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Rules and a Stable Nominal Anchor

At its September 2025 meeting, the FOMC lowered the funds rate by 25 bps and signaled more reductions to come. The press conference of Chair Powell following the meeting characterized the decision making process that led to the decision as standard. The FOMC goes meeting by meeting and, in a “data dependent way,” evaluates which one of its two dual mandates, price stability or maximum employment, is of more concern. It then adjusts its funds rate target appropriately.

The funds rate reduction followed a five-year reformulation of the consensus statement (“Statement on Longer-Run Goals and Monetary Policy Strategy”) in August 2025. For markets, the consensus statement is supposed to explain the consistency in how the FOMC responds to incoming information on the economy. Markets will then understand better how to adjust the yield curve in response to such “news” on the economy. Does the context provided by this consensus statement explain the September 2025 funds rate reduction? The 2025 consensus statement was preceded originally by a statement formulated in 2012 and then a revision in 2020. The argument here is that to understand the September 2025 funds rate reduction one needs to place it in the context of the change of views reflected in the abandonment of the 2012 statement in favor of the 2020 statement.

Section 1 provides the economic background for the September 2025 policy action. Section 2 reviews its defense by FOMC chair Powell. Section 3 examines the three consensus statements: 2012, 2020, and 2025. It then asks whether these statements and their evolution can explain the September 2025 funds rate reduction. Section 4 reviews the criticism of Treasury Secretary Scott Bessant of the Federal Reserve. The section continues by arguing that the Fed could raise the level of the public debate by amplifying the consensus statement through exposition of a simple conceptual framework for policy complemented by explicitness about the consistency in policy over time. Section 5 concludes with comments on Fed independence.

The state of the economy in September 2025

At the September 2025 FOMC meeting, the FOMC lowered the target range for the funds rate by 25 bps to 4 to 4 ¼ %. It also lowered the interest rate on Fed funds futures contracts by forecasting in the SEP that the median funds rate would decline to 3.4% in 2026 and 3.1% in 2027. The FOMC based its decision on a forecast that highlighted weakness in the labor market with that weakness keeping inflation under control.

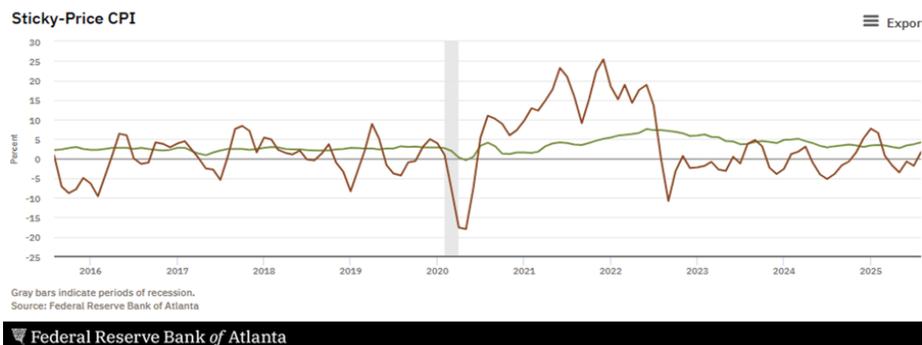
The economic background to the September 2025 FOMC decision was not suggestive of recession. Historically, the most reliable short-term predictor of recession, a sustained 20% rise in weekly initial jobless claims, was not suggestive of recession. On September 13, 2025, the percentage rise in the series from a year ago was 4.1%. At 4.3% in August 2025, the monthly unemployment rate was only slightly higher than the average for the preceding four months of March through July of 4.2%. The main cause for concern was a decline in monthly nonfarm payroll employment growth from 140,000 on average from January 2023 through January 2024 to 54,000 on average from February 2025 through July 2025. However, the lower more recent number for payroll

employment could well have been the new norm for two reasons: first the significant reduction in immigration and second reduction of jobs in the services industries for Hispanics. In general, the picture in the labor market was one of firms neither laying off nor hiring workers, very likely due to caution on how the administration's tariff policies would work out.

