



HOW THE FEDERAL OPEN MARKET COMMITTEE CAN START LEARNING FROM EXPERIENCE

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ABSTRACT

The FOMC lacks systematic procedures for learning from experience what monetary policies have stabilized the economy and what monetary policies have destabilized it. Standard Fed narrative prevents such learning by assuming that all adverse outcomes arise from external shocks, which the Fed prevents from being even worse. However, if the Fed cannot admit that it makes mistakes, it cannot learn. This paper presents proposals that would compel the Fed to be explicit about the nature of the monetary standard that it has created, instead of just repeating the mantra of how it always pursues "maximum employment" and "price stability." Such explicitness would allow evaluation of what monetary policies are optimal for stabilizing the economy.

JEL codes: E, E4, E5, E42, E51, E52, E58

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onstitutionally, Congress is responsible for the monetary standard. Congress in turn has delegated the responsibility for creating and implementing the monetary standard to the Federal Reserve System. Unfortunately, the mandate it has given to the Federal Reserve is too general to possess any substance. A routine part of the Fed boilerplate—the objectives of "price stability" and "maximum employment"—amount to little more than instructions to achieve all good things.

As a condition for its independence to conduct monetary policy, the Fed should be transparent about the monetary standard that it has created. Accountability requires transparency, and transparency is integrally related to learning. Without a clear articulation of the monetary standard, the Fed has no way of learning from the accumulation of experience. The Fed has a responsibility to defend the existing monetary standard by placing it in the historical context of what standards have stabilized the economy and what standards have destabilized it in the past.

The monetary standard explains how the Federal Open Market Committee's (FOMC) reaction function for setting the funds rate gives money a well-defined value and keeps output growing around its trend value. Another way to understand the monetary standard is to conceptualize how the price system intermediates the interaction between the behavior of the FOMC and the behavior of the economy in a way that allows it to achieve its objectives. What monetary standard has the FOMC created? Fed policymakers do not say. Perhaps, they do not even know. The Fed still has a long way to go to fulfill the program of transparency advocated by Marvin Goodfriend in his paper "Monetary Mystique: Secrecy and Central Banking."¹ To a significant extent, the Fed remains in the "trust me" stage.

When the FOMC makes mistakes, as it does every 15 years or so, it brings down the economy. Given the high stakes, the implicit understanding of the monetary standard that guides the FOMC consensus should be made explicit and

^{1.} Marvin Goodfriend, "Monetary Mystique: Secrecy and Central Banking," *Journal of Monetary Economics* 17, no. 1 (1986): 63–92.

thus subject to professional and public scrutiny. The proposal here would structure FOMC decision-making to force the FOMC to articulate the body of knowledge that guides its decision-making and subject its decisions to open debate. The proposal would force the FOMC to defend the monetary standard it has created by placing it in historical perspective.

CAN THE FOMC LEARN HOW TO CONDUCT A STABILIZING MONETARY POLICY?

From April 2021 to April 2022, inflation (core personal consumption expenditures chain-type price index) was 4.9 percent, up from 1.5 percent from February 2020 to February 2021, and well above the FOMC's 2 percent inflation target. Previously, in the course of the Great Inflation (from 1965 to 1982), this measure of inflation rose irregularly from an average of 1.3 percent for the period 1960Q1 through 1964Q4 to an average of 9.7 percent in the early 1980s. Why did the FOMC not learn how to control inflation from this experience? More generally, can the FOMC learn by accumulating a body of knowledge about the optimal monetary standard that grows over time and that remains independent of changes in its membership? Milton Friedman said that the test of an institution is how well it does under poor leadership. Can one have confidence that the FOMC will always do well by this criterion?

FOMC chairs communicate in two ways, neither of which elucidates the monetary standard. First, they communicate to financial markets how they discipline the period-by-period choice of the funds rate in a way that provides consistency over time. That consistency is a prerequisite for allowing financial markets to predict how the FOMC will respond to "news" (new information) about the economy, so that the yield curve will respond in a stabilizing way. Second, the FOMC chairs communicate to the general public using a narrative designed to defend FOMC independence. This narrative entails explaining the choice of the funds rate as intuitively optimal in terms of the contemporaneous behavior of the economy, whose behavior is destabilized by external shocks. Missing is the historical narrative that explains when monetary policy was stabilizing and when it was destabilizing. Such a narrative is essential for public vetting and debate of monetary policy.

Karl Brunner and Allan Meltzer criticized the FOMC for its lack of an analytical framework that relates its objectives to the setting of its instruments.²

^{2.} Karl Brunner and Allan H. Meltzer, "The Federal Reserve's Attachment to the Free Reserve Concept" (Testimony before the House Committee on Banking and Currency, Subcommittee on Domestic Finance, Government Printing Office, Washington, DC, May 1964).

