

**Inflation Dynamics in Stable and Unstable Policy Regimes:
Comment on “Deflating Inflation Expectations”**

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I'd like to thank the organizers for the opportunity to discuss this year's U.S. Monetary Policy Forum paper.¹ It represents a useful sequel to the very first Forum paper, which I discussed 10 years ago at the inaugural gathering in 2007.² The earlier paper provided a flexible specification that was capable of capturing the changing dynamics of inflation across time and across a number of countries. In particular, the framework was able to accommodate the significant difference between the behavior of inflation during the 1970s and its behavior during the so-called Great Moderation period, a difference that we often attribute to changes in the monetary policy regime. The current paper finds that a simplified version of that framework suffices to characterize the dynamics of inflation in the U.S. since 1984 — that is, since the Volcker disinflation.

From the point of view of a monetary policy practitioner, this narrower focus has certain virtues. Understanding the local dynamics of inflation within the current monetary regime — a regime in which inflation has been low and relatively stable — is clearly useful for thinking about policy on a meeting-by-meeting basis, and the authors make a valuable contribution in this regard. But policymakers also need to understand, to the extent possible, the forces that might cause these dynamics to shift or drift away toward greater volatility. In my remarks, I'll comment both on how I think about the behavior of what the authors call “local mean inflation” and on the longer-run question of transitions between more and less stable periods. Now would be a good time to emphasize that the views expressed are my own and are not necessarily shared by my colleagues in the Federal Reserve System.³

The key output of the author's empirical exercise is an estimate of what they call the local trend rate of inflation, estimated from their univariate model. They find that, given this estimate, measures of inflation expectations add little to the near-term forecasting ability of the model. This strikes me as a credible result for a period over which monetary policy has fairly consistently achieved low and stable inflation. In such an environment, variations in our measures of (longer-term) inflation expectations are plausibly attributable at least as much to the imperfections in those measures as they are to meaningful variation in actual expectations. At the same time, expectations for near-term inflation seem likely to follow an estimated local trend pretty closely.

They also find that measures of resource slack add little to near-term inflation forecasts. This highlights the extent to which such empirical relationships are likely to be contingent on the conduct of monetary policy. The authors interpret this finding as raising doubts about what they

call the “Phillips-curve-centric approach to forecasting inflation.” I share these doubts, and they illustrate the broader danger of treating estimated relationships between measures of slack and inflation as structural.

Later in the paper, the authors estimate a related model in which trend inflation is a function of lagged actual inflation and consider how alternative future paths for realized inflation would affect the movement of their estimated inflation trend toward the FOMC’s 2 percent goal. Given their specification, getting the trend to 2 percent in finite time requires realized inflation to overshoot and rise above 2 percent, an algebraic fact they demonstrate with some illustrative calculations. This has the feel of an engineering exercise, and while it is useful for illustrating properties of their estimated inflation process, I’m not sure the authors want us to take it seriously as a menu for policymakers. For example, the notion that the Fed would engineer a sequence of inflation shocks in order to bring the local trend back to target seems hard to square with the central idea in the paper — that the local trend itself wanders around and is not firmly tied to the Fed’s target or to the public’s expectations. Moreover, it’s not obvious that policy would affect trend inflation only through period-by-period inflation realizations.

The random-walk feature of the local trend in their main model suggests an inflation process (and an expectations process) that is not perfectly anchored, in the sense that the long-run forecast of inflation fluctuates over time. The natural question here is how sharply the data can distinguish between this specification and one in which the trend is a very slow-moving but mean-reverting process centered around 2 percent. For some purposes, a random walk might be a useful approximation, but these two specifications could have very different policy implications. For example, a mean-reverting trend could converge to target from below without meaningful overshooting.

The bottom line I take from their estimation, though, is that if inflation continues to be determined as it was over their sample period, we should continue to see similar stability in inflation trends. This conclusion is somewhat reassuring, but the comfort it provides is limited by the post-1984 scope of the exercise. Because as much as we’d like to, I don’t think we can take the stability of this period for granted. Rather, it appears to be a consequence of the conduct of monetary policy. Indeed, the relative stability of their estimated local trend strikes me as good evidence of the success of the policy regime that has prevailed since the 1980s, and in particular since the early 1990s, a regime in which the Fed has acted pre-emptively against incipient inflationary pressures.⁴

Policymakers have a natural interest in acting in a manner that is consistent with maintaining a stable inflation regime. No one policy decision is likely to dislodge the trend dynamics of inflation, of course. But as policymakers we need to do a better job, I believe, of understanding how those dynamic transitions out of periods of relative stability occur. The difficulty of doing this is in part evident in the more complex, general specification in the 2007 U.S. Monetary Policy Forum paper.⁵ An even greater challenge, I think, comes from the fact that we really have only one observation of a transition away from price stability in the postwar U.S. data — the episode beginning in the mid-1960s. I’d like to take the remainder of my time to look more closely at that episode, because I think it may shed some light on our current situation.⁶

There are some striking parallels between the monetary policy environments of the mid-1960s and today. First, resource utilization was tight and getting tighter. The unemployment rate fell from 5 ½ percent at the end of 1963 to 4 percent in 1965 and 3.6 percent by the end of 1966. Along the way, there was an active debate about the degree of remaining slack.