Growth in real final sales to private domestic producers did decline somewhat in 2025. The average of the 4 quarterly growth rates in 2024 was 3%, while in the first two quarters of 2025 the number was 1.9%. However high frequency data showed no evidence of an imminent recession. For example, the Atlanta Fed GDPNow series using high frequency data to forecast real GDP was at 3.3% as September 17, 2025. Household balance sheets remain supportive of continued growth. As reported by Stanley (2025), the household debt to GDP ratio was at its lowest level since 1998. In 2025Q2, the value of household assets rose strongly to \$197.3 trillion. Real household liquid assets (currency, bank deposits, and money market funds shares deflated by the PCE deflator) “over the past two years . . . has outpaced the pre-pandemic trend.” A Deutsche Bank blog post by George Saravelos (2025) argued that tech-related spending has kept the economy growing and offset the weakness in payroll employment growth caused by restrictions on immigration and the weakness caused by tariffs. CAPEX spending in the tech sector could well weaken in the near future but also tariff-related uncertainty could diminish and offset the weakening.

At the same time, underlying inflation remained in excess of the FOMC's 2% target. As measured by the Atlanta Fed sticky-price measure of inflation, over the two years prior to September 2025, underlying inflation remained consistently above the FOMC's 2% inflation target. As shown in Figure 1 of the Atlanta Fed measure of 3-month annualized sticky-price inflation, the underlying inflation rate associated with near price stability averaged 2.3% over the prepandemic period of January 2012 to December 2019. (The headline figure is lowered by flexible-price inflation with sticky-price inflation weighted toward services inflation and flexible-price inflation weighted toward good inflation.) In the more recent past, this series averaged 3.8% over the interval July 2023 to August 2025.

Figure 1



The question addressed in the following sections is whether the September 2025 reduction in the funds rate can be understood in a straightforward way in terms of an application of the August 2025 consensus statement.

Defending the September 2025 funds rate reduction

In response to a question from a reporter, Elizabeth Schulze, Chair Powell (Board of Governors 2025, 9) defended the September reduction in the funds rate at the press conference following the FOMC meeting:

Elizabeth Schulze: Elizabeth Schulze with ABC News. The latest inflation report shows that prices are still going up across key categories for many households, including groceries. What will the Fed do if prices pick up more?

Powell responded: Right now, the situation we're in is that we see inflation – we continue to expect it to move up. Maybe not as high as we would have expected it to move up a few months ago. The pass through into – of the tariffs into inflation has been slower and smaller. The labor market has softened. So the case for there being a persistent inflation outbreak is less. And so that's why we think it's time for us really to acknowledge that the risks to the other mandate have grown, and that we should move in the direction of neutral. So what will we do? We'll do what we need to do. But we have two mandates, and we try to balance them. For a long time, our framework says that when our two goals are in tension – this is quite an unusual situation – how do we decide what to do? Because our tools can't do two things at once. What we do is we ask, which is farther from – how far is each from the goal and how long is it expected to get to the goal? So and then that's – we think about those things, and we see – as I mentioned, we have been – our policy had been really skewed toward inflation for a long time, really. Now we see that there's downside risk clearly in the labor market. And so we're moving in a direction of more neutral policy.

The evolution of the consensus statements

For monetary policy to be stabilizing, markets need to understand how the FOMC will respond to incoming information on the economy not only in the near term but also well into the future. An obvious example is that if the FOMC lowers the funds rate in response to weakness in the economy, markets need assurance that the FOMC will raise the funds rate in the future to prevent the emergence of inflation. With that assurance, the short end of the yield curve will decline without an increase in the longer end due to a rise in an inflation premium.

At the same time, in his public communication, Chair Powell employs the language of discretion. He avoids any explicit statement about the consistency in policy the FOMC imposes over time on individual funds rate decisions at FOMC meetings—information that markets need to understand the consistency over time referred to above. Markets need to infer that consistency through a combination of the language of the consensus statement and speeches of the FOMC chair. The following illustrates this practice using the 2012 and 2020 consensus statements.