When I joined the Fed in 1975, I was given various explanations for the absence of such an explicit framework. One answer was that each of the 19 individuals who sit around the FOMC table has a separate model of monetary policy, and it was not possible to impose uniformity on these disparate models. However, it is the task of the FOMC chair to arrive at a consensus that imposes continuity on policy. So it should be the task of the chair to articulate the framework that shapes that consensus. Another answer was that without consensus within the academic community over optimal monetary policy, the FOMC had no reliable guidance from academia. In the 1970s, policymakers often defended policy by asserting that it had to be correct because it was more stimulative than desired by the monetarists and tighter than desired by the Keynesians.

Two very different answers relied on this political economy argument. Al Burger of the St. Louis Fed said that the FOMC chair could arrive at a consensus and control policy over time most easily by limiting discussion to the immediate policy action on the table, as opposed to organizing a discussion of policy based on a rule. Economist Marvin Goodfriend, on the other hand, said that FOMC chairs feel their position strengthened in communicating an FOMC consensus (with at most one or two dissents as evidence of a debate) by limiting discussion to the period-by-period choice of a policy action. Consensus is important because legislators attacking the Fed do not understand the fundamental issues but can take advantage of a "chicken fight" (Marvin's words) within the FOMC to attack it over tightening monetary policy.

FORCING THE FOMC TO ARTICULATE THE NATURE OF THE MONETARY STANDARD

In a piece criticizing the Democratic party, *New York Times* columnist David Brooks wrote: "We all make mistakes. The question is do we learn from them?" Brooks listed their mistakes starting with "It is possible to overstimulate the economy." To learn, it is first necessary to admit the possibility of making mistakes. But this challenges Fed culture. The Fed assigns adverse outcomes to external shocks, which it avers to having mitigated. There is no group of economists within the Fed devoted to learning from historical experience. To retain control of the narrative that presumes the Fed understands the structure of the economy and the consequences of its actions, the Fed institutionalizes historical amnesia.

What is important is to go beyond writing a history that catalogs mistakes. The moral is otherwise too glib: do not make mistakes. What is required is to learn the nature of the optimal rule based on an understanding of the optimal monetary standard. For that to happen, the FOMC needs to articulate monetary policy in a way that not only makes its predictions clear but that is also defensible in terms of what monetary standards have been stabilizing or destabilizing in the past.

STRUCTURING FOMC DEBATE TO CLARIFY THE NATURE OF THE MONETARY STANDARD

The choice of the optimal monetary standard would be straightforward if a professional consensus existed. Unfortunately, it does not. The FOMC, therefore, should have an informed debate based on a knowledge of monetary history, and accountability requires that the FOMC release such debate to the public promptly. The proposal to ensure that such debate occurs consists of three parts. The first part is establishment of a monetary history group responsible to the FOMC, not the chair. Being responsible to the FOMC instead of the chair means that promotion does not depend on unconditional support of the chair's position. The group's role would be to engage FOMC participants in a discussion of the nature of the monetary standard and to place the standard in historical perspective. Such a discussion could take place quarterly and a transcript made public within a short time frame.

The second part is to restructure the Federal Reserve Board of Governors (the Board) document that offers forecasts before FOMC meetings (the Tealbook). The first half of the Tealbook should place the contemporaneous behavior of the economy in historical perspective. Why did the economy evolve in such a way that led to the current situation? The Board staff uses two models to explain the behavior of the domestic economy: a large-scale structural model of the United States called FRB/US and a Dynamic Stochastic General Equilibrium (DSGE) model. The Board staff could use these models to explain the evolution of the economy through the current period. Vigorous FOMC debate should ensure that the staff does not simply reproduce the standard Fed narrative of external shocks producing adverse outcomes.

The second half of the Tealbook should contain the usual forecast of the economy. At present, this forecast is entirely judgmental. In the author's experience, the major purpose of a forecast is to organize how new information, since the last FOMC meeting, has affected the estimate of the current behavior of the economy. That is, forecasting means guess and adjust as new information arrives. The proposal here is to discipline the staff forecast with a monetary policy that imposes consistency on the choice of the funds rate over time. Specifically, the FOMC would give the staff a reaction function to use in its forecasts. That

reaction function would be subject to periodic review, but presumably infrequently changed, and publicly available.³

The third part of the proposal is to create a committee (all participants, voting and nonvoting) Summary of Economic Projections (SEP). A consensus forecast of the economy built up from scratch is impractical because of the number of individuals sitting around the FOMC table. So the committee should start with the Board's staff forecast and modify its broad conclusions under the guidance of the chair. Regional Federal Reserve Bank presidents would bring information about the economy from their own districts. A committee SEP should be based on the resulting modified forecast. It should also highlight the FOMC's influence over the growth of aggregate nominal demand (nominal GDP growth), an aspect of policy now missing.