Second, inflation was low and stable coming into this period, hovering around 1 ½ percent through the end of 1965, although a number of prominent wage settlements in 1964 and 1965 exceeded the administration's guidelines. Inflation then began rising: to 3.1 percent for 1966, 2.6 percent for 1967, and 4.3 percent for 1968.

Third, fiscal stimulus was in play throughout the period. The Kennedy tax cut was enacted in February 1964, followed in subsequent years by increased spending on Johnson's Great Society programs. In mid-1965, Johnson announced a military buildup in Vietnam. But he deliberately kept the magnitude of the additional spending a secret, although Fed Chairman William McChesney Martin was aware of what was going on from contacts in Congress, at the Department of Defense, and at defense contractors in his hometown of St. Louis.

Fourth, Chairman Martin faced a hostile political environment, and the tension between monetary and fiscal policy was front and center. Congressional populists such as Wilbur Mills and Wright Patman repeatedly threatened restrictive changes to the Federal Reserve Act. And President Johnson was not shy about scolding the Fed chairman, both in private and in public.

As the Kennedy tax cut was being considered at the beginning of 1964, Congress and the White House were openly opposed to interest rate increases. At hearings in January of that year, Rep. Reuss accused Martin of wanting to "vitiate" the effects of the tax cut on employment. At the same time, Walter Heller, chair of Johnson's Council of Economic Advisers, was arguing that tight money "could kill off a substantial part of the expansionary economic impact of the tax cut." The Fed *did* ultimately raise the discount rate on November 24, 1964, by 50 basis points. President Johnson erupted — the press described him as "unhappy and upset."

The next time the Fed raised the discount rate was December 6, 1965, also by 50 basis points. Two days later, Johnson famously summoned Martin to his Texas ranch, where he was recovering from gallbladder surgery. Johnson upbraided Martin, telling him "You've got me in a position where you can run a rapier into me and you've done it," adding, "that's a despicable thing to do." Martin's visit included an infamous drive around the ranch at breakneck speeds in Johnson's white Cadillac convertible, with Johnson at the wheel.

In early 1966, bank credit soared, real growth surged, and inflation rose to 3 percent. Wanting to avoid the visibility of a discount rate increase, the Fed embarked on a jawboning campaign to persuade banks to limit credit growth, and the Desk brought down free reserves — that is, excess reserves minus discount window borrowing. The resulting rise in market rates, together with binding Regulation Q constraints, led to a slowdown in housing activity that caused the Fed to back off at the end of 1966 and early 1967. (This also led to Congress granting us authority to purchase obligations of the federal housing agencies, and then proceed to pressure us to actually make such purchases, but that's another story.)⁷

Economic conditions early in 1966 also led Martin to begin campaigning within the administration for a tax increase in order to provide further policy restraint and help finance the war. LBJ finally signed on at the beginning of 1967 and proposed a tax surcharge in his State of the Union address, but his administration argued for easier monetary policy to offset the anticipated contractionary effect. Johnson delayed introducing a bill, however, out of fear that Congress would insist on scaling back his Great Society initiatives in exchange. In the end, the tax bill was not passed until the spring of 1968, at which point inflation had risen to 4 percent. It was a temporary tax surcharge, however, and did not have the contractionary effect that was anticipated at the time, in part because the distinction between permanent and temporary tax changes wasn't fully appreciated. The Fed then began raising rates more aggressively, but it was too late.

You may have noticed in my narrative the seemingly bizarre coincidence that at beginning of the tightening sequence in 1964 and 1965, we raised rates just twice in two years, both times at the very end of the year. The broader parallel is that initial policy tightening moves in the first two years were quite slow, both then and now. Another is the potential for conflicting views of how monetary policy should react to fiscal stimulus in an economy with tight labor markets.

Another parallel is that there was uncertainty then, as now, regarding how accommodative the stance of policy actually was at any given point. The Committee was often focused on free reserves and nominal rather than real interest rates. Both gave off misleading signals in early 1966. Today, uncertainty about r^* and other parameters of the Taylor Rule also make assessing the stance of policy challenging.

There are several differences between then and now that ought to give us some comfort that we can avoid the mistakes of the 1960s. Certainly, there have been substantial improvements in the transparency of fiscal policy. It's hard to imagine a contemporary administration hiding a doubling of war spending from Congress and the secretary of the Treasury for any appreciable amount of time.

The most important difference, though, is that the disastrous inflationary experience of the 1970s has made clear how costly it can be to lose control of inflation and have inflation expectations become unhinged. This lesson appears to be much more broadly understood now within the economics profession and the central banking world.