The following shows key excerpts from the original 2012 Board of Governors (2012) consensus statement:

The inflation rate over the longer run is primarily determined by monetary policy, and hence the Committee has the ability to specify a longer-run goal for inflation. . . . The maximum level of employment is largely determined by nonmonetary factors that affect the structure and dynamics of the labor market. These factors may change over time and may not be directly measurable. Consequently, it would not be appropriate to specify a fixed goal for employment.

The unstated intent of the consensus statement was to institutionalize the monetary regime that emerged with the success of the Volcker-Greenspan (V-G) era of restoring price stability and then maintaining it. A monetary policy concentrated on price stability did not require periodic significant increases in unemployment as the earlier Keynesian consensus had assumed. A political consensus formed around support for central bank independence as a foundation for a policy of price stability. Implementation of the policy rested on the William McChesney Martin policy of leaning against the wind (LAW) in which the FOMC moved the funds rate to counter sustained changes in the economy's rate of resource utilization.

A characteristic of the V-G procedures was that the FOMC would lower the funds rate in a sustained way in response to sustained increases in the unemployment rate until the unemployment rate declined and then stabilized. Unlike the earlier period, the FOMC did not have a specific, if unstated, objective for the unemployment rate (employment). Instead, the unemployment rate was an informational variable about stability in the real economy. Once the unemployment rate stabilized and the economy began growing again, preemptive increases at the sign of emerging overheating in the labor market preserved the stability in the economy's rate of resource utilization. Those preemptive increases reinforced the credibility of the nominal anchor in the form of expectational stability. That credibility then disciplined the price setting of firms to be consistent with price stability.

FOMC Chair Janet Yellen's defense of the preemptive increases in the funds rate started in December 2015 and the continued more vigorously in December 2016 reflected these V-G procedures. Yellen (2017b, 16) said:

We should also be wary of moving too gradually. Job gains continue to run well ahead of the longer-run pace we estimate would be sufficient, on average, to provide jobs for new entrants to the labor force. Thus, without further modest increases in the federal funds rate over time, there is a risk that the labor market could eventually become overheated, potentially creating an inflationary problem down the road that might be difficult to overcome without triggering a recession. Persistently easy monetary policy might also eventually lead to increased leverage and other developments, with adverse implications for financial stability. For these reasons, and given that monetary policy affects economic activity and inflation with a substantial lag, it would be imprudent to keep monetary policy on hold until inflation is back to 2 percent.

More succinctly, Yellen (2017a) said, "If the economy ends up over heating and inflation threatens to rise well above our target, we don't want to be in a position where we have to raise rates rapidly, which could conceivably cause another recession. So we want to be ahead of the curve and not behind it."

Given the sharp rise in unemployment in April 2020 with the onset of the pandemic, the FOMC revised the consensus statement in August 2020. Even though the shock was a negative productivity shock, the FOMC decided to implement a highly expansionary monetary policy to return unemployment to at least its prepandemic level more rapidly than in the recent recoveries from recession. A central element was to inform markets that the FOMC had abandoned preemptive increases in the funds rate. As reflected in the "shortfalls" language in the 2020 consensus statement, markets should not raise bond rates based on the assumption that the FOMC would raise the funds rate in response to a rapid decline in the unemployment rate.

The 2020 consensus statement read (Board of Governors 2020):

In order to anchor longer-term inflation expectations at this level, the Committee seeks to achieve inflation that averages 2 percent over time, and therefore judges 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. Monetary policy actions tend to influence economic activity, employment, and prices with a lag. In setting monetary policy, the Committee seeks over time to mitigate shortfalls of employment from the Committee's assessment of its maximum level.

The revised statement also informed bond markets that they should assume that the FOMC would maintain the funds rate at the zero lower bound while inflation rose to an undefined level for an undefined period above the 2% target. The organizing principle of monetary policy changed from stabilizing the economy's rate of resource utilization to opportunistic exploitation of a Phillips curve at times when the FOMC perceived it as flat. Speeches by chair Powell advanced the belief that the Phillips curve was flat down to at least the pre-pandemic level of 3.5% unemployment. Powell (2021a) stated:

We have a flat Phillips curve, meaning there's still a small connection [“between slack in the labor market and inflation”] but you need a microscope to find it. We've also got low persistence of inflation, so that if inflation were to go up for any reason it . . . doesn't stay up. . . . Remember, we're a long way from maximum employment. There's plenty of slack in the labor market.

