13.13: Federal Reserve Actions and Quantitative Easing

Learning Objectives

- Evaluate Federal Reserve decisions over the last forty years
- Explain the significance of quantitative easing (QE)

Federal Reserve Actions Over Last Four Decades

For the period from the mid-1970s up through the end of 2007, Federal Reserve monetary policy can largely be summed up by looking at how it targeted the federal funds interest rate using open market operations. The Federal Reserve closely monitors the economy and considers when and if it should intervene, being mindful of the delicate tradeoff between unemployment and inflation.

Of course, telling the story of the U.S. economy since 1975 in terms of Federal Reserve actions leaves out many other macroeconomic factors that were influencing unemployment, recession, economic growth, and inflation over this time. The nine episodes of Federal Reserve action outlined in the sections below also demonstrate that the central bank should be considered one of the leading actors influencing the macro economy. As noted earlier, the single person with the greatest power to influence the U.S. economy is probably the chairperson of the Federal Reserve.

Figure 1 shows how the Federal Reserve has carried out monetary policy by targeting the federal funds interest rate in the last few decades. The graph shows the federal funds interest rate (remember, this interest rate is set through open market operations), the unemployment rate, and the inflation rate since 1975. Different episodes of monetary policy during this period are indicated in the figure.

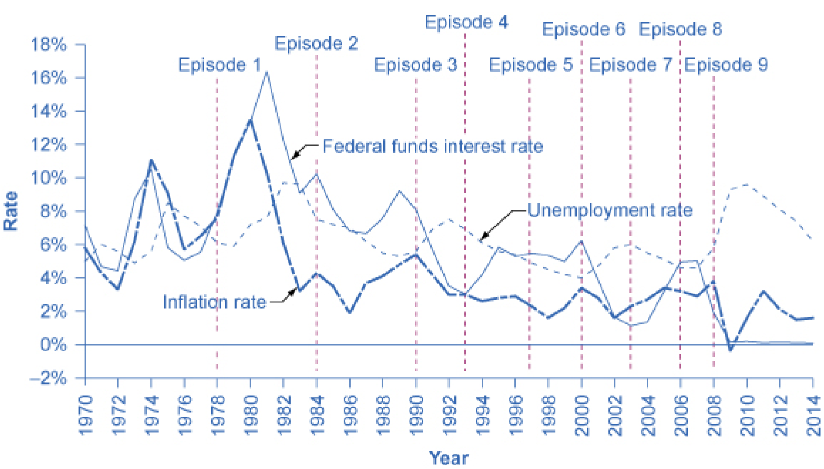

Figure 1. Monetary Policy, Unemployment, and Inflation. Through the episodes shown here, the Federal Reserve typically reacted to higher inflation with a contractionary monetary policy and a higher interest rate, and reacted to higher unemployment with an expansionary monetary policy and a lower interest rate.

EPISODE 1

Consider Episode 1 in the late 1970s. The rate of inflation was very high, exceeding 10% in 1979 and 1980, so the Federal Reserve used tight monetary policy to raise interest rates, with the federal funds rate rising from 5.5% in 1977 to 16.4% in 1981. By 1983, inflation was down to 3.2%, but aggregate demand contracted sharply enough that back-to-back recessions occurred in 1980 and in 1981–1982, and the unemployment rate rose from 5.8% in 1979 to 9.7% in 1982.

EPISODE 2

In Episode 2, when the Federal Reserve was persuaded in the early 1980s that inflation was declining, the Fed began slashing interest rates to reduce unemployment. The federal funds interest rate fell from 16.4% in 1981 to 6.8% in 1986. By 1986 or so, inflation had fallen to about 2% and the unemployment rate had come down to 7%, and was still falling.

EPISODE 3

However, in Episode 3 in the late 1980s, inflation appeared to be creeping up again, rising from 2% in 1986 up toward 5% by 1989. In response, the Federal Reserve used contractionary monetary policy to raise the federal funds rates from 6.6% in 1987 to 9.2% in

1989. The tighter monetary policy stopped inflation, which fell from above 5% in 1990 to under 3% in 1992, but it also helped to cause the recession of 1990–1991, and the unemployment rate rose from 5.3% in 1989 to 7.5% by 1992.

