

Rules Versus Discretion Over the Last 50 Years

Prepared for the Conference

A 50-Year Retrospective on the Shadow Open Market Committee (SOMC) and Its Role in

Monetary Policy

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This event represents an important occasion for colleagues and scholars in macroeconomics to come together. It offers a valuable opportunity to discuss the theme "Rules Versus Discretion Over the Last 50 Years," marking the 50th anniversary of the Shadow Open Market Committee (SOMC), which was established in 1973. The retrospective theme, "A 50-Year Retrospective on the Shadow Open Market Committee and Its Role in Monetary Policy," is being examined here at the David and Joan Traitel Building at Stanford University, made possible by the generous support of David and Joan.

Reflecting on Historical Context

First, it is essential to recognize the key figures who played a role in establishing the SOMC, particularly Alan Meltzer, a long-term colleague. I would also like to acknowledge his wife, Marilyn, who is in attendance today. Alan and I have been long-term colleagues, and having grown up in Pittsburgh, I have long admired Carnegie Mellon University. Significant contributions from other original members, such as Karl Brunner and Anna Schwartz, must also be acknowledged. Their intellectual legacies, along with the influence of Milton Friedman—who

emphasized monetary aggregates—continue to inform our discussions about monetary policy today.

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	$R_t^{FD} = R_{t-1} + 0.5(\pi_t - \pi^{LR}) + (u_t^{LR} - u_t) - (u_{t-4}^{LR} - u_{t-4})$

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.

Source: Board of Governors of the Federal Reserve System.

Table 1. Monetary Policy Rules as Reported in the Federal Reserve Report, March 2, 2023.

Understanding Monetary Policy Rules

I would like to highlight the importance of policy rules at the outset. I define a rule like my Taylor 1993 one as an instrument rule whereby the central bank sets its policy interest rate in reaction to its key policy objectives: price stability and stability of the real economy. This is in contrast to the earlier monetary aggregate growth rules of Friedman and Meltzer. It is crucial that

we do not overlook these rules, as they can easily be forgotten if we are not careful. If you examine Table 1 from a paper I recently wrote about the Federal Reserve and the monetary policy rules reported in the Fed's documentation, you will see how relevant these rules remain, particularly the Taylor rule. The table shows my original (1993) rule and four popular variants which have been developed since.

The Federal Funds Rate Over Time

Figure 1 shows the evolution of the effective federal funds rate over the past 50 years, illustrating significant swings and the consequences of adhering to—or deviating from—these policy rules. This chart spans the late 1960s through 2024. Notably, the federal funds rate reached nearly 20% during the challenging economic times of the Great Inflation, underscoring the necessity for rigorous corrective policy measures. Since the 1980s, the Federal Reserve's shift toward a more rules-based approach has likely contributed to the overall decrease in rates. Since the beginning of the 21st century, as seen in the figure, the GFC of 2007-2009 reflected the Fed keeping interest rates too low for too long which precipitated a housing boom and bust. In the subsequent recovery period, the Fed also kept rates too low relative to the rule as it did during the pandemic. This likely fueled the recent inflationary burst seen at the right of the figure. At present the goal is to bring interest rates into the ideal range between 2% and 3%.

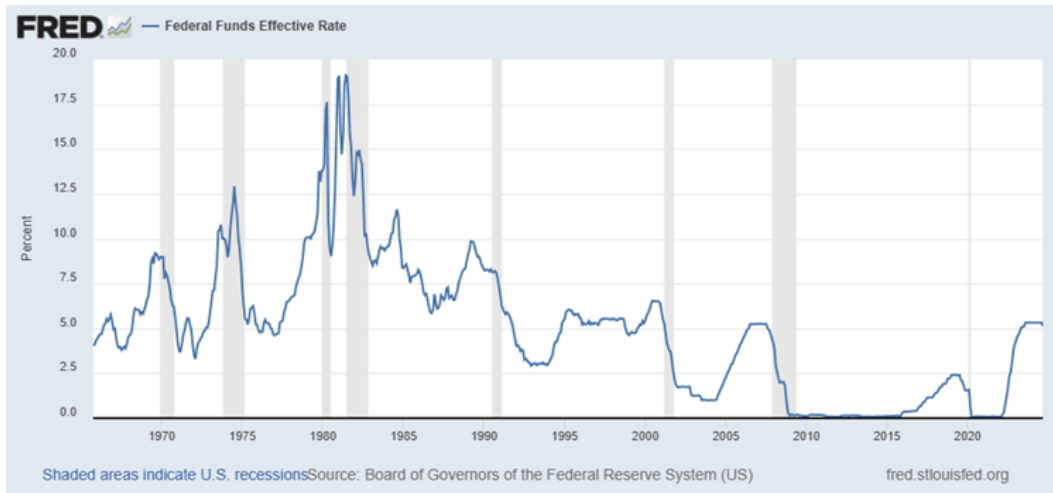


Figure 1. The Effective Federal Funds Rate.

