Monetary Policy During the Past 30 Years With Lessons for the Next 30 Years[1]

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The 30th anniversary of the Cato Institute's monetary conference series provides an excellent opportunity to take stock of what we have learned about monetary policy in the past 30 years and to draw lessons for the next 30 years.

Considering the overall performance of the American economy, the past 30 years divide naturally into two parts. During the first part—roughly the first two-thirds—economic performance was quite good, but during the second part it was quite poor. In terms of monetary policy, there is a corresponding natural division with a steadier rules-based approach to policy in the first part and a much less predictable discretionary approach to policy in the second.

The policy implication of this experience thus jumps out at you. To be sure, however, one needs to work carefully through the facts and follow the relationship between economic performance and monetary policy.

Economic Performance

Let's start with some charts which illustrate the key facts. Figure 1 shows the growth rate of real GDP from quarter to quarter in the United States. It is like an EKG for the American economy. It shows that the volatility of GDP growth declined markedly in the 1980s and 1990s.

[1] This is a written version of a luncheon address given at the Cato Institute's 30th Annual Monetary Conference on Money, Markets and Government: The Next 30 Years, November 15, 2012, Washington, D.C. Some of the charts and analysis were used in Taylor (2002) and Taylor (2012a). I am grateful to Monica Bhole for helpful research assistance.

This period of greater economic stability is called the Great Moderation by many economists and is marked off by two vertical dashed lines in the chart. During this period expansions with positive growth were long, and recessions with negative growth were short. Following the back-to-back early 1980s recessions, there were only two recessions during this period and both were mild in comparison with other periods in American history.

Figure 2 shows the unemployment rate. It too declined during the period of the Great Moderation with relatively small ups and downs corresponding to the two mild recessions. The 1980s and 1990s were especially good compared with late the 1960s and 1970s when unemployment was rising.

Of course it is equally obvious from Figures 1 and 2 that the good economic performance did not last. The Great Moderation came to an abrupt end with the Great Recession. And the poor performance has continued with an extraordinarily weak recovery compared to the recoveries from previous deep recessions with financial crises in the United States as shown by Bordo and Haubrich (2011). The recovery from the deep 1981-82 recession was more than twice as fast as the recent recovery as shown by the circled areas in Figure 1. And the unemployment rate again went into double digits and has come down more slowly than in the early 1980s.

Monetary Policy

During much of the same time period in the 1980s and 1990s and until recently, monetary policy was more predictable, less discretionary, and more steadily focused on the goal of price stability, especially compared with the 1970s. During this period the Fed largely avoided go-stop changes in money growth and interest rates that had caused boom-bust cycles in the past.

However, for the past decade or so, there has been a large deviation from the type of monetary policy that worked well in the 1980s and 1990s. It appears that the policy reversal started during 2003-2005 when interest rates were held abnormally low, and it has continued during the more recent period of large scale purchases of mortgage backed securities and longer term Treasuries and of Fed statements that interest rates will be held at zero for several years into the future.

Much as economic theory would predict, when monetary policy became more rule-like and focused, the performance of the macro economy improved, and when policy reversed so did economic performance. Figure 3 is one way to show the changes in policy.[2] It plots the inflation rate which declined from the peaks reached during the great inflation of the late 1960s and 1970s. To illustrate the shifts in monetary policy, I have drawn a line at 4% inflation. Observe, as shown by the boxes in the chart, that the Fed's policy interest rate—the Federal funds rate—was much higher in 1989 when it was 9.7% than in 1968 when it was 4.8 % even though the inflation rate and business cycle conditions were about the same. That larger response of the interest rate was a regular predictable characteristic of monetary policy in the 1980s and 1990s compared with the earlier period. It is one of the best ways to indicate that policy changed leading to less inflation and ushering in the Great Moderation.

To illustrate the shift back in policy, I have drawn in another line at 2% inflation. Observe that the federal funds rate was only 1.0% in 2003 while it was 5.5% in 1997, even though the inflation rate was the same in 2003 as in 1997 and the overall level of utilization in the economy was similar. In other words the Fed deviated significantly from the type of policy that had worked well in the 1980s and 1990s by holding the interest rate very low. This was a

[2] I first used this method to illustrate the change in policy at the 90th birthday celebration for Milton Friedman in 2002 (Taylor 2002) and I updated the chart for the Friedman Centennial in November 2012 (Taylor 2012a). Other ways to show the changes are found in Taylor (2012b)

change that characterized the whole 2003-2005 period, which some now call the "too low for too long" period.