In April 28, 2021, Chair Powell (Board of Governors, 2021, 6) commented:

It seems unlikely frankly that we would see inflation moving up in a persistent way that would move inflation expectations up while there's still significant slack in the labor market. . . . It's much more likely that . . . having achieved maximum employment conditions we would also be seeing 2% inflation. . . .

On November 3, 2021, Powell (2021b) declared:

We don't meet the liftoff test now because we're not at maximum employment. . . . We didn't ask ourselves whether the liftoff test is met because, you know, it's clearly not met on the maximum-employment side. . . . I don't think that we're behind the curve. . . . The reason is that there's still ground to cover to get to maximum employment.

Using its flat Phillips curve logic, the FOMC dismissed the rise in inflation in 2021 as transitory due to short-lived supply disruptions from Covid. However, by the start of 2022, it became obvious that the inflation was not transitory but persistent, and the FOMC began raising the funds rate in March 2022. It did so even though the February unemployment rate at 3.8%, the number available at the March 2022 meeting, exceeded the 3.2% low reached in the pre-pandemic period.

Powell (Board of Governors 2025) said:

With the ELB [effective lower bound], we adopted flexible average inflation targeting—a “makeup” strategy to ensure that inflation expectations would remain well anchored even with the ELB constraint. In particular, we said that, following periods when inflation had been running persistently below 2 percent, appropriate monetary policy would likely aim to achieve inflation moderately above 2 percent for some time. In the event, rather than low inflation and the ELB, the post-pandemic reopening brought the highest inflation in 40 years to economies around the world. Like most other central banks and private-sector analysts, through year-end

2021 we thought that inflation would subside fairly quickly without a sharp tightening in our policy stance.

If the inflation had been due to transitory supply disruptions, price rises should have been followed by price declines. Adjusted for trend inflation, that reversal did not occur. Over the 5-year period 2015Q1 to 2020Q1, the price level (PCE implicit deflator) rose 7.9%. Over the 5-year period 2020Q2 to 2025Q2, it rose 21.3%. It is hard not to look at the high rate of growth of aggregate nominal demand over the latter period, a variable under the control of the Fed, as the cause of the inflation.

How should the FOMC respond to criticism?

Scott Bessent (2025), Treasury Secretary, criticized the Fed:

The Fed’s new operating model is effectively a gain-of-function monetary policy experiment. . . . The Fed must change course. Its standard tool kit has become too complex to manage, with uncertain theoretical underpinnings. Simple and measurable tools, aimed at a narrow mandate, are the clearest way to deliver better outcomes and safeguard central-bank independence over time. . . . This harmful cycle concentrated national wealth among those who already owned assets. . . . Successive interventions during and after the financial crisis of 2008 created what amounted to a de facto backstop for asset owners. This harmful cycle concentrated national wealth among those who already owned assets. . . . Successive interventions during and after the financial crisis of 2008 created what amounted to a de facto backstop for asset owners. This harmful cycle concentrated national wealth among those who already owned assets. . . . At the heart of independence lies credibility and political legitimacy. Both have been jeopardized by the Fed’s expansion beyond its mandate. Heavy intervention has produced severe distributional outcomes, undermined credibility and threatened independence. . . . There must also be an honest, independent, nonpartisan review of the entire institution, including monetary policy, regulation, communications, staffing and research.

Bessent (2025) added: “In 2009, the Fed forecast that real gross domestic product would accelerate to 4% in 2011. Instead, growth slowed to 1.6%. Cumulatively over that period, the Fed’s two-year projections overstated real GDP by more than \$1 trillion.”

