

Bad Luck or Bad Policy?

Why inflation rose and fell, and what this means for monetary policy

BY VANESSA SUMO

Wars have often fueled inflation. Throughout history, printing money was a handy way for governments and empires to fund war-related expenses without raising taxes. However, with too much money chasing too few goods, price levels would then shoot up. In 1970s America, though, wars were not the stuff that fueled inflation. Indeed, economist Brad DeLong of the University of California at Berkeley calls the Great Inflation of the 1970s, “America’s only peacetime outburst of inflation.”

No matter which measure is used, inflation was high and volatile in the late 1960s to the early 1980s. There were three different inflation cycles during this period, and each peak of the cycle was higher than the last. By the first quarter of 1980, inflation had risen more than 14 percent over the previous year. However, after hitting that high point, inflation rapidly declined and has remained remarkably low and stable over the last two decades. How can we explain this unmistakable shift?

It is tempting to assign blame or praise to the members of the Federal Reserve’s Open Market Committee, who were at the helm of the central bank during these various episodes. Much credit, for instance, has been given to Paul Volcker and Alan Greenspan for driving down inflation during their tenure. But couldn’t they have also been lucky? Similarly, weren’t Arthur Burns and G. William Miller

just hit by a string of bad luck? After all, the twin oil shocks of the 1970s must have had a devastating effect on the economy.

Whether the rise and fall of inflation is thanks to luck or policy is an important question because the answer tells us to what extent monetary policy matters for economic stability or if we are simply helpless to the vagaries of the business cycle. “Do we think that we’ve learned some lessons from the 1960s and 1970s, so that [the Fed] should keep doing what they’ve been doing? Or do we think that we just got lucky? If so, that doesn’t tell us much about future Federal Reserve policy,” says Mark Watson, an economist at Princeton University and a visiting scholar at the Richmond Fed. The answer is far from settled, but it could be a good measure of both.

Policy Mistakes and Triumphs

The story that policy rather than luck is responsible for the rise and fall of inflation is, according to Chicago Fed economist Francois Velde, “an optimistic story that relies on errors made and lessons well learned.” Learning from policy mistakes of the past is a crucial point for this view because it provides a reason why policymakers engineered a decisive break in their response to inflation in the early 1980s.

The story begins with the memory of the Great Depression of the 1930s. DeLong believes that “the truest cause” of the 1970s inflation was the shadow cast decades later by this

extraordinary economic downturn. The Great Depression may have led to the Great Inflation because that event cultivated a strong aversion to unemployment, convincing policymakers that any level of unemployment was too high.

At the same time, work by some of the best economists of the 1960s reassured policymakers that lower unemployment could be successfully purchased by allowing only moderate increases in inflation. For instance, estimates by Nobel Prize winners Robert Solow and Paul Samuelson of the trade-off between inflation and unemployment for the United States (the Phillips Curve) suggested that a modest 4.5 percent increase in prices each year would be enough to bring down the unemployment rate from 5.5 percent to 3 percent.

Against this backdrop, the Fed, under William McChesney Martin Jr., proceeded with what it thought would be a successful experiment of stimulating the economy through expansionary monetary policy without accelerating inflation. But as Velde notes, unemployment indeed fell by 1969 — but to only about 4 percent and at a high price tag of 6 percent inflation, not exactly the terms that it had bargained for.

By the time the 1970s rolled in and Burns was appointed as the new head of the Fed, inflation had started to escalate to worrying levels. At this point, it was becoming clear that the trade-off promised by the Phillips

Curve could no longer be fulfilled. Once people came to anticipate more inflation, any surprise expansionary attempts by the Fed would only result in higher inflation but without a substantial decrease in unemployment below its “natural rate.” However, neither Burns nor the political leadership at that time were willing to lower inflation for fear of the extremely high cost it would entail in terms of the loss of jobs.

The triumphant moment arrived when Paul Volcker took control of the Federal Reserve at the end of the decade, armed not only with the political mandate to purge inflation but also with a bagful of hard lessons from policy mistakes committed in the recent past. An important lesson learned was that people form their expectations about inflation based on how they anticipate policymakers will react to it. In fact, policymakers themselves could alter the terms of the trade-off between inflation and unemployment. For instance, because people are well aware of policymakers’ temptation to stimulate the economy with surprise inflation, central bankers must find a credible way to resist this temptation in order to effectively carry out monetary policy.