The inflation rate started to pick up during this period though less as measured by the GDP deflator, shown in Figure 3, than by housing prices. The low interest rate in 2003-2005 also led investors to take on extra risk in a search for yield. There has been much debate about whether the abnormally low interest rate exacerbated the housing boom and encouraged risk-taking, but in my view the evidence is mounting that this is exactly what happened. A recent study by Bordo and Lane (2012) not only reviewed the existing research, it also showed that over many countries and across many time periods asset price acceleration regularly follows such excessive monetary accommodation.

Following this period of extra low interest rates the Fed eventually tightened policy, and the tightening was probably greater than it would have been had the interest rate not gotten so low previously. In any case the overall result was a recession with a financial panic that made the recession worse. The Great Moderation was over. To be sure, it was not only monetary policy that brought on the crisis and the recession. Working in tandem with the abnormally low interest rates was lax enforcement of existing regulations at financial institutions including Freddie Mac and Fannie Mae.

During the Panic

Once the financial panic began in late September 2008, the Fed provided liquidity to the financial system. This action helped stabilize markets, much as did the Fed's response to the market disruption following the September 11, 2001 terrorist attacks.

Figure 4 illustrates the Fed's reactions in September 2001 and September 2008. It shows how the Fed increased the supply of reserve balances—deposits the commercial banks hold at the Fed—and thereby supplied liquidity to the financial markets. This is not to say that the Fed's interventions prior to the panic of 2008 were appropriate or that the size of the interventions during the panic was of the appropriate magnitude.[3] Nevertheless, the expansion of reserves during the panic of 2008 reflected a sensible central bank reaction.

After the Panic

After the panic was over, the liquidity facilities were drawn down as the liquidity needs diminished. However, the Fed did not return to a more normal monetary policy. Rather it continued to expand its balance sheet. It started to conduct unconventional large-scale asset purchases called quantitative easing, buying massive amounts of mortgage-backed securities and long-term Treasuries.

Figure 4 shows the impact of these securities purchases on reserve balances, which were used to finance the purchases. Without these purchases, reserve balances would have wound down as in the 9-11 2001 case. The contrast with what actually happened in 2009-2012 is striking as shown in Figure 4.

It is difficult to overstate the extraordinary nature of these recent interventions. They clearly dwarf the emergency response to the payments system damage caused by September 11, 2001 attacks. Before the 2008 panic, reserve balances were about $10 billion. Currently they are around $1,500 billion. If the Fed had stopped with the emergency responses of the 2008 panic, instead of embarking on QE1 and QE2, reserve balances would now be normal.

[3] Interest rates fell faster than the FOMC targets during this period. This may be an indication that the increase in the supply of reserves was greater than the increase in demand for reserves.

The economic impact of these purchases is hotly debated. Research by Johannes Stroebel and me (2012) shows that the MBS purchase program had little or no significant impact on mortgage rates. The paper by Gagnon et al (2011) shows a significant influence of large-scale asset purchases on interest rates. However, that study is based on announcement effects which are unreliable as explained in Taylor (2010). It remains to be seen whether the new MBS purchase program in QE3 will have a lasting impact.

In any case, there is no question that these unconventional actions have taken monetary policy more toward more discretion. Quantitative easing has been unpredictable in practice, as traders speculate whether and when the Fed will intervene. The Fed has moved well beyond its traditional areas. It can now intervene in any credit market—not only mortgage backed securities but also securities backed by automobile loans or student loans. This creates more uncertainty and raises questions about why an independent agency of government should have such power. The large increase in the Fed's balance sheet also raises questions about the impact on inflation down the road as well as the danger of additional contraction if the Fed has to reduce the size of the balance sheet quickly.

In addition because the supply of reserves has exploded the Fed must set the short term interest rate by declaring what interest rate it will pay on reserves without regard for supply and demand in the money market. By replacing large decentralized markets with centralized control, the Fed is distorting incentives and interfering with price discovery with unintended consequences throughout the economy.