Source: Federal Reserve Bank of St. Louis via FRED

The Path Forward in Monetary Policy

While historically high rates have posed challenges to the real economy as recently experienced, our focus today should be on maintaining a target range closer to 2%, possibly 2.5% to 3%. However, achieving this stability continues to be uncertain. It is not solely the Fed's challenge; other countries are also navigating similar situations. Charting the trajectory of the effective funds rate over the past 50 years reveals that we have seen extreme fluctuations in interest rates, and we find ourselves currently in a medium stage, attempting to reduce rates slightly. The success of these efforts remains to be seen.

This, in essence, encapsulates our overarching goal. How can we achieve this? By adhering to a series of established rules as described in Table 1, one of which (the original Taylor rule) is illustrated in Figure 2.

$$r = p + 0.5y + 0.5(p-2) + 2$$
$$r = 1.5p + 0.5y + 1$$

where
 r is the federal funds rate
 p is the inflation rate
 y is real GDP gap

Figure 2. A Simple Version of the Taylor rule: If Inflation is 2% ($p=2$) and the GDP Gap is 0% ($y=0$), Then the Interest Rate r Should be 4% ($r=4$)

Source: Taylor (1993).

The Taylor rule, represented in Figure 2, is a key framework for monetary policy. It posits that when inflation is at 2% ($p=2$) and the GDP gap is zero ($y=0$), the interest rate should be set at 4%. This rule has gained significant attention but is part of a broader context that includes similar rules adopted by other central banks, thereby enriching our discussions on contemporary monetary policy.

Below Target: The Consequences of Low Interest Rates

Figure 3 allows for a closer analysis of how the federal funds rate has shifted since 2016, noting that decisions made during this period, especially during and after the pandemic, may have inadvertently contributed to rising inflation. The signals sent by the Fed regarding interest rate adjustments have sometimes lacked clarity, resulting in unintended consequences. It is imperative that the Fed aligns its policy rate with established targets to maintain predictability in monetary policy.

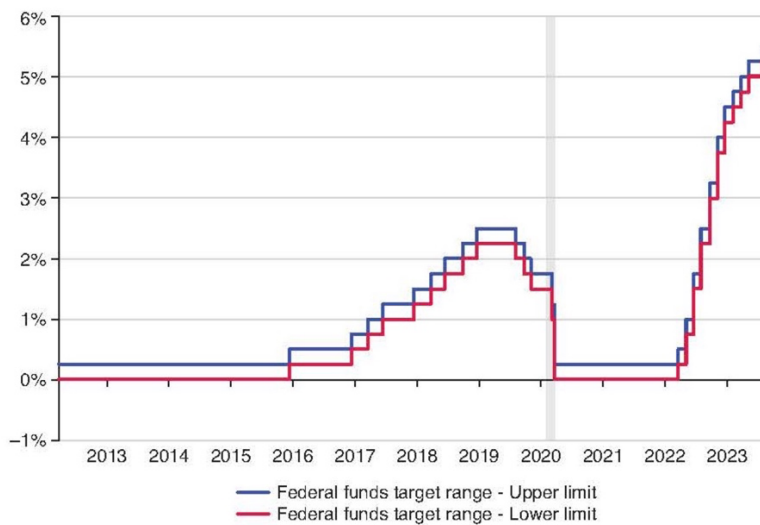


Figure 3. The Fed Held the Interest Rate Lower Than the Taylor rule, Leading to Rising Inflation.

Source: Board of Governors of the Federal Reserve System via FRED.