There is simply no way for the Fed to answer Bessent’s criticisms without bringing clarity to how monetary policy works to achieve its legislated objectives. It is not sufficient for the Fed to profess allegiance to the dual mandate without explaining the framework it is using to pursue its mandated objectives. In his August Jackson Hole speech, Powell (2025) stated: “The changes we made in this review are a natural progression [from the 2012 consensus statement], grounded in our ever-evolving understanding of our economy.” The statement begs for an articulation of the structure of the economy and the FOMC’s understanding of how that structure changed to require revised consensus statements.

Making the message in the consensus statement explicit

For the FOMC to make monetary policy transparent and accountable, the FOMC should explain it in terms of a conceptually simple model. The model would not be a structural model of the economy, but would clarify what macroeconomic variables the FOMC controls, how it exercises that control, and what are the limitations to that control. Such a model only has substance if it imposes a consistency on individual policy actions over time. Accountability and transparency require that the chair make explicit that consistency using one of the differing formulations of the Taylor rule. He then needs to organize FOMC discussion in a way organized by the chosen formulation. Finally, he needs to express the choice of the policy action and forward guidance decided upon at FOMC meetings in terms of either implementation, modification, or departure from the rule.

The exposition of the three consensus statements in section 4 above makes clear how dramatically the FOMC's conception of the implicit model determining the nature of monetary policy has changed. The original 2012 exposition drew on the underlying policy in the V-G era, which was disciplined by the need to restore the expectation of nominal stability. That discipline eliminated any attempt to resurrect the policy of the Phillips curve trade-offs that characterized the earlier Burns-Miller policy. A LAW policy of moving the funds rate to counteract unsustainable changes in the economy's rate of resource utilization, which allows the working of the price system to determine the level of resource utilization, implies turning over the determination of real variables (output and employment) to the price system. It follows that unstable inflation arises from procedures that interfere with the working of the price system. This macroeconomic equivalent of price fixing creates the imbalances in the bond market whose monetization or demonetization leads to unpredictable increases or decreases in the price level.

The 2020 exposition of the consensus statement assigned an enhanced role for an activist monetary policy to control the real economy. The central focus of monetary policy became the Phillips curve with its forecasted trade-offs between unemployment and inflation. Both variables became independent objectives of policy. A presumed flat Phillips curve would provide a free lunch for a stimulative monetary policy. As shown by the Powell quotes in section 3, that presumption provided the rationale for the all-out stimulative pandemic monetary policy. The situation recalled the decade of the 1970s with its prevailing assumption that a 4% unemployment rate represented full employment. An average unemployment rate of 6.4% from January 1971 through August 1979 provided an ongoing incentive for a stimulative monetary policy. The go-stop character of policy resulted from the way that the increases in inflation resulting from stimulative policy caused a switch to a contractionary monetary policy.

What about the 2025 revision of the consensus statement and how it framed the decision to lower the funds rate and signal more reductions to come at the September 2025 FOMC meeting? It reflects a policy of going from meeting to meeting, evaluating which of the objectives of price stability and maximum employment are of more concern, and then moving the funds rate target appropriately. Although the statement of Chair Powell in the post-meeting press conference did not explicitly mention a flat Phillips curve, his comments were in that spirit. Powell said, as cited above, "The labor market has softened. So the case for their being a persistent inflation outbreak is less." Although the consensus statement is ambiguous, its spirit still reflects the 2020 consensus statement.

This characterization of the three consensus statements suggests using a first-difference Taylor rule in the first case and a level-form or gap Taylor rule in the latter two cases. In the first case, the 2012 consensus statement, a first-difference rule encapsulates the practice of LAW in the Volcker-Greenspan era of moving the funds rate in a consistent way to discover the funds rate (the neutral or natural rate of interest) that stabilizes the economy's rate or resource utilization. The first-difference rule expressed in formula (1) is from a list of rules in the Board of Governors (2011, 43) Tealbook used in alternative simulations of the Board model FRB/US.

$$(1) \quad i_t = i_{t-1} + 0.5(\pi_{t+3|t} - \pi^*) + 0.5(\Delta^4 y_{t+3|t} - \Delta^4 y_{t+3|t}^*)$$

where i_t is the funds rate for quarter t . $\pi_{t+3|t}$ is forecasted inflation three quarters ahead, and π^* is the inflation target. $(\Delta^4 y_{t+3|t} - \Delta^4 y_{t+3|t}^*)$ is the forecasted three-quarters ahead annual average real GDP growth relative to potential. The formula is from Orphanides (2003). As the Board (2011, 43) staff noted: "The prescriptions of the first-difference rule do not depend on assumptions regarding r^* [a constant term for the average funds rate] or the level of the output gap." Orphanides and van Norden (2002) also criticized Taylor rules requiring estimation of an output gap.