EPISODE 4

In Episode 4, in the early 1990s, when the Federal Reserve was confident that inflation was back under control, it reduced interest rates, with the federal funds interest rate falling from 8.1% in 1990 to 3.5% in 1992. As the economy expanded, the unemployment rate declined from 7.5% in 1992 to less than 5% by 1997.

Watch it

This video reviews the major monetary tools we've learned about thus far, which were the main tools used prior to the recession in 2008.

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EPISODES 5 AND 6

In Episodes 5 and 6, the Federal Reserve perceived a risk of inflation and raised the federal funds rate from 3% to 5.8% from 1993 to 1995. Inflation did not rise, and the period of economic growth during the 1990s continued. Then in 1999 and 2000, the Fed was concerned that inflation seemed to be creeping up so it raised the federal funds interest rate from 4.6% in December 1998 to 6.5% in June 2000. By early 2001, inflation was declining again, but a mild recession occurred in 2001. Between 2000 and 2002, the unemployment rate rose from 4.0% to 5.8%.

EPISODES 7 AND 8

In Episodes 7 and 8, the Federal Reserve conducted a loose monetary policy and slashed the federal funds rate from 6.2% in 2000 to just 1.7% in 2002, and then again to 1% in 2003. They actually did this because of fear of Japan-style deflation; this persuaded them to lower the Fed funds further than they otherwise would have. The recession ended, but, unemployment rates were slow to decline in the early 2000s. Finally, in 2004, the unemployment rate declined and the Federal Reserve began to raise the federal funds rate until it reached 5% by 2007.

EPISODE 9

In Episode 9, as the Great Recession took hold in 2008, the Federal Reserve was quick to slash interest rates, taking them down to 2% in 2008 and to nearly 0% in 2009. When the Fed had taken interest rates down to near-zero by December 2008, the economy was still deep in recession. Open market operations could not make the interest rate turn negative. The Federal Reserve had to think "outside the box."

Creating New Monetary Policy tools

At the beginning of the Great Recession the Federal Reserve found itself in a precarious position. Short term interest rates were close to zero, making it hard to conduct traditional open market operations. After all, expansionary monetary policy is carried out when the Fed purchases Treasury bills (T-bills) to lower short-term interest rates. If short-term rates are close to zero, there is little room for them to fall and stimulate spending. To deal with this situation, the Fed and the U.S. Treasury tried a number of innovative initiatives:

- The Fed began conducting quantitative easing (or QE, discussed in detail below). In quantitative easing, the Fed buys longer-term assets, instead of just T-bills, thus, lowering long-term interest rates, which they hoped would stimulate spending. QE includes the purchase of non-traditional assets like mortgage-backed securities, as well as Treasury and Corporate debt. By doing this, the Fed injected money into the banking system and increased the amounts of funds available to lend to the business sector and consumers.
- The Fed also tried alternative ways to increase reserves in the banking system, to provide at least the potential for banks to increase loans. To this end, the Fed began paying interest on bank reserves, something they had not done previously. This provided an incentive for banks to hold more reserves.
- In addition, the Fed made more aggressive use of repurchase agreements (or Repos). Repurchase agreements are essentially overnight loans in which central banks exchange cash for T-bills held by commercial banks, thus increasing holdings of bank reserves. These transactions are automatically reversed (i.e. the T-bills are "repurchased") at a small profit to the banks after 24 hours, so this has a very short term impact on bank reserves.

- While not technically monetary policy if we are speaking strictly, the Congress and the President also passed several pieces of legislation that would stabilize the financial market. The Troubled Asset Relief Program (TARP), passed in late 2008, allowed the U.S. Treasury to inject cash into troubled banks and other financial institutions and help support General Motors and Chrysler as they faced bankruptcy and threatened job losses throughout their supply chain. The Treasury purchased "troubled assets" from the banks, allowing them to clean up their balance sheets and begin lending again. The TARP was criticized as a "bail-out" of large banks by taxpayers, but while the Treasury purchased some $450 billion in troubled assets, they were able to recoup all but $37 billion by selling those assets once financial markets had stabilized. The purpose of these initiatives was not to bail out banks, or even protect depositors, but rather to protect the integrity of the payments system.