The Cost of Low Rates: Historical Context of Inflation

Figure 4 provides a historical examination of policy rates, highlighting discrepancies between recommended (based on a Taylor rule) and actual rates since January 2019. This underlines the importance of precision in implementing monetary policy. The dark blue line

represents the actual policy rate, while the dashed line depicts the recommended policy based on a more generous interpretation of the Taylor rule. A less generous interpretation is represented by a less conspicuous straight line. The significant gap between these lines reflects the serious consequences of being misaligned with recommended measures.

This illustrates the point I have emphasized in my discussion: one must exercise caution in policy implementation, as deviations can lead to significant risks. While we can debate the specifics, the ideal scenario is to keep rates as close as possible to their target.

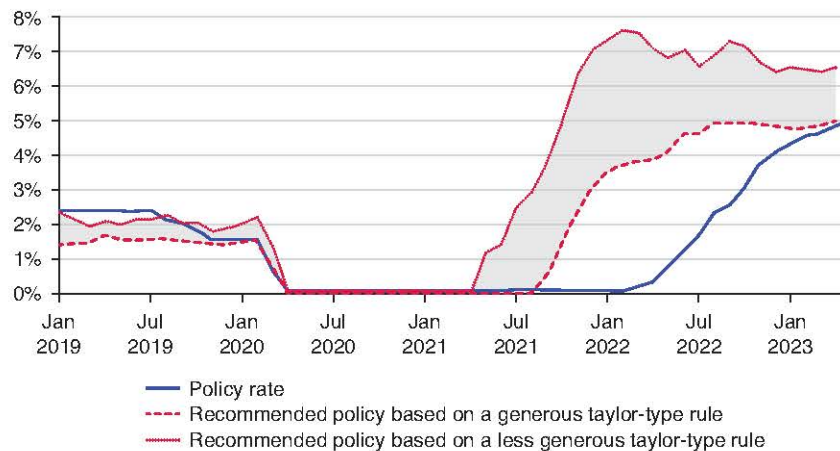


Figure 4. This Chart produced by James Bullard shows that policy was too low, resulting in rising inflation

Source: James Bullard, Federal Reserve Bank of St Louis

Monetary Policy's Global Impact

We must also consider the Fed's role within the global monetary system. Its interactions with other central banks such as the European Central Bank and the People's Bank of China significantly influence domestic policies.

This analysis serves as an illustrative example of the significant deviations observed in the data during specific historical periods. The actual implicit price deflator, presented in Figure 5, is a reliable measure of the inflation rate. Inflation rates peaked in the 1950s, 1970s, and 1980s before experiencing a substantial decline, except for a recent surge that approached nearly 10%. This domestic price deflator remains a central focus of the Federal Reserve's analysis.

Currently, there is ongoing concern regarding the sustainability of this decline. The Fed has explicitly targeted an inflation rate of 2%, although recent measures indicate levels closer to 2.5% to 3%. It is crucial to avoid inflationary spikes, which deviate from the intended conditions.

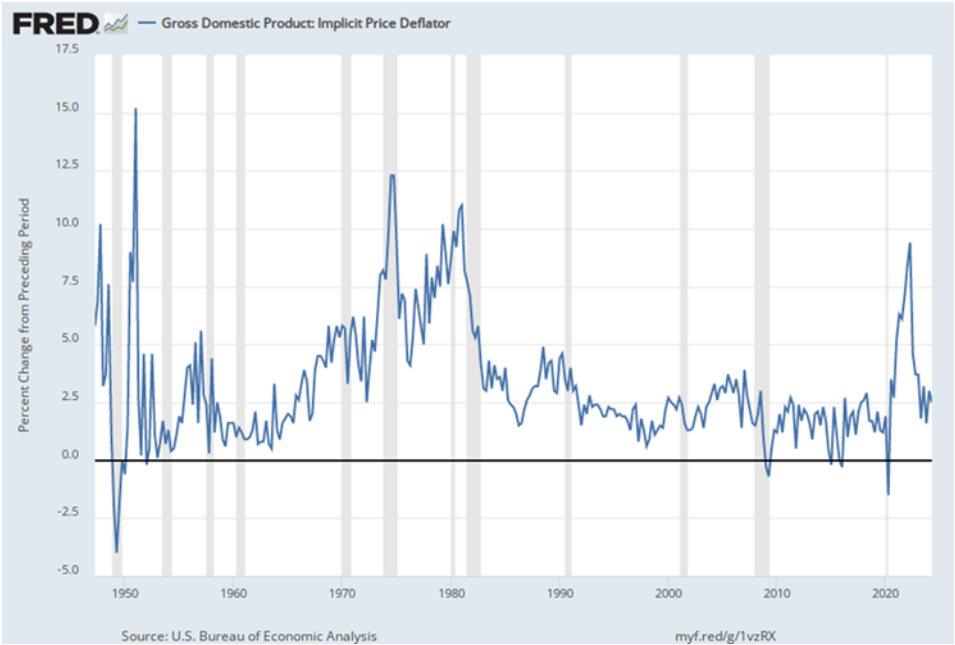


Figure 5. The Inflation Rate Rose Well Above the Fed's Target of 4%.