The Zero-Bound on the Nominal Interest Rate

The zero lower bound on the short term nominal interest rate has been a main rationale for much of the discretionary interventions by the Fed after the panic of 2008. Fed officials have pointed out that policy rules or guidelines suggest that the federal funds rate should be much less than zero. But since large negative nominal rates are not feasible, the officials further argued that that massive quantitative easing was needed. They also argued that pledges to hold the federal funds rate at zero—part of the Fed's forward guidance—were needed to get current long rates down.

In my view the zero bound on interest rates does not have such implications, at least not during the period in question. First, it is not clear that a sensible interest rate policy rule would imply that the zero bound is binding to any significant degree. Consider Figure 5. It shows the federal funds rate and projections of the federal funds rate into the future by members of the Federal Open Market Committee.[4] It also shows (in red) the federal funds rate implied by a rule (Taylor (1993)) that I proposed and another one (in gray) which people at the Fed such as Janet Yellen (2012a, 2012b)) have been emphasizing. The first rule hovered around zero for a while but did not go much below zero, thereby hardly recommending massive quantitative easing. The second went way below zero and was thus used as a justification for quantitative easing.

There are a number of reasons, however, to be concerned about using the second rule as a guideline for policy in practice. It has a larger coefficient on the output gap—the deviation of real GDP from potential GDP—a measure of the utilization of overall resources in the economy. But the gap is very hard to measure, and good policy analysis suggests a smaller weight on the gap because of the measurement errors. Smets (1998), for example, found that the size of the

[4] Figure 5 is an updated version of a chart prepared by Robert DiClemente of Citigroup. The two rules are as stated in Yellen (2012a). The inflation numbers are the PCE price index. Projected values are from the FOMC central tendency forecasts.

coefficient should decline by a specific amount with the amount of uncertainty. Specifically he found that with a standard deviation of 1.4 for the estimation error on the output gap, the coefficient on the output gap should be 1; for a standard deviation of 1.6 for the measurement error on the gap the coefficient is .5. How big is the uncertainty for the United States? The standard deviation in the Weidner and Williams (2012) survey is 1.8 percent which takes the coefficient even lower. Moreover, robustness studies show that a smaller reaction is better as summarized in Taylor and Williams (2011).

Another reason to be concerned with the second rule is that it uses a very large value for the output gap, at least in the representation in Yellen (2012a). It is much larger, for example, than the average gap in the Weidner and Williams (2012) survey.

Forward Guidance and Discretion

Figure 5 also illustrates how the Fed's current forward guidance procedures have become quite complex and have increased the discretionary tendency of policy. They may also have reduced transparency which is counter to the intentions of the Fed. Observe that in the out years, even with the lower policy rule, most FOMC members are indicating that they want interest rates to be lower than the policy rule guidelines. The general FOMC view, as now reflected in the FOMC statement, is that the federal funds rate will be held at zero through mid-2015 even though both rules now suggest higher rates with the inflation and GDP forecasts of the FOMC members.

This discrepancy creates time inconsistency problems. Promising, even with some caveats, to do something in the future which will not be the right thing to do in a back-to-normal future is not time consistent. Recent suggestions by FOMC members to use economic indicators

rather than dates (such as mid-2015 to describe when rates would rise above zero) have the same problem if they are not consistent with the rule that would apply in the future or leave open how you return to such a rule in the future.

For these reasons it would be preferable for the FOMC to base its forward guidance directly on some kind of policy rule, as Plosser (2012) suggests. One rationale some FOMC members give for not doing so is that, as put by Yellen (2012b), "times are by no means normal now, and the simple rules that perform well under ordinary circumstances just won't perform well with persistently strong headwinds restraining recovery and with the federal funds rate constrained by the zero bound." But even if you agree with this view—and as stated earlier in these remarks I do not—the alternative discretionary policy is not well-specified and creates these time inconsistency problems.

An Alternative Policy When the Zero Bound Hits

An alternative to discretionary large-scale asset purchases or to inconsistent forward guidance when an interest rate rule is up against a zero bound is to switch to a steady money growth rate rule of the kind that Milton Friedman recommended. Large increases in reserves or the monetary base would be appropriate but only if they were needed to prevent the broader measures of the money supply from declining, or to achieve steady money growth rates more generally, not if they simply increased the volatility of money growth. Milton Friedman argued that keeping money growth from declining would have likely prevented the Great Depression of the 1930s in his research and writings with Anna Schwartz. While he did mention the possibility of modest increases in money growth in very depressed times and modest reductions in money

growth in excessive boom times, above all he advocated steady money growth, which would have made all the difference in the Great Depression. See in particular Friedman (1968).