Orphanides (2023 [2024]) simplified (1) by collapsing the right-hand-side difference terms for inflation and output into the single term for nominal GDP. The resulting rule causes changes in the funds rate to counteract forecasted deviations of nominal GDP growth from forecasted potential real output growth inconsistent with price stability. Orphanides (2024, 9) explained: "In real time, the natural growth rule employs short-term forecasts to check whether nominal income grows in line with the economy's natural growth rate." Orphanides defined the "natural growth rate" as equal to growth in potential real output plus 2%, the FOMC's inflation target.

Orphanides (2023 [2024], 7, 9) described the rule:

According to this rule, the change of the federal funds rate from the previous quarter can be guided by the difference between the projected growth of nominal income, n , and the natural growth rate, n^* , defined as the sum of the Fed's inflation goal, π^* , and the growth rate of real potential GDP, g^* . The rule takes the first-difference form:

$$(2) \quad \Delta i = \theta(n - n^*)$$

where Δi is the rule's prescription for the quarterly change of the funds rate from the previous quarter, and θ is a parameter governing how responsive policy should be to the projected imbalance.

In the case of the second consensus statement of 2020 and the third consensus statement of 2025, a level-form or gap Taylor rule is appropriate. Both inflation and employment are separate, independent targets. As noted above, the FOMC pursues a stimulative monetary policy when it assumes that the trade-off is favorable, that is, the Phillips curve is flat. Taylor (1993) is the classic example of such a rule. Taylor showed that the following "Taylor rule" with g_π and g_x equal to .5 predicted the funds rate reasonably well over the period 1987 through 1992:

$$(3) \quad i_t = 2 + \pi_t + g_\pi(\pi_t - \pi^*) + g_x x_t$$

The funds rate is i_t . The constant term, 2, is the assumed long-run average of the real rate of interest. The prior four-quarter inflation rate is π_t and the FOMC's inflation target is π^* . Taylor assumed that the FOMC's inflation target has remained unchanged at 2 percent. The output gap, x_t , is the percentage deviation of real GDP from a trend line fitted to past real GDP taken as measuring potential real output.

The criticisms of Treasury Secretary Bessent about “gain of function,” more commonly known as “mission creep,” have merit. An example is the Fed's involvement in the allocation of credit, which began in September 2008 and gained force in March 2020 when the Fed departed from being a conventional central bank and became a combination central bank and financial intermediary. The payment of interest on reserves greatly enhanced its ability to become a player in credit markets by allowing a vast expansion in its asset portfolio. Another example is how the Fed expanded its provision of a financial safety net by bailouts of distressed financial institutions after the Lehman Brothers failure in September 2008. One more example was how in 2008 the Fed made a low unemployment rate in minority communities an objective.

The Fed has made the implementation of monetary policy so complicated that only a small number of experts can follow it. The result is that to the general public the Fed has become an impenetrable force pulling levers to control the economy. With the end of the political environment that respected central bank independence as a condition for allowing the central bank to concentrate on price stability and movement to a populist political environment that sees the world in terms of external forces exercising control over the lives of citizens, it is inevitable that groups will attempt to seize control of the Fed to use its powers for their own ends. The Fed needs to rethink how it defends its independence.

The Fed needs to become transparent and accountable by articulating what macroeconomic variables it controls, how it exercises that control, and what are the limitations to that control. It needs to do so within a simple conceptual framework that highlights the consistency imposed on individual policy actions. It only adumbrates that consistency at present with its consensus statement. It needs to go much further by organizing FOMC discussion around such consistency and by communicating with the public how individual policy actions can be understood in terms of that consistency. The result would be an informed public debate that would encourage support for Fed independence but within the U.S. system of checks and balances.

