a), (2010b), (2015), and (2019). The response to the specific policy

is based on certain established economic principles, which I summarized by saying that fiscal policy should be *predictable, permanent and pervasive* and thereby affect incentives throughout the economy. I showed that there are many good fiscal packages that are consistent with these three principles. One would consist of: (1) Committing to keep income tax rates where they are, effectively making current income tax rates permanent. (2) Making the tax credits permanent rather than temporary. (3) Enacting responsible government spending plans that met reasonable long-term objectives and that put the U.S. economy on a credible path to budget balance. (4) Recognizing that the “automatic stabilizers” will help stabilize the economy, and therefore make them part of the overall fiscal package even if they do not require legislation.

This is not the kind of economic policy that has been recently been proposed. Rather than predictable, the policy response has created uncertainty about the debt, growing federal spending, future tax rate increases, and new regulations. Rather than permanent, it is temporary and thereby has not created a lasting economic policy. And rather than being pervasive, it targets certain sectors or groups. It is not surprising, therefore, that the policy has left us with lower growth forecasts.

The good news is that we can get back to a strong recovery by following an economic policy based on these clear economic principles. As argued in a *Wall Street Journal* article “A Better Strategy for Faster Growth,” published by George Shultz, Gary Becker, Michael Boskin, John Cogan, Allan Meltzer and me, the recent experience makes the case for doing so stronger than ever.

Guidelines for Fiscal Policy: Permanent, Pervasive, and Predictable

The mantra often heard during debates about stimulus proposals is that it should be temporary, targeted, and timely. (See Elmendorf and Furman (2008), for example). Going forward, we need a renewed set of principles and a new mantra. Based on the arguments presented above as well as experience and basic economic theory, I recommend this alternative mantra for fiscal policy: *permanent, pervasive, and predictable*.

Permanent. The most obvious lesson learned from the recent stimulus program is that one should have strong misgivings about a temporary stimulus program. Such a program is not likely to have much impact, and any impact it has will be short lived. Temporary is not a principle we want to follow if we want to get the economy moving again. Rather we should be looking for more lasting or permanent fiscal changes. More lasting or permanent tax changes will be more effective in helping to turn the economy around in a lasting way. We need to worry about the next few years, not just the next few months.

Pervasive. One of the arguments in favor of “targeting” the stimulus package is that by focusing on people who were “liquidity constrained” the bang for the buck would be larger. But such targeting does not keep the stimulus from being ineffective. Moreover, targeting implies letting tax rates increase. But increasing tax rates on businesses or on investments would increase unemployment and further weaken the economy. Better to seek an across the board approach where both employers and employees benefit. When people are losing their jobs and their life savings, the last thing they want government to do is increase tax rates on the firms who hire them or on the asset markets where their money is invested.

Predictable. While timeliness is an admirable attribute, it is only one temporal property that a good fiscal policy should have in a large dynamic economy. Even more important is that

policy actions be clear and understandable—that is predictable—so that individuals and firms know what to expect as they make decisions which depend on future government actions. One of the most widely heard complaints about government interventions is that they have been too erratic or ad hoc. In my view financial markets are clamoring for clarity. Economic policy—not only fiscal policy and monetary policy discussed here, but also regulatory policy and international policy—works best when it is as predictable as possible.

Monetary Policy Issues

With these fiscal policy principles in mind, now let me discuss monetary policy. Starting around 2017, the Federal Reserve began to move to a more rules-based monetary policy that had worked well in the United States in the 1980s, 1990s, and in other years. Many papers written at the Fed and elsewhere reflected this revival, and they showed the benefits of rules-based policies. In July 2017, when Janet Yellen was Chair of the Federal Reserve Board, the Fed began to include a whole section on rules-based monetary policy in its Monetary Policy Report.

Many central bank leaders and monetary policy experts made favorable comments about the rules-based policy, and central bankers were supportive. Jerome Powell, who followed Janet Yellen as Chair of the Federal Reserve Board said: “I find these rule prescriptions helpful.” Mario Draghi, then President of the ECB said “we would all clearly benefit from...improving communication over our reaction functions...” Raghu Rajan, former Governor of the Reserve Bank of India said “what we need are monetary rules.” The evidence was that the move toward rules-based policy was beneficial and economic performance improved.

This move toward monetary policy rules was interrupted when the pandemic hit in 2020. Rules were removed from the Fed’s Monetary Policy Report in July 2020. But by February

2021, rules were put back in the Fed's Monetary Policy Report. However, rules were taken out again in the February 25, 2022 edition of the Monetary Policy Report. But Chair Powell said on March 3, 2022 that rules would be back in. And in the Monetary Policy Report, released on June 17, 2022, policy rules were back in, including the Taylor rule which was back as the first on the list.

This approach has continued through the report just released on March 3, 2023. As stated in the Fed's Monetary Policy Report, "Throughout 2021 and 2022, the target range for the federal funds rate was below the prescriptions of most of the simple rules, though that gap has narrowed considerably as the FOMC has expeditiously tightened the stance of monetary policy and inflation has begun to moderate." (Monetary Policy Report, March 3, 2023).