At the press conference following an FOMC meeting, the chair should present not only the committee SEP but also make available the staff forecast. The chair should explain why the committee version is more optimistic or pessimistic than the staff forecast. Then, within, say, a month, the Fed should make available the full transcript of the FOMC meeting. Getting monetary policy right is a matter of existential importance. The public has a right to know that FOMC participants are discussing policy with a deep knowledge of monetary history and the alternative frameworks the economics profession has devised to understand monetary policy.

Such a deep discussion would result from the regular interaction of the committee and the monetary history group. The history group would challenge the standard assumption of the Fed narrative that the evolution of monetary policy follows the evolution of the economy—that is, economic instability arises from external shocks. In contrast, the monetary history group would treat the evolution of the monetary policy as providing semi-controlled experiments about the optimal monetary standard. The stabilizing properties of the price system and the monetary character of inflation impose continuity over time to the structure of the economy and allow discrimination about the desirability of past monetary standards.

CHOOSING A MODEL TO ARTICULATE THE MONETARY STANDARD

Articulation of the monetary standard requires the choice among broad classes of models. The monetarist-Keynesian debate of the 1970s identified two choices.

^{3.} Athanasios Orphanides, "Improving Monetary Policy by Adopting a Simple Rule," *Cato Journal* 38, no. 1 (2018): 139–46. Orphanides offers a similar proposal.

In the Keynesian tradition, recessions are an inherent feature of a free market economy—that is, the price system works poorly to maintain full employment; inflation is a nonmonetary phenomenon—that is, the FOMC controls inflation through its control of the amount of slack (unemployment) in the economy; and the market power of corporations and unions produces cost-push shocks that force the FOMC to make difficult choices between achievement of price stability and full employment. In the monetarist tradition, central bank interference with the operation of the price system causes recessions; inflation is a monetary phenomenon—that is, the control of inflation requires that monetary policy discipline money creation; and the Fed can separate the determination of the price level from the behavior of the real economy and thus give the price system full rein to determine real variables.

The big tent model of the economy is the New Keynesian (NK) model. The representative work in the Keynesian tradition is a paper by Blanchard and Gali,⁴ and, in the monetarist tradition, it is a paper by Goodfriend and King.⁵ However, NK models can only organize a general approach. The assumption of rational expectations means that all the agents in the model, including the central bank, understand the structure of the economy. The central bank would never implement a rule that causes serious recessions or inflation. Estimation of NK models, therefore, will never address the issue of the role of monetary instability in causing economic instability. In addition, if the central bank is not responsible for economic instability, the models do not need to contain money. The models cannot address the empirical generalizations organized around money identified by Milton Friedman.

Another issue with NK models is that, even with models that differ, their estimation will always fit the data. Estimation, then, can neither reject a model nor evaluate its predictive ability relative to competing models. Finally, NK models assume knowledge not possessed by the policymaker. Econometricians are far from constructing models that can reliably explain the behavior of the natural values of variables, such as the natural rate of interest, the natural rate of unemployment, or the output gap. In practice, the reaction functions used are reduced forms.

The choice between alternative models requires a solution to the identification problem. Obviously, a solution would be enhanced if economists could run controlled experiments by implementing different monetary policies. The

^{4.} Olivier Blanchard and Jordi Gali, "Real Wage Rigidities and the New Keynesian Model," *Journal of Money, Credit, and Banking* 39 (2007): 35–65.

^{5.} Marvin Goodfriend and Robert G. King, "The New Neoclassical Synthesis and the Role of Monetary Policy," in *NBER Macroeconomics Annual* 1997, eds. Ben S. Bernanke and Julio Rotemberg (Cambridge, MA: MIT Press, 1997), 231–83.

approach required for broad model identification must be to determine which of the differing classes of models best organizes a review of historical experience. Such methodology was pioneered by Milton Friedman and Anna J. Schwartz in their book *A Monetary History*.⁶ They identify episodes of economic instability accompanied by the behavior of the Fed, documenting how the Fed's behavior arose independently of instability in the private economy rather than in response to instability.

The identification of the forces that produce instability in the economy requires a historical narrative capable of isolating forces that emerge independently from the stabilizing operation of the price system. Learning requires treating monetary history as a series of semi-controlled experiments that elucidate the nature of the optimal monetary standard and the rule that implements it. A Keynesian benchmark for identifying the forces that cause economic instability flags booms and busts and cost-push shocks that overwhelm the stabilizing properties of the price system. A quantity theoretic benchmark for identifying episodes of economic instability that does not require stability of money demand flags departures from a rule that provides for a stable nominal anchor and that allows the price system an unfettered ability to determine real variables. Like Friedman and Schwartz, one can then concatenate episodes to construct a consistent historical narrative.

With the monetarist tradition, semi-controlled experiments constitute how monetary policy has evolved over time using knowledge of how policymakers understood the world in which they operated. One can then generalize across the different policies to determine which policies are associated with economic stability and which with instability. However, this approach is rendered extremely difficult because the language of discretion used by the Fed obscures the evolution of policy. The required judgment about the nature of policy makes it difficult to achieve any sort of consensus. The three-pronged proposal detailed above addresses the issue by requiring explicit articulation of the underlying consistency of policy and the monetary standard.