Concluding comment

The debate is on over Fed independence. So far, the Fed's defense of its independence consists of veiled threats of something terrible happening if it loses its independence. For reasons left unclear, inflation will be the order of the day. However, the question remains whether such a defense is viable as the political environment moves toward populism with its theme that powerful external cliques control the lives of ordinary Americans. If the Fed rejects open debate, to the populists, it comes across as fortress Fed with the portcullis down and the drawbridge up. That perception is an invitation to the populists to attack.

For open debate to occur, the issue must be moved away from the discretionary control of the economy by the FOMC chair and a small number of individuals unknown to the public versus the

arbitrary influence of the president weighing in on that control. The concentration by the FOMC of public communication based on forward guidance, that is, forecasts of the near-term behavior of the economy, precludes serious debate with all but a few Fed watchers. The FOMC needs to explain that it is not exercising discretionary control over the economy but rather providing a framework of monetary stability for a free market economy. There is a need to explain monetary policy not just in terms of its meeting by meeting implementation, but in terms of a simple conceptual framework that provides for price stability and allows the price system to ensure full employment.

References

- Bessent, Scott. 2025. "The Fed's 'Gain of Function' Monetary Policy." *The Wall Street Journal*, September 5.
- Board of Governors of the Federal Reserve System. 2011. "Report to the FOMC on Economic Conditions and Monetary Policy." Book B, Monetary Policy: Strategies and Alternatives, August 4.
- _____. 2012. Monetary Policy. Transcripts and other historical materials. January 24-25 Meeting. Statement on Longer-Run Goals and Monetary Policy Strategy As adopted effective January 24, 2012.
- _____. 2020. Monetary Policy. Review of Monetary Policy Strategy, Tools, and Communications. 2020 Statement on Longer-Run Goals and Monetary Policy Strategy. Adopted effective January 24, 2012; as amended effective August 27, 2020.
- _____. 2021. Jerome H. Powell Press Conference. April 28.
- _____. 2025. Transcript of Chair Powell's Press Conference September 17. Federal Open Market Committee. Monetary Policy, September 17.
- Orphanides, Athanasios. 2003. "Historical Monetary Policy Analysis and the Taylor Rule," *Journal of Monetary Economics*, vol. 50, July, 983-1022.
- _____. "Enhancing Resilience with Natural Growth Targeting." MIT, December 2023. Draft prepared for the AIER *Fed Framework Review Workshop*, Florida Atlantic University, Boca Raton, January 20, 2024.
- Orphanides, Athanasios, and Simon van Norden. "The Unreliability of Output Gap Estimates in Real Time." *Review of Economics and Statistics* 84 (November 2002), 569-83.
- Powell, Jerome H. 2021a. "Transcript: Jerome Powell Interview Hosted by Princeton." WSJPRO Central Banking, January 14.
- _____. 2021b. "Transcript": Fed Chief Powell's Postmeeting Press Conference. WSJ Pro Central Banking, November 3.
- _____. 2025. "Monetary Policy and the Fed's Framework Review." Remarks at the Kansas City Federal Reserve Bank conference, "Labor Markets in Transition: Demographics, Productivity, and Macroeconomic Policy" Jackson Hole, Wyoming, August 22.
- Stanley, Stephen. 2025. "Notes from the Economics Desk." Santander, September 22.
- Saravelos, George. 2025. FX Blog. "Deus ex Machina." Deutsche Bank, September 23.

Yellen, Janet L. 2017a. "Yellen Says Fed's Focus Has Shifted to Holding Growth Gains." Interview with Susan Collins, Dean of the Ford School University of Michigan, Ann Arbor MI, April 10, 2017, Bloomberg Markets, April 10.

_____. 2017b. "Inflation, Uncertainty, and Monetary Policy." Remarks at the 59th Annual Meeting of the National Association for Business Economics." Cleveland, OH, September 26.