The table below shows the rules included in the March 3, 2023 Report. The notation is standard, and is given in the footnote to the table. The symbol r is the interest rate, π is the inflation rate, u is the unemployment rate, and the superscript LR means the long run. The results are similar to what one finds by looking at the Taylor rule, which is listed first. The results can be compared by looking at the average gap in percentage points between the FOMC interest rate and the settings of each of the other rules.

A. Monetary policy rules

Taylor (1993) rule	$R_t^{T93} = r_t^{LR} + \pi_t + 0.5(\pi_t - \pi^{LR}) + (u_t^{LR} - u_t)$
Balanced-approach rule	$R_t^{BA} = r_t^{LR} + \pi_t + 0.5(\pi_t - \pi^{LR}) + 2(u_t^{LR} - u_t)$
Balanced-approach (shortfalls) rule	$R_t^{BAS} = r_t^{LR} + \pi_t + 0.5(\pi_t - \pi^{LR}) + 2\min\{(u_t^{LR} - u_t), 0\}$
Adjusted Taylor (1993) rule	$R_t^{T93adj} = \max\{R_t^{T93} - Z_t, \text{ELB}\}$
First-difference rule	$R_t^{FD} = R_{t-1} + 0.5(\pi_t - \pi^{LR}) + (u_t^{LR} - u_t) - (u_{t-2}^{LR} - u_{t-1})$

NOTE: R_t^{T93} , R_t^{BA} , R_t^{BAS} , R_t^{T93adj} , and R_t^{FD} represent the values of the nominal federal funds rate prescribed by the Taylor (1993), balanced-approach, balanced-approach (shortfalls), adjusted Taylor (1993), and first-difference rules, respectively.

R_{t-1} denotes the midpoint of the target range for the federal funds rate for quarter $t-1$, u_t is the unemployment rate in quarter t , and r_t^{LR} is the level of the neutral real federal funds rate in the longer run that is expected to be consistent with sustaining maximum employment and inflation at the FOMC's 2 percent longer-run objective, represented by π^{LR} . π_t denotes the realized four-quarter price inflation for quarter t . In addition, u_t^{LR} is the rate of unemployment expected in the longer run. Z_t is the cumulative sum of past deviations of the federal funds rate from the prescriptions of the Taylor (1993) rule when that rule prescribes setting the federal funds rate below an effective lower bound of 12.5 basis points.

The Taylor (1993) rule and other policy rules generally respond to the deviation of real output from its full capacity level. In these equations, the output gap has been replaced with the gap between the rate of unemployment in the longer run and its actual level (using a relationship known as Okun's law) to represent the rules in terms of the unemployment rate. The rules are implemented as responding to core PCE inflation rather than to headline PCE inflation because current and near-term core inflation rates tend to outperform headline inflation rates as predictors of the medium-term behavior of headline inflation.

Getting Back on Track

It is good that rules are now back in the Fed's Monetary Policy Report, and it is good that they might continue in future Monetary Policy Reports. It would be more helpful if the Fed incorporated more aspects of these rules or strategy ideas into its actual decisions. Apparently, this has recently begun to happen, as I show by comparing the interest rate path and policy rules for the interest rate. But at first only small changes were seen in actual monetary policy. So a gap existed between rule-based policy and policy actions. This was the case at the Fed and also at other central banks. Thus, we are still living in a high inflation era unless monetary policy actions—including monetary actions in other countries—are taken. Events in Ukraine and the Russian response recently raised reported inflation, but not the basic story.

Figure 1 shows the effective federal funds rate from late 2022 through the present in 2023. While the gap between the rules and the effective funds rate has narrowed, it still seems to exist.