THE POWELL PANDEMIC MONETARY POLICY

Because of the radical change in monetary policy announced by FOMC chair Jerome Powell in his August 2020 Jackson Hole speech, the FOMC has provided

^{6.} Milton Friedman and Anna J. Schwartz, *A Monetary History of the United States, 1867–1960* (Princeton, NJ: Princeton University Press, 1963).

a semi-controlled experiment from which one can learn.⁷ As exposited, however, the Powell policy conflated a change in the monetary standard with a policy of Odyssean forward guidance of "lower for longer." It will not be enough to just say, "To control inflation, next time, we will be more proactive in raising the funds rate." The FOMC changed the monetary standard by reverting to the pre-Volcker-Greenspan policy of activist aggregate-demand management as a consequence of making a low, inclusive unemployment rate an independent target in addition to its inflation target. In contrast, after the Volcker disinflation of the early 1980s, the FOMC had treated changes in unemployment as an indicator of whether the economy was growing unsustainably fast or slow. Thus achievement of "maximum employment" emerged as a consequence of a healthy economy.

The formal announcement of the change in the monetary standard came in a press release on August 27, 2020, revising the FOMC's Statement on Longer-Run Goals and Monetary Policy Strategy. Although the press release referred to community meetings, a Fed conference, and an extensive internal debate, the Fed did not release any transcript of the internal debate. Only after five calendar years and the release of FOMC transcripts will the public know whether that internal debate reflected an understanding of the radical change in the monetary standard. The press release states:

"The economy is always evolving, and the FOMC's strategy for achieving its goals must adapt to meet the new challenges that arise," said Federal Reserve Chair Jerome H. Powell. "Our revised statement reflects our appreciation for the benefits of a strong labor market, particularly for many in low- and moderate-income communities, and that a robust job market can be sustained without causing an unwelcome increase in inflation."⁸

The FOMC's adoption of a target for unemployment changed the monetary standard to one of aggregate-demand management with inflation output tradeoffs. The FOMC abandoned the Volcker-Greenspan policy in favor of the earlier Burns-Miller policy.

^{7.} Jerome H. Powell, "New Economic Challenges and the Fed's Monetary Policy Review" (Speech, Federal Reserve Bank of Kansas City Economic Policy Symposium, Jackson Hole, Wyoming, August 27, 2020).

^{8.} Board of Governors of the Federal Reserve System, "Federal Open Market Committee Announces Approval of Updates to Its Statement on Longer-Run Goals and Monetary Policy Strategy," press release, August 27, 2020, https://www.federalreserve.gov/newsevents/pressreleases/monetary 20200827a.htm.

On maximum employment, the FOMC emphasized that "maximum employment is a broad-based and inclusive goal," and reports that its policy decision will be informed by its "assessments of the *shortfalls* of employment from its maximum level.' The original document referred to '*deviations* from its maximum level.' On price stability, the FOMC adjusted its strategy for achieving its longer-run inflation goal of 2 percent by noting that it 'seeks to achieve inflation that averages 2 percent over time.' To this end, the revised statement says that 'following periods when inflation has been running persistently below 2 percent, appropriate monetary policy will likely aim to achieve inflation moderately above 2 percent for some time.'" The Odyssean forward guidance entailed abandoning the preemptive increases in the funds rate based on signs of either an overheating labor market or an increase in inflation that had characterized the Volcker-Greenspan policy. Abandoning preemption entailed a change in the monetary standard in that preemption to preserve price stability eliminated the earlier Burns-Miller policy of using Phillips curve tradeoffs to juggle unemployment and inflation objectives.

The FOMC based the radical change in the monetary standard on the lessons it drew from the recovery from the Great Recession. Although not articulated, the FOMC interpreted the recovery using the Keynesian Modigliani-Papademos framework in which the change in inflation depends on the difference between the unemployment rate and the non-accelerating inflation rate of unemployment (NAIRU) value.⁹ In other words, the FOMC controls inflation by manipulating the amount of slack in the economy. One presumed lesson was that the Janet Yellen FOMC's preemptive increases in the funds rate, given the persistence of somewhat below target inflation, prevented a socially desirable decline in the unemployment rate to a low, inclusive value. In the absence of knowledge of the NAIRU, the FOMC modified the framework by waiting for an increase in inflation before raising the funds rate.

The FOMC 2020 press release concluded:

The updates to the strategy statement explicitly acknowledge the challenges for monetary policy posed by a persistently low interest rate environment. Here in the United States and around the world, monetary policy interest rates are more likely to be constrained by their effective lower-bound than in the past.¹⁰

^{9.} Franco Modigliani and Lucas Papademos, "Targets for Monetary Policy in the Coming Year," *Brookings Papers on Economic Activity* 1 (1975): 141–63; and "Monetary Policy for the Coming Quarters: The Conflicting Views," *New England Economic Review* 76 (1976): 2–35.
10. Board of Governors of the Federal Reserve System, "Federal Open Market Committee Announces Approval of Updates."