Watch It

Watch this video to learn more about the Fed's new monetary policy tools, which were developed in response to the 2008 recession.

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It is not yet clear the extent to which these new monetary policy tools will continue to be used once interest rates return to normal levels, allowing traditional open market operations to be used again. For now at least, they remain part of the Fed's toolkit.

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Quantitative Easing

The most powerful and commonly used of the three traditional tools of monetary policy—open market operations—works by expanding or contracting the money supply in a way that influences the interest rate. In late 2008, as the U.S. economy struggled with recession, the Federal Reserve had already reduced the interest rate to near-zero. With the recession still ongoing, the Fed decided to adopt an innovative and nontraditional policy known as **quantitative easing (QE)**. This is the purchase of long-term government and private mortgage-backed securities by central banks to make credit available so as to stimulate aggregate demand.

Quantitative easing differed from traditional monetary policy in several key ways. First, it involved the Fed purchasing long term Treasury bonds, rather than short term Treasury bills. The logic was the following: investment spending decisions are typically based on long term interest rates. Home mortgages, for example, have maturities up to 30 years. With traditional monetary policy, the idea is that since short term and long term interest rates tend to rise or fall together, lowering short term rates will ultimately lower long term rates and stimulate investment spending. Quantitative easing attempted to skip the middle step and directly lower long-term interest rates.

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This leads to a second way QE is different from traditional monetary policy. Instead of purchasing Treasury securities, the Fed also began purchasing private mortgage-backed securities, something it had never done before. One of the triggers of the financial crisis, which precipitated the recession, was the collapse of the market for mortgage-backed securities (MBS). Mortgage-backed securities were financial assets consisting of bundles of individual mortgages. The idea behind MBS was that by holding many mortgages in a single asset, if a few mortgages went into default, which happens even in normal times, the rest would maintain the value of the broader asset. Since each mortgage paid interest, so did the MBS. When the housing market collapsed and many mortgages defaulted, no one knew what the mortgage-backed securities were worth. As a result, they were termed "toxic assets," which put the financial institutions holding those securities on very shaky ground. By offering to purchase mortgage-backed securities, the Fed was both pushing long term interest rates down and also removing possibly "toxic assets" from the balance sheets of private financial firms, which would strengthen the financial system.

Quantitative easing (QE) occurred in three episodes:

1. During QE_1, which began in November 2008, the Fed purchased $600 billion in mortgage-backed securities from government enterprises Fannie Mae and Freddie Mac.
2. In November 2010, the Fed began QE_2, in which it purchased $600 billion in U.S. Treasury bonds.
3. QE_3, began in September 2012 when the Fed commenced purchasing $40 billion of additional mortgage-backed securities per month. This amount was increased in December 2012 to $85 billion per month. The Fed ended the program in late 2014 after the

unemployment rate had slipped under 6 percent.

The quantitative easing policies adopted by the Federal Reserve (and by other central banks around the world) are usually thought of as temporary emergency measures. If these steps are, indeed, to be temporary, then the Federal Reserve will need to stop making these additional loans and sell off the financial securities it has accumulated. The concern is that the process of quantitative easing may prove more difficult to reverse than it was to enact.

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Watch It

Watch the selected clip from this video to review some of the Fed's tools for enacting monetary policy and to see how quantitative easing was used following the 2008 recession.

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Glossary

[glossary-page][glossary-term]countercyclical:[/glossary-term]
[glossary-definition]moving in the opposite direction of the business cycle of economic downturns and upswings[/glossary-definition][glossary-term]federal funds rate:[/glossary-term]
[glossary-definition]the interest rate at which one bank lends funds to another bank overnight[/glossary-definition][glossary-term]quantitative easing (QE):[/glossary-term]
[glossary-definition]the purchase of long term government and private mortgage-backed securities by central banks to make credit available in hopes of stimulating aggregate demand[/glossary-definition]
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