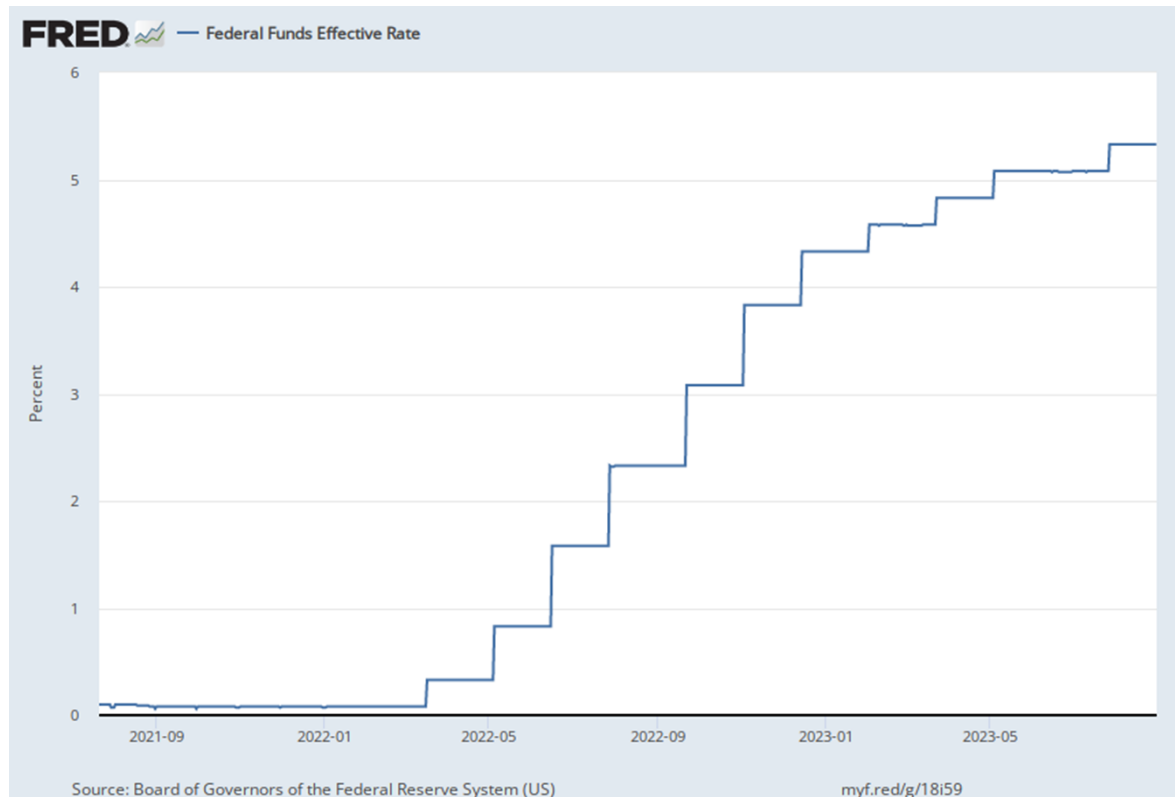


Figure 1. The Effective Federal Fund Rate

To see this I show in equation (1) the Taylor rule as it originally appeared over 30 years ago in Taylor (1993). The variables are defined below the equation. Note that y shown in equation 1 is the percentage deviation of real GDP from its potential which is closely related to the deviation of the unemployment rate from the natural rate.

$$r = p + .5y + .5(p - 2) + 2 \quad (1)$$

where

- r is the federal funds rate,
- p is the rate of inflation over the previous four quarters
- y is the percent deviation of real GDP from a target.

Now let us use equation (1) to see when and by how much the Fed was and is now behind the curve. Using this policy rule we can see that if the inflation rate is 2 percent and the target for the interest rate is 2 percent, then the interest rate should be 4 percent. That is $2+2=4$. If the equilibrium interest rate is 1 percent, then the funds rate should be 3 percent.

During much of 2022 the actual rate was thus well behind the curve. If the inflation rate rises to 3 percent, then the funds rate should be 4.5 percent ($1 + 3 + .5(3-2) = 4.5$) which is about where it is now. If the inflation rate is 4 percent, then the funds rate should be 6 percent ($1 + 4 + .5(4-2)$).

Thus, if we use the Taylor rule in the most recent Monetary Policy Report, and plug in an inflation rate over the past four quarters of 4 percent, a target inflation rate of 2 percent, an equilibrium interest of 1 percent, and the gap between real GDP and its potential level of 0 percent, then you get a federal funds rate of 6 percent. So even with these inflation numbers, the Fed is still behind the curve, though as Chair Powell has indicated the Fed may be still catching up. Note that these calculations assume that the equilibrium interest rate is 1 percent.

Conclusion

Regarding fiscal policy, there are many good fiscal packages that are consistent with the three principles that policy should be *predictable, permanent and pervasive*, and these would put

the economy on the road to an improved fiscal and monetary state and thereby faster and more inclusive economic growth.

One example fiscal package would consist of the following:

- A commitment to keep income tax rates were they are now, effectively making current income tax rates permanent. This would be a significant stimulus to the economy and to the financial markets.
- Responsible government spending plans that meet reasonable long-term objectives, put the U.S. economy on a credible path to budget balance, and are expedited to the degree possible without causing waste and inefficiency.
- An explicit recognition that the “automatic stabilizers” are likely to help stabilize the economy, and should be viewed as part of the overall fiscal package even though they may not require legislation.

Regarding monetary policy, clearly the Fed got behind the curve on rules-based monetary policy in the United States, but it appears to have outlined a method to get back. By reviewing the years leading up to the present monetary situation, this paper provides the background needed for analyzing current and future monetary policy decisions.

The answer to the key question “Are We Entering a New Era of High Inflation?” is clearly “yes,” unless monetary policy makers change policy toward a more rules-based policy and do not revert to the policy that led to high inflation. This would give an appropriate mix between fiscal policy and monetary policy. They would both be based on sensible rules.

There are now more reasons than ever for central banks to use a more rules-based policy. Central banks should start now on rules that markets understand. The policy interest rate would

increase as inflation rises, as has already happened. It would of course be a contingency plan, as are all rules. This would greatly reduce chances of a large damaging change later.

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