The prospect of a periodic return to the zero lower bound would impart a negative bias to inflation or even create a negative downward price spiral. Keeping inflation from falling below the 2 percent target would be challenging. Powerful real forces, especially globalization, exacerbated the problem of disinflation. When the unemployment rate shot up to 14.7 percent in April 2020, the FOMC believed that it could implement a strongly stimulative monetary policy without fear of excessive inflation.

ILLUSTRATING THE NEED FOR ARTICULATION AND DEBATE OF THE MONETARY STANDARD

When assessing the lessons the FOMC claimed to have learned from the recovery from the Great Recession, it is important to note that there will exist multiple interpretations of any one historical event. In particular, some of my other works provide a very different interpretation.¹¹ The reason that inflation remained slightly below target was that monetary policy was not stimulative. Monetary policy simply preserved the prior expectation of near price stability achieved in the Greenspan era after 1997 and reinforced by the Great Recession. At the start of the recovery, monetary policy was moderately contractionary¹² because of the universal expectation that a strong recovery would follow a deep contraction, as had always occurred in the past. The resulting strong upward tilt in the yield curve, which kept long-term yields relatively high, made monetary policy moderately contractionary. Moreover, the FOMC was slow to develop strong forward guidance and quantitative easing (QE) as tools to make policy more expansionary. Only starting in 2016 did a normal recovery begin.

Nevertheless, overall, the recovery following the Great Recession was a period of significant real and nominal stability. That performance is remarkable given a negative natural rate of interest and weakness in the world economy punctuated by successive crises (e.g., the near breakup of the Eurozone, Brexit, the Chinese devaluation with capital outflows threatening a tightening of Chinese monetary policy, and finally the Trump trade war). That stability had to derive significantly from the FOMC's policy of forward guidance and QE in

^{11.} Robert Hetzel, "Recovery from the Great Recession" (Mercatus Working Paper, Mercatus Center at George Mason University, Arlington, VA, February 2021); and *The Federal Reserve System: A New History* (Chicago: University of Chicago Press, 2022).

^{12.} For an example of this argument, see Scott Sumner, "Nominal GDP Targeting: A Simple Rule to Improve Fed Performance," *Cato Journal* 34 (2014): 315–37; and *The Money Illusion* (Chicago: The University of Chicago Press, 2021).

maintaining aggregate demand despite forces making for weakness. There was never any threat of a downward price spiral.

Because QE works through money creation that makes investors' portfolios liquid and produces a rebalancing that raises asset prices (e.g., equities, houses, consumer durables, commodities), the FOMC should have understood that the money creation that characterized the pandemic monetary policy would provide significant economic stimulus.¹³

When a normal recovery began in mid-2016, the FOMC initiated a steady succession of funds rate increases. Those increases occurred with an inflation rate marginally below the FOMC's 2 percent target. Preemptive increases in the funds rate maintained a long recovery that allowed the labor market to match applicants with openings and to achieve a historically low unemployment rate.

The contrast between the two interpretations of the recovery from the Great Recession implies very different frameworks for implementing a stabilizing monetary policy. The monetary standard put in place by the Powell FOMC is one of activist aggregate demand management based on the pursuit of two independent goals (low inflation and low unemployment) presumed to be linked by a structural albeit flat Phillips curve. The alternative framework of Wicksellian monetarism¹⁴ entails establishing credibility for near price stability to shape the expectations of firms setting prices for multiple periods (firms in the sticky-price sector as in Kosuke Aoki's article).¹⁵ The FOMC then follows a rule that allows the price system free rein to determine real variables (output and employment) through procedures that cause the real funds rate to track its natural counterpart. Instead of alternating between expansionary and contractionary monetary policy required by an activist monetary policy, policy is always neutral.

A test of the Powell policy will be whether the FOMC succeeds in restoring 2 percent inflation without a recession. The failure of an activist aggregate demand policy a second time would make it harder to blame exogenous costpush forces for inflation as did FOMC chairman Arthur Burns in 1979.¹⁶

14. Hetzel, The Federal Reserve System.

^{13.} Michael D. Bordo and John Landon-Lane, "Does Expansionary Monetary Policy Cause Asset Price Booms?" in *The Historical Performance of the Federal Reserve: The Importance of Rules*, ed. Michael D. Bordo (Stanford, CA: Hoover Institution Press, 2019); and Milton Friedman, "The Lag in Effect of Monetary Policy," in *The Optimum Quantity of Money and Other Essays*, ed. Milton Friedman (Chicago: Aldine Publishing Company, 1969).

^{15.} Kosuke Aoki, "Optimal Monetary Policy Responses to Relative-Price Changes," *Journal of Monetary Economics* 48 (2001): 55–80.