The Fed's actions since 2009 have not kept the broader monetary aggregates growing steadily. Figure 6 shows M2 growth along with monetary base growth (with a dual scale since the growth rates are so different). While the money multiplier has been quite variable and special factors may have influenced money growth, you can see the impacts of the changes in the monetary base—which are mainly caused the large scale asset purchases—on the broader M2 monetary aggregate.

I am frequently asked what would Milton Friedman say and I often hear people trying to channel him in ways that I do not think are plausible. Unfortunately we will never know exactly what Milton Friedman would have said about recent monetary policy, but he always insisted on predictable steady rule-like behavior for the policy instruments, and that is not a characteristic of recent policy.

Conclusion

I have argued here that the monetary policy experience of the United States during the past 30 years—both in good times and bad—has clear implications for the future. Simply put: A change to a more rules based policy would lead to improved economic performance.

Some say that the Fed can't do anything more to help the economy or that it has run out of ammunition. I disagree. A change in monetary policy to a more rules-based approach as in the 1980s and 1990s and until recently would help the economy as it did in those decades. Getting started as soon as possible is important. Putting in place a more rules-like policy in a period where other policies—fiscal, regulatory, international—are creating so much uncertainty

would soon improve economic conditions. It is in uncertain times like today that predictable rules are especially needed.