At the same time, however, some policymakers of the 1960s articulated remarkably modern concerns. In a speech shortly after the December 1965 rate increase, for example, Martin articulated a prescient argument for pre-emptive monetary policy:

[T]he effective time to act against inflationary pressures is when they are in the development stage — before they have become full-blown and the damage has been done.... It is simpler, for one thing, to try to prevent prices from rising than to attempt to roll them back. And finally, it is surer and safer: so long as inflation is merely a threat rather than a reality, it is enough to prevent the pace of economic expansion from accelerating dangerously. But once that pace has become unsustainably fast, then it becomes necessary to reduce the speed, and once such a reduction has started, there is no

assurance it can be stopped in time to avoid an actual downswing.... We shall succeed in avoiding a “stop-and-go” cycle — as the British call the practice of first permitting inflationary pressures to develop and then taking drastic measures to suppress them — only if we do not delay until inflation is upon us.⁸

So Martin, at least, understood the risks in a way that we would find familiar. One hopes that the experience of the 1970s has made this lesson more broadly appreciated than it was in Martin’s time. But Martin’s contemporaneous understanding of the value of pre-emption suggests that the problem may have been less a lack of understanding and more a lack of political will.

The political context around price stability and Fed independence may be the most critical difference between the mid-1960s and now. The deference to Fed independence shown by administrations since the early 1990s has set a precedent that seems to have improved the political dynamic for us in recent years relative to what the record shows for the 1960s and ’70s. Certainly there is much more widespread understanding of the extent to which central bank independence, in a context of accountability and transparency, contributes to healthier monetary policy. At the same time, given various legislative proposals that have emerged in the last few years, I think we’d all agree that central bank independence cannot be taken for granted.

So what should we make of this historical digression? Are we at risk of losing stability, as we did in the 1960s? If you choose to focus on the parallels, you might think so, although the significant differences could mitigate your concerns. But, turning back to this year’s paper, one might wonder what the authors’ empirical exercise would have shown if performed only using data available through the end of 1965. A recent paper by Elmar Mertens reports such one-sided estimates.⁹ His estimated trends are low and stable until 1966, when they begin rising sharply. Estimates of the volatility of the trend are also low before 1966, in many cases close to current levels, and also rise sharply starting in 1966. This confirms the sense one gets from narrative accounts of how suddenly stability seemed to have been lost. It also confirms the notion that inflation dynamics estimated over a period of relative stability may have only limited implications for the important task of maintaining that stability.

Again, this does not tell us how much at risk we are right now. Monetary policy in the 1960s makes for a sobering tale, but I believe we can avoid repeating those mistakes. I look forward to the 20th U.S. Monetary Policy Forum, where I trust we will not be learning more about how stability is lost, but rather about how it is preserved.

¹ Stephen G. Cecchetti, Michael Feroli, Peter Hooper, Anil K. Kashyap, and Kermit L. Schoenholtz, “[Deflating Inflation Expectations](#),” U.S. Monetary Policy Forum, March 3, 2017.

² Stephen G. Cecchetti, Peter Hooper, Bruce C. Kasman, Kermit L. Schoenholtz, and Mark W. Watson, “[Understanding the Evolving Inflation Process](#),” U.S. Monetary Policy Forum, March 9, 2007. (Paper revised July 2007.)

³ And now would be a good time for an endnote thanking John Weinberg and Jessie Romero for assistance in preparing these remarks.

⁴ Marvin Goodfriend, “[Monetary Policy Comes of Age: A 20th Century Odyssey](#),” Federal Reserve Bank of Richmond *Economic Quarterly*, Winter 1997, vol. 83, no. 1, pp. 1-22.

⁵ Cecchetti et al. (2007)

⁶ For accounts of monetary policy in the mid-1960s, see Allan H. Meltzer, *A History of the Federal Reserve: Volume 2*, Chicago: University of Chicago Press, 2010; Robert L. Hetzel, *The Monetary Policy of the Federal Reserve: A History*, New York: Cambridge University Press, 2008; and Robert P. Bremner, *Chairman of the Fed: William McChesney Martin Jr. and the Creation of the American Financial System*. New Haven: Yale University Press, 2004. For an account of the pivotal December 1965 discount rate increase, see also Helen Fessenden, “1965: The Year the Fed and LBJ Clashed,” Federal Reserve Bank of Richmond *Econ Focus*, Third/Fourth Quarter 2016.

⁷ Renee Haltom and Robert Sharp, “[The First Time the Fed Bought GSE Debt](#),” Federal Reserve Bank of Richmond *Economic Brief* no. 14-04, April 2014.

⁸ William McChesney Martin, “[The Federal Reserve’s Role in the Economy](#),” Remarks before the 59th Annual Meeting of the Life Insurance Association of America, New York, New York, December 8, 1965.

⁹ Elmar Mertens, “[Measuring the Level and Uncertainty of Trend Inflation](#),” *Review of Economics and Statistics*, December 2016, vol. 98, no. 5, pp. 950-967.