Source: US Bureau of Economic Analysis via FRED.

Inflation Trends in Latin America and Their Connection to the Fed

The final chart presented illustrates inflation rates in Latin America, specifically among Brazil, Colombia, Chile, Mexico, and Peru, collectively referred to as the LA Five, up to January 2022. These inflation trends closely follow the Fed's actions, indicating that the Fed's influence is not isolated but has ramifications for monetary policies in these countries.

The objective of our reform efforts in the international monetary system should be to foster greater cooperation among all countries, including Russia, China, and Japan, while ensuring alignment where feasible. Pursuing an international framework that incorporates similar rules or strategies to those of the Fed would facilitate enhanced global economic stability.

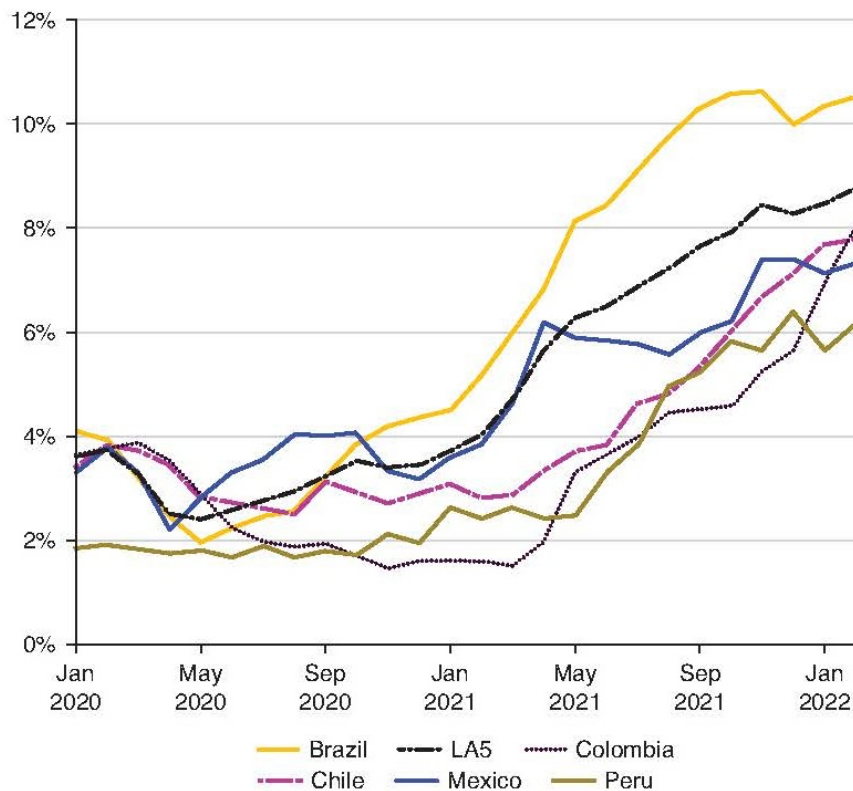


Figure 6. Inflation in Latin America from January 2020 to January 2022.

Source: Haver Analytics; national authorities; and IMF staff calculations.

Conclusion

In conclusion, while progress has been made, particularly in the past two to three years, there remains significant work to be done. The ideal scenario envisions a coordinated approach to establish a framework where inflation targets can align internationally, ideally matching the Fed's target of 2%, and contributing to greater global economic stability.

References

Board of Governors of the Federal Reserve System. 2023. Monetary Policy Report. March 3.

Taylor, John B. 1992. "Discretion versus Policy Rules in Practice." *Carnegie- Rochester Conference Series on Public Policy* 39 (December): 195-214.

Williams, John C. 2023. Keynote speech at the Research & Statistics Centennial Conference, Federal Reserve Board, Washington, DC. November 8.