But how can we assert that the rise and fall in inflation was indeed due to a shift from bad to good policies, as sketched in the story above? Two studies, one by Richard Clarida of Columbia University, Jordi Gali of Pompeu Fabra University in Barcelona, and Mark Gertler of New York University, and another one written more recently by Richmond Fed economist Thomas Lubik and Frank Schorfheide of the University of Pennsylvania, look for evidence that policy has changed over the relevant period in a way that explains the dramatic movement in inflation.

Both papers look at the responsiveness of the Fed’s interest rate policy to changes in inflation during the pre-Volcker period on the one hand and the Volcker and Greenspan period on the other. The idea is as follows. Central bank behavior is

captured well by a policy rule by which the Fed sets the federal funds rate, its monetary policy instrument, in response to deviations of current or expected inflation and output from some desired level. If the Fed wishes to successfully bring down inflation, a helpful measure would be to raise the fed funds rate by more than the increase in inflation, such that the real short-term rate rises and real spending falls. But if the fed funds rate changes by only a fraction of the change in anticipated inflation, then the Fed will effectively stimulate the economy through lower real short-term rates, which leads to further rises in inflation.

Such a policy that accommodates inflation, or a passive interest rate policy, is particularly bad because it not only prevents the Fed from stabilizing inflation, but it also can actually turn monetary policy into a source of economic instability. This can happen because passive policy leaves open the possibility that the economy be subjected to “sunspot” shocks, which are unrelated to economic fundamentals but matter anyway because people think they do.

For instance, sunspot fluctuations can occur when individuals correctly anticipate that the Fed will react too feebly to an inflationary shock. This anticipation is then built into future inflation, to which real interest rates decline, and the initial expectations are validated. Because of this, inflation can wander off the path it would otherwise follow. The same fate holds for fundamental shocks, such as productivity shocks, that hit the economy. Under a passive policy regime these can affect the economy in unpredictable ways. Thus, if a good or active policy is not in place, monetary policy itself could potentially lead to the type of volatile macroeconomic outcomes that we witnessed back in the 1970s. The work of Clarida, Gali, and Gertler, as well as that of Lubik and Schorfheide largely confirm this story.

Clarida, Gali, and Gertler were probably the first to “add precision

to the conventional wisdom” that monetary policy was relatively well managed during the time of Volcker and Greenspan but much less so 15 years prior to Volcker. They confirm their suspicions that monetary policy was passive during the pre-Volcker period, whereas they find that during the Volcker and Greenspan era, the nominal interest rate was almost three times more sensitive to changes in expected inflation. “[Not] until Volcker took office did controlling inflation become the organizing focus of monetary policy,” wrote Clarida, Gali, and Gertler. Hence, good policy had saved the day.

Lubik and Schorfheide revisit the findings of Clarida, Gali, and Gertler, and add even more precision to the latter’s work by devising a more sophisticated method to estimate the dynamics of the economy. Their estimation results likewise allow them to ascertain whether there was a shift from bad to good policy by looking at the responsiveness of the nominal interest rate to inflation during the pre-Volcker and post-1982 periods. Like Clarida, Gali, and Gertler, they find that after the Volcker policy shift, monetary policy was much more aggressive in fighting inflation than in the 1970s. In addition, their method allows them to be more precise about the role of sunspot shocks and fundamental shocks during the period of passive policy, which had opened the door to erratic and undesirable paths of inflation and output in the 1970s.

These papers have prompted many responses, particularly to explain why rational policymakers would choose to follow the inferior policy that they did in the 1960s and 1970s. In the response offered by Giorgio Primiceri of Northwestern University, rational policymakers form their rules based on what they believe is optimal at that time, given the information they observe and what they know about how the economy works. In other words, policymakers were simply doing the best they could. “Alan Greenspan in the 1960s would have behaved very similarly to the chairman



In the 1970s, the U.S. economy experienced significant shocks, such as sharp rises in energy prices in 1973 and 1979. At the same time, the Federal Reserve pursued monetary policies that many considered unwise. Economists debate whether the high and erratic inflation of the period could have been contained if the Fed had acted differently or if the shocks to the economy were too much to overcome.