^{16.} Arthur F. Burns, "The Anguish of Central Banking" (Speech, The 1979 Per Jacobsson Lecture, Belgrade, Yugoslavia, September 30, 1979).

WHAT SHOULD THE FOMC HAVE LEARNED FROM THE GREAT INFLATION?

Mary Daly, president of the San Francisco Fed, explained how the lessons learned from the 1970s Great Inflation would allow the current FOMC to avoid repeating the same mistakes. She explained:

Let me talk about what exactly happened during the "Great Inflation." . . . The Fed's policy misses were amplified and perpetuated by institutional factors and by its own communication strategy. . . . At the time, there was a very tight link between price and wage inflation. Many employment contracts included automatic cost-of-living adjustments, or COLAs, which meant that when prices went up, wages soon followed. Firms then passed on these increased labor costs to prices, and so it went, again and again, in a self-perpetuating upward inflation spiral. . . . The more inflation rose, the more consumers and businesses expected it to rise. As inflation moved up, so did inflation expectations. These expectations of future inflation were then built into wage and price contracts. Before long, inflation dynamics and future inflation were deeply intertwined with inflation psychology.¹⁷

In Daly's account, inflationary expectations arose in a way external to the Fed rather than from expansionary and ultimately inflationary monetary policy. There is no mention of the high rates of money growth. A wage-price spiral perpetuated by inflationary expectations untethered to the systematic behavior of the Fed drove inflation. The FOMC could have ended the inflation if it had communicated clearly with the public.

Daly's account comes from the FOMC's own contemporaneous understanding of inflation in the 1970s.¹⁸ That understanding treated inflation as a nonmonetary phenomenon whose control required manipulation of the amount of slack in the economy (excess unemployment) with the tradeoffs given by a Phillips curve. In other words, the Powell FOMC and the Burns-Miller FOMC possessed similar views of the nature of inflation and the monetary policy required to control it. The possibility then arises that the high inflation of 2022 and the 1970s both derive from the same faulty understanding of optimal monetary policy.

^{17.} Mary C. Daly, "This Time Is Different . . . Because We Are" (Speech, Los Angeles World Affairs Council & Town Hall, February 23, 2022).

^{18.} Robert Hetzel, *The Monetary Policy of the Federal Reserve: A History* (Cambridge: Cambridge University Press, 2008).





Sources: Federal Reserve Bank of Atlanta, "Sticky-Price CPI," https://www.atlantafed.org/research/inflationproject /stickyprice; and Federal Reserve Bank of St. Louis, FRED, "Personal Consumption Expenditures: Services (implicit price deflator)," https://fred.stlouisfed.org/series/DSERRD3Q086SBEA, and "Personal Consumption Expenditures: Goods," https://fred.stlouisfed.org/series/DGDSRD3Q086SBEA.

CAN THE FED ENGINEER A SOFT LANDING?

As shown in figures 1 and 2, to achieve its goal of 2 percent inflation, the FOMC will need to reverse the increase in underlying inflation. Theory specifies that in order to let the price system work to determine relative prices, monetary policy should stabilize the price level in the sticky-price sector of the economy and allow prices set in the flexible-price sector pass through to the headline price level.¹⁹ Firms in the sticky-price sector set prices for multiple periods whereas firms in the flexible-price sector set prices in auction markets.

Figure 1 shows sticky-price and flexible-price inflation. Figure 2 shows personal consumption expenditures (PCE) inflation in the goods and services sectors. Services sector inflation is taken to be a proxy for sticky-price inflation whereas goods sector inflation is taken to be a proxy for flexible-price inflation.

Measured by sticky-price inflation, the FOMC successfully achieved its inflation target in the recovery from the Great Recession. Over the eight years from January 2012 through December 2019, 12-month percentage changes in

^{19.} Aoki, "Optimal Monetary Policy Responses"; and Gregory N. Mankiw and Ricardo Reis, "What Measure of Inflation Should a Central Bank Target?" *Journal of the European Economic Association* 1 (2003): 1058–86.



Sources: Federal Reserve Bank of Atlanta, "Sticky-Price CPI," https://www.atlantafed.org/research/inflationproject /stickyprice; and Federal Reserve Bank of St. Louis, FRED, "Personal Consumption Expenditures: Services (implicit price deflator)," https://fred.stlouisfed.org/series/DSERRD3Q086SBEA, and "Personal Consumption Expenditures: Goods," https://fred.stlouisfed.org/series/DGDSRD3Q086SBEA.

sticky-price inflation averaged 2.3 percent. Over the period 2012Q1 through 2019Q4, quarterly observations of PCE services sector averaged 2.4 percent. The lower headline inflation numbers came from inflation in the flexible-price sector (goods sector). Despite FOMC concern about controlling inflation at the zero lower bound, there is no evidence of a downward bias in inflation.