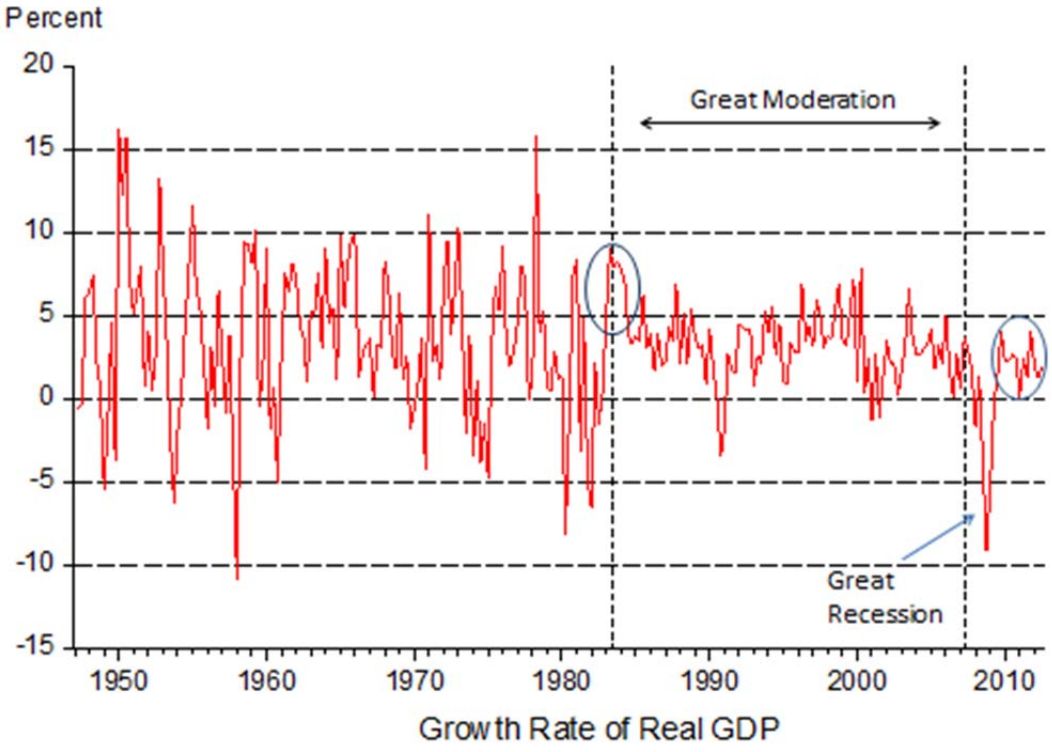


Figure 1

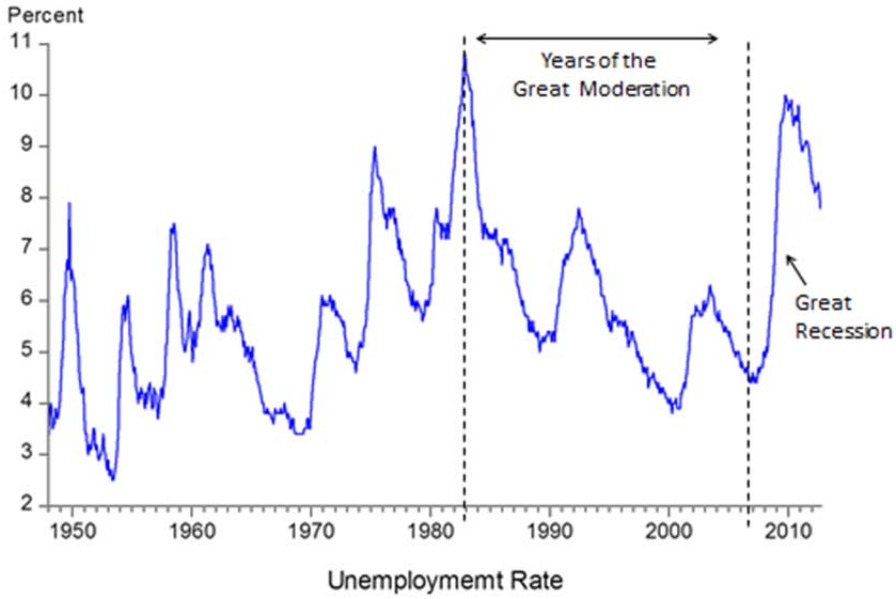


Figure 2

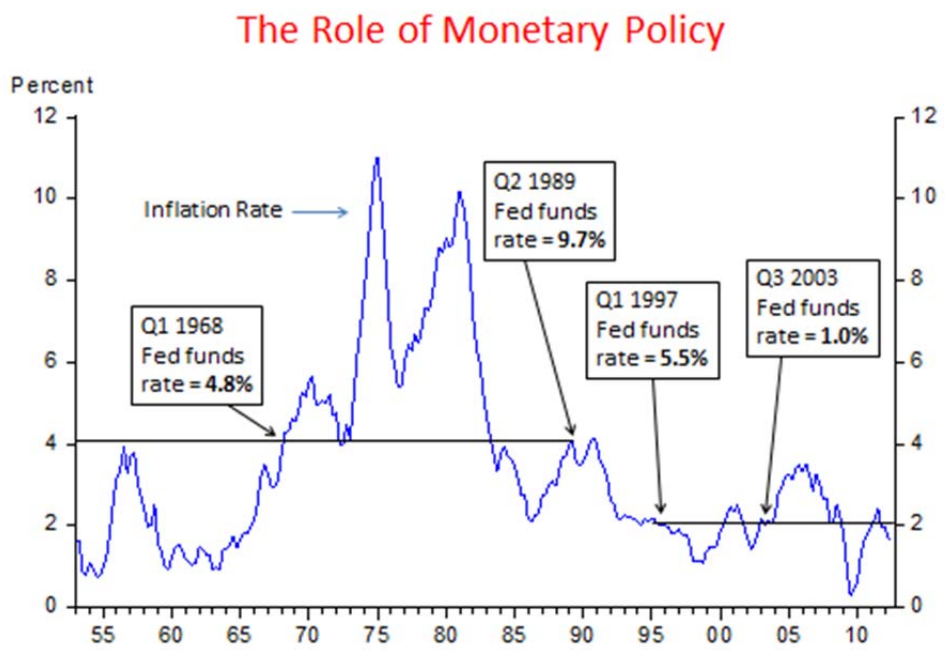


Figure 3

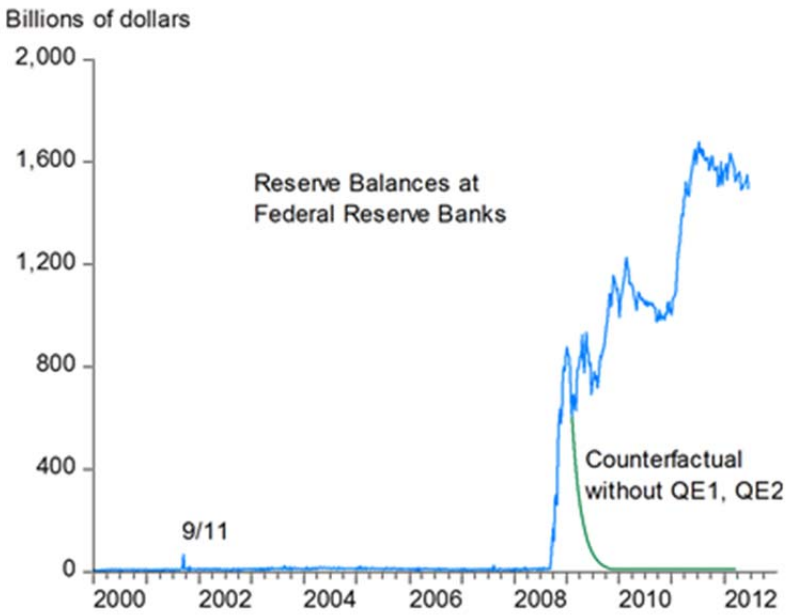
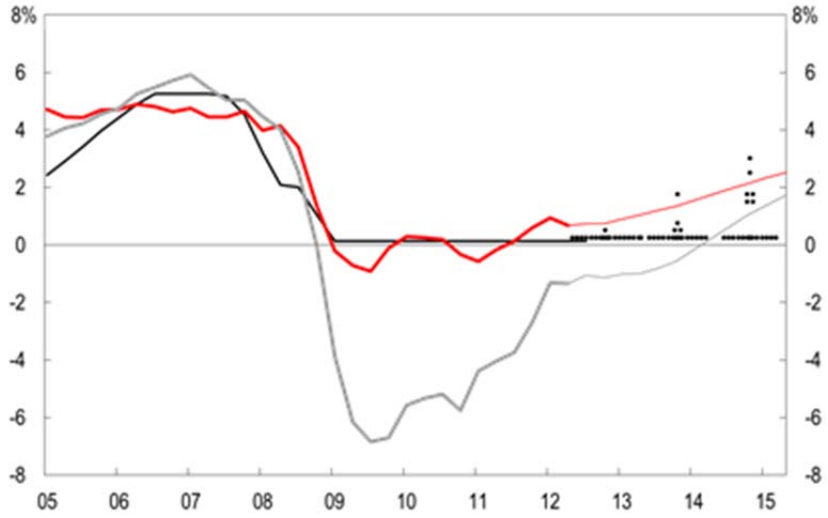
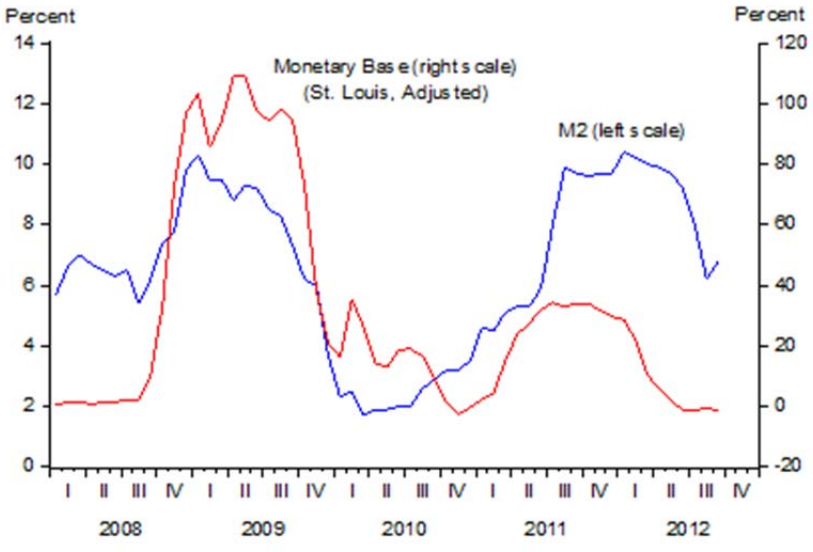


Figure 4



Federal Funds Rate: Actual, Two Rules, and FOMC Projections
Source: Update based based on Robert DiClemente, Citigroup

Figure 5



Money Growth
Monthly, Percent change from a year ago

Figure 6

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