[then], just because Alan Greenspan in the 1960s would not have known what he knows now,” says Primiceri.

One reason why episodes of high inflation can occur is if policymakers believe that the natural rate of unemployment is lower than it actually is. Their policies would then tend to be too expansionary, thus leading to higher inflation. However, this is not enough to explain why rational policymakers would let inflation remain high for such a long time. According to Primiceri, policymakers in the 1960s were under the spell of overoptimism, a condition that was encouraged by looking at the turbulent inflation data from the 1950s, which offered the false hope that inflation was quickly “mean reverting.” Because they observed that inflation was moving up and down, they were convinced that if inflation went up, it would not be long before it would come back down again.

But what prolonged the rise in inflation was when this overoptimism turned into overpessimism in the 1970s. Policymakers thought that the sacrifice ratio, or the cost of bringing down inflation in terms of unemployment, was going to be very high. For example, in a 1978 article, Arthur Okun computed the sacrifice ratio based on the estimated trade-off between inflation and unemployment in the literature at that time to be at 10 to one. That is, in order to bring inflation down by 1 percent, GDP must contract by 10 percent, a very painful proposition. Things started to change only in the beginning of the 1980s, when the cost of inflation was

finally deemed by all quarters as simply too high.

As Luck Would Have It

Not everyone believes in the optimistic story of bad policy turned good. For instance, the oil price shocks of 1973 and 1979 are considered one of the prime suspects in the terrible inflation of the 1970s. In that case, it may have been bad luck rather than bad policy that was driving the surge and persistence in inflation. But economists have at least three problems with this argument. First, inflation was already building up prior to each burst in oil prices, not the other way around. Second, it is not clear that these shocks affected wages, something that would have left a lasting impact on the course of inflation. Third, an oil price shock alone may not be enough to set off a sustained rise in inflation without the help of an expansionary monetary policy.

Still, fewer and more manageable shocks during the 1980s and beyond have made this period a relatively peaceful one. The decline in the volatility of output growth, due to this dose of good fortune, may have moderated inflation since the 1980s and made a central banker’s job of taming inflation much easier. Such lucky shocks can come in the form of smaller ones like the absence of oil supply disruptions and the productivity resurgence of the 1990s, or more permanent changes in the structure of the economy. These include new ways to manage inventory that have allowed firms to smooth production, as well as

improvements in banking and finance that have made it easier for consumers and businesses to hedge risks and soften their liquidity constraints.

But instead of trying to pick out what exact piece of bad or good luck there is to blame or be thankful for, more recent work has focused on analyzing how the volatility of such shocks has changed over time. If the rise and fall in inflation is indeed due to a change in the economy’s fortunes, and not because of a policy shift, then the volatility of these shocks should have diminished in the 1980s and beyond.

Indeed, Princeton University economist Christopher Sims and Tao Zha of the Atlanta Fed find that, unlike the conclusions of the policy camp, the Fed’s monetary policy rule did not change over time. Instead, what best characterizes the rise and fall of inflation in their view is “stable monetary policy reactions to a changing array of major disturbances.” In other words, the differences in the two regimes can be traced to the change in the volatility of the shocks affecting these two periods. Sims and Zha point to the oil price shocks and the financing of the Vietnam War in the 1960s and 1970 as the source of this macroeconomic turmoil, and that shocks on such a scale have not recurred since.

On the surface, it is difficult to square how different economists can come to strikingly different conclusions – one says that a change in policy is responsible for the dramatic turn in inflation and the other says it is all about luck. The divergence lies in the

methods that they use to get their results. For instance, Primiceri has two papers that argue in favor of each corner of the ring (although he says that his “policy” explanation is his favorite one). In his “luck” study, he uses a statistical model that imposes minimal assumptions and very little structure, and so allows the data in its most undisturbed form to weave its own conclusion. He and others like Sims and Zha who have used this approach tend to find results in favor of the luck side. On the other hand, those who take on more economic assumptions in their model, for instance, on how policymakers behave and make decisions, will tend to lean toward the policy side.

Similarly, Lubik’s response to Sims and Zha’s conclusions is that finding a change in the volatility of the underlying shocks to the economy can actually correspond to more than one economic structure or to more than one view of how shocks are transmitted throughout the economy. Thus, we cannot be certain that the bad luck-good luck story is the right explanation of what is observed in the data.