The FOMC must have been aware that underlying inflation began to rise above target after April 2021 (figure 1) or 2020Q4 (figure 2). It then rose well above target, reaching 5.2 percent in May 2022 (figure 1) or 4.5 percent in 2022Q1 (figure 2). Presumably, the FOMC believed it was allowing a manageable overshoot given the shortfall in its unemployment target. However, the size of the overshoot eventually caused the FOMC to shift its priorities to controlling inflation instead of lowering unemployment. It seems likely that the FOMC underestimated the stimulus provided by high rates of money growth, just as it did in the 1970s.

The helicopter drop of money starting in March 2020 with the monetization of government and mortgage debt occurring at the zero lower bound worked in the spirit of Tobin's Q by increasing the liquidity of the public's asset portfolio.²⁰ To reconcile the public to holding a more liquid asset portfolio, the price

^{20.} Bordo and Landon-Lane, "Asset Price Booms"; and Friedman, "The Lag in Effect of Monetary Policy."

of illiquid assets must rise (e.g., equities, houses, commodities, and consumer durables). That effect is visible in figure 2 in goods inflation. The increase in the price of assets relative to their service flows stimulates investment, making monetary policy expansionary. Given that this portfolio balance effect works with a lag, it is understandable that an FOMC focused on controlling slack and predicting inflation with Phillips curve tradeoffs would have missed it.

The issue, as of June 2022, is whether the FOMC can restore 2 percent inflation without a recession. The critical factor is whether the public expects a surge in inflation to be followed by an unwinding or for the surge to persist. That expectation is determined by the way in which monetary policy has shaped expectations. For example, the 1946-1947 inflation was an inflation shock caused by the removal of price controls; the winter 1950-1951 inflation was an inflation shock caused by the Chinese crossing the Yalu River and the expectation of World War III producing a rise in commodity prices. In both cases, expectations were those of the gold standard. The price level was assumed stationary; if it rose, it would fall. The expectation of deflation following inflation made real interest rates rise with little change in nominal interest rates. However, the price level did not fall after World War II as it did after World War I.²¹ By the time of the 1965–1966 rise in inflation, inflation was assumed stationary. The reason is that the inflation that had arisen in 1956-1957 had been brought down with two recessions, but there was no deflation. As a result of these stationary expectations, the Fed was able to lower the 1965–1966 inflation with only a growth recession.

In 2022, the question is whether the expectations of the public have been conditioned by the long period of relative price stability that persisted after 1994 when the Greenspan FOMC finally vanquished the bond market vigilantes by restoring the expectation of near price stability. If so, the 1965–1966 experience is relevant. However, economist Scott Sumner is critical of the way the FOMC has implemented its strategy, labeled average inflation targeting (AIT),²² because it was done asymmetrically. Chair Powell announced that FOMC would only offset undershoots, not overshoots. That fact was unclear initially and only revealed after it had been implemented.

Martinez-Garcia et al. wrote in 2021: "Average inflation targeting means that policymakers would consider those deviations and can allow inflation to modestly and temporarily run above the target to make up for past shortfalls,

^{21.} Hetzel, Monetary Policy of the Federal Reserve.

^{22.} Scott Sumner, "Firemen and Arsonists," Econlib, June 5, 2022, https://www.econlib.org/firemen -and-arsonists/.

or vice versa" (italics added).²³ If the FOMC had announced AIT as a rule to be implemented symmetrically, it likely would have influenced expectations positively, like in 1965–1966—that is, the public would have anticipated that the above-target inflation of 2021 and 2022 will be reversed.²⁴ Moreover, if the FOMC needed to confront offsetting above-target inflation, it likely would have responded sooner to the increase in underlying inflation shown in figures 1 and 2, instead of waiting until March 2022.

The go-stop cycle of the 1970s offers a template for how the Fed causes recessions.²⁵ When the FOMC is concerned about inflation, it raises the funds rate until the economy weakens and then maintains that funds rate despite the weakening so as not to signal markets that it is backing off. Perhaps, in 2022, the FOMC can break this pattern by drawing on the capital for the expectation of price stability built up in the Volcker-Greenspan era and with the Great Recession. When the economy weakens, it will be able to lower the funds rate modestly while headline inflation falls owing to a decline in the cost-push shocks. It is hoped that expected inflation will also fall. If not, policy will need to produce a recession to restore 2 percent inflation.

In a way analogous to the Volcker FOMC's October 1979 announcement of procedures to ensure control of money creation in order to reinforce its credibility to restore price stability, the FOMC could also specify a path for nominal output growth whose upward slope decreases over time to 2 percent.²⁶ In doing so, the FOMC, for the first time, would be taking explicit responsibility for the growth of aggregate nominal demand.

CHOOSING THE REACTION FUNCTION

The reaction function chosen by the FOMC to discipline the staff forecasts in the Tealbook, as discussed earlier, would articulate the nature of the monetary standard. Three general reaction functions, each embodying different rules, encompass the likely choices.