A Table for Two

Lubik and Schorfheide are able to measure the importance of sunspot

shocks and fundamental shocks as well as to observe how exactly these disturbances could have led to the economic turmoil under a passive policy regime in the 1970s. They find that although sunspot fluctuations can explain a sizeable amount (about one-third) of the volatility in inflation, they do not do a good job of explaining the volatility in output growth. “It leaves the door open for an alternative explanation,” says Lubik, “that [output growth volatility] may have been due to bad luck.”

Thus, luck may play a bigger role in the dynamics of output growth. But if the behavior of output somehow affects inflation, then a bit of luck, not just policy, will also find its way to explaining the changes in prices. In the 1980s and 1990s, monetary policy was more aggressive, but at the same time, real shocks such as the adoption of information technology had a favorable impact on output growth and inflation. Thus, the fall in inflation in the last two decades could be explained by a combination of a lot of good policy and a bit of good luck caused by stable output growth. “I would put 70 percent on good policy and 30 percent on good luck,” says Lubik.

Similarly, James Stock of Harvard University and Mark Watson of

Princeton University find that monetary policy has played an important role in determining the path of inflation, but doubt whether it was instrumental for bringing about that happy period of stable output in the last two decades. “My view is that the Fed gets to take full credit for taming inflation; whether it gets credit for taming the business cycle is another question,” says Watson.

In theory, the causation can run the other way. Monetary policy can ease output growth volatility as it works on inflation. But if at the same time the shocks to the economy have become smaller or if firms have become better at smoothing shocks, then these spells of good luck could be mostly responsible for the stability in output growth. Stock and Watson think that this is the story of the 1980s and beyond and hence conclude that monetary policy played, at best, a modest role in this period of moderation in output growth volatility.

Thus, there could be a role for both luck and policy, with policy getting the edge for inflation and luck for output growth. However, most are in agreement that the Fed should take much recognition for restoring price stability — and responsibility for maintaining it. **RF**

READINGS

Clarida, Richard, Jordi Gali, and Mark Gertler. “Monetary Policy Rules and Macroeconomic Stability: Evidence and Some Theory.” *Quarterly Journal of Economics*, February 2000, vol. 115, no. 1, pp. 147-180.

DeLong, J. Bradford. “America’s Peacetime Inflation: The 1970s.” In Romer, Christina, and David Romer (eds.), *Reducing Inflation: Motivation and Strategy*. Chicago: University of Chicago Press, 1997.

Lubik, Thomas, and Frank Schorfheide. “Computing Sunspot Equilibria in Linear Rational Expectations Models.” *Journal of Economic Dynamics and Control*, November 2003, vol. 28, no. 2, pp. 273-285.

—. “Testing for Indeterminacy: An Application to U.S. Monetary Policy.” *American Economic Review*, March 2004, vol. 94, no. 1, pp. 190-217.

Okun, Arthur. “Efficient Disinflationary Policies.” *American Economic Review*, 1978, vol. 68, no. 2, pp. 348-352.

Primiceri, Giorgio. “Time Varying Structural Vector Autoregressions and Monetary Policy.” *Review of Economic Studies*, July 2005, vol. 72, no. 3, pp. 821-852.

—. “Why Inflation Rose and Fell: Policymakers’ Beliefs and U.S. Postwar Stabilization Policy.” *Quarterly Journal of Economics*, August 2006, vol. 121, no. 3, pp. 867-901.

Sims, Christopher, and Tao Zha. “Were There Regime Switches in U.S. Monetary Policy?” *American Economic Review*, March 2006, vol. 96, no. 1, pp. 54-81.

Stock, James, and Mark Watson. “Has the Business Cycle Changed? Evidence and Explanations.” Prepared for the Federal Reserve Bank of Kansas City Symposium, *Monetary Policy and Uncertainty*, August 2003, Jackson Hole, Wyoming.

Velde, Francois. “Poor Hand or Poor Play? The rise and fall of inflation in the U.S.” Federal Reserve Bank of Chicago *Economic Perspectives*, 1st Quarter 2004, vol. 28, pp. 34-51.