With the Keynesian conception of the economy, powerful real forces in the form of booms (characterized by excessive optimism) and busts (characterized

^{23.} Enrique Martinez-Garcia, Jarod Coulter, and Valeri Grossman, "Fed's New Inflation Targeting Seeks to Maintain Well-Anchored Expectations," Federal Reserve Bank of Dallas, April 6, 2021.
24. Sumner, "Firemen and Arsonists."

^{25.} Robert Hetzel, *The Great Recession: Market Failure or Policy Failure?* (Cambridge: Cambridge University Press, 2012); and *The Federal Reserve System*.

^{26.} Final sales to private domestic purchasers would be a less noisy measure than nominal GDP.

by excessive pessimism) overwhelm the stabilizing properties of the price system. In this case, the FOMC can smooth out the resulting business cycle through the countercyclical manipulation of aggregate demand. A reaction function with a measure of slack (output gap) and inflation is appropriate, accompanied by a Phillips curve that predicts the tradeoffs between these two variables. Moreover, the nonmonetary character of inflation complicates the tradeoff by forcing upward and downward shifts (market power and globalization, respectively) in the Phillips curve.

With the monetarist conception of the economy, the price system works well to provide for full employment in the absence of monetary instability. In a way analogous to price fixing in individual markets, interference with the operation of the price system creates monetary absorptions and expansions that render the evolution of the price level unpredictable. Firms setting prices for multiple periods do not possess a common future price level that can both serve as a benchmark for setting relative prices and provide the public with the desired amount of real purchasing power. A reaction function that provides for price stability and that causes the real funds rate to track the natural rate of interest, thereby allowing the price system free rein to determine real variables, is appropriate. The rule disciplines the demand for money to grow in line with real potential output, and the FOMC accommodates that demand with its interest rate target.

Market monetarism offers a third alternative in the form of a target path for nominal GDP. This rule is somewhat reminiscent of the Keynesian alternative in that productivity and inflation shocks force real-nominal tradeoffs. However, the market makes the tradeoff, not the FOMC. The FOMC's focus is exclusively on a nominal variable. Nominal GDP is a lagging indicator of the stance of monetary policy. As calculated by Milton Friedman, the lag for real GDP is two to three quarters, and for inflation it is two years.²⁷ Scott Sumner deals with this issue using market-based forecasts.²⁸ Presumably, as now when the FOMC compares its forecast of the yield curve (forward rates) with that of the market's, the FOMC would engage in a dialogue with markets over the correct forecast of nominal GDP.

A CONCLUDING (PESSIMISTIC) COMMENT

The Fed is stuck in a political equilibrium that preserves its independence but imposes periodic large costs on the economy owing to monetary instability. To

^{27.} Milton Friedman, "The Quantity Theory of Money," in *The New Palgrave Money*, ed. John Eatwell, Murray Milgate, and Peter Newman (New York: W. W. Norton, 1989), 1–40.
28. Sumner, "Nominal GDP Targeting."

protect against populist attack, the Fed advances a narrative in which it provides for stability in a market economy and a financial system that are inherently unstable. The narrative holds that the Fed never makes mistakes. The cost for upholding this narrative is that the Fed cannot learn from experience. Moreover, the Fed cannot explain the success of the Volcker-Greenspan era. To restore the expectation of near price stability, monetary policy had to forgo the prior aggregate-demand management intended to balance off low inflation and low unemployment, and instead remain focused on the low inflation objective.²⁹ As a consequence, the FOMC had to implement procedures that turned over the determination of real variables (output and employment) to the operation of the price system. Articulation of this policy would contradict the Fed's narrative about the source of instability originating in the private sector. It would also contradict the Fed's defense of discretion as required to mitigate recurrent but unforeseen private sector shocks.

The proposal made in this paper would force the Fed to articulate the monetary standard that it has created and defend it in the historical context of what standards have destabilized the economy and what standards have stabilized it. Transparency, accountability, learning, and a stabilizing monetary policy go hand in hand.

^{29.} Hetzel, The Federal Reserve System.

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Robert L. Hetzel is a retired economist from the Federal Reserve Bank of Richmond. He received an AB and a PhD from the University of Chicago. While at Chicago, he was in the Money and Banking workshop and did his thesis work under Milton Friedman. He joined the research department at the Federal Reserve Bank of Richmond in 1975, where, as senior economist and research advisor, he counseled the bank's president on matters concerning his participation in meetings of the Federal Open Market Committee. His research agenda is the evolution of central banking in the modern regime of fiat money. He regularly writes articles on monetary policy in which he continues the Friedman monetarist tradition. His two recent books, both published by Cambridge University Press, are *The Monetary Policy of the Federal Reserve: A History* (2008) and *The Great Recession: Market Failure or Policy Failure*? (2012). Robert Hetzel is currently working on a book on Milton Friedman.

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