How the Failure to Normalize Monetary Policy Creates Zombie Enterprises

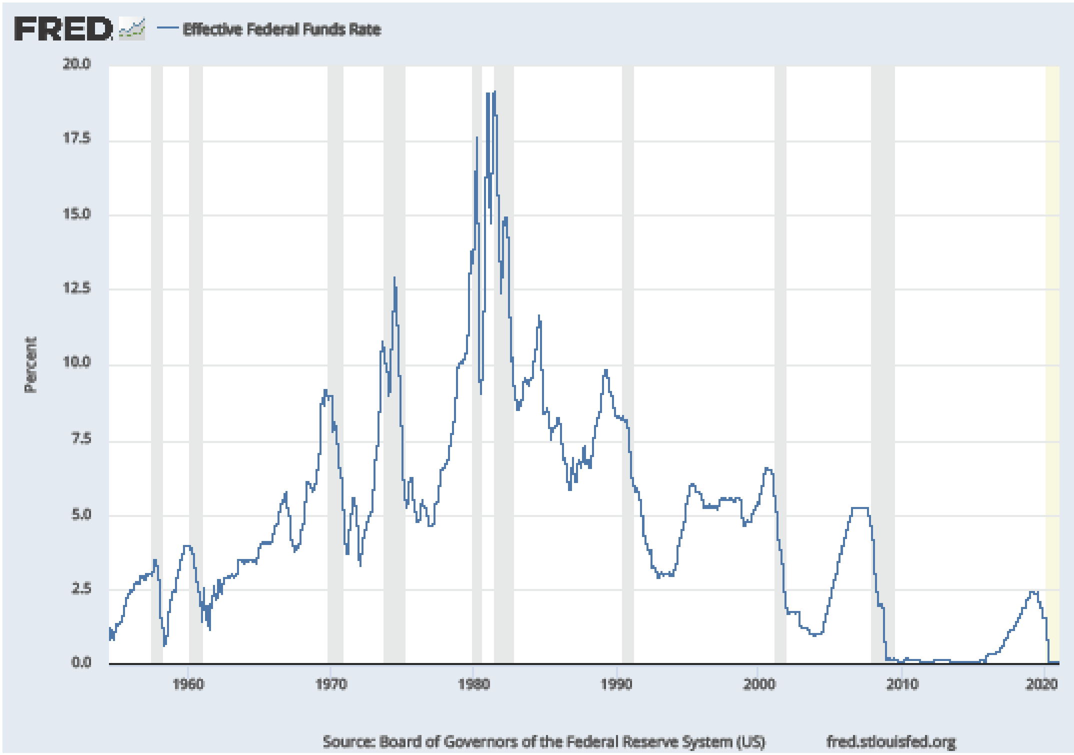
Barry Poulson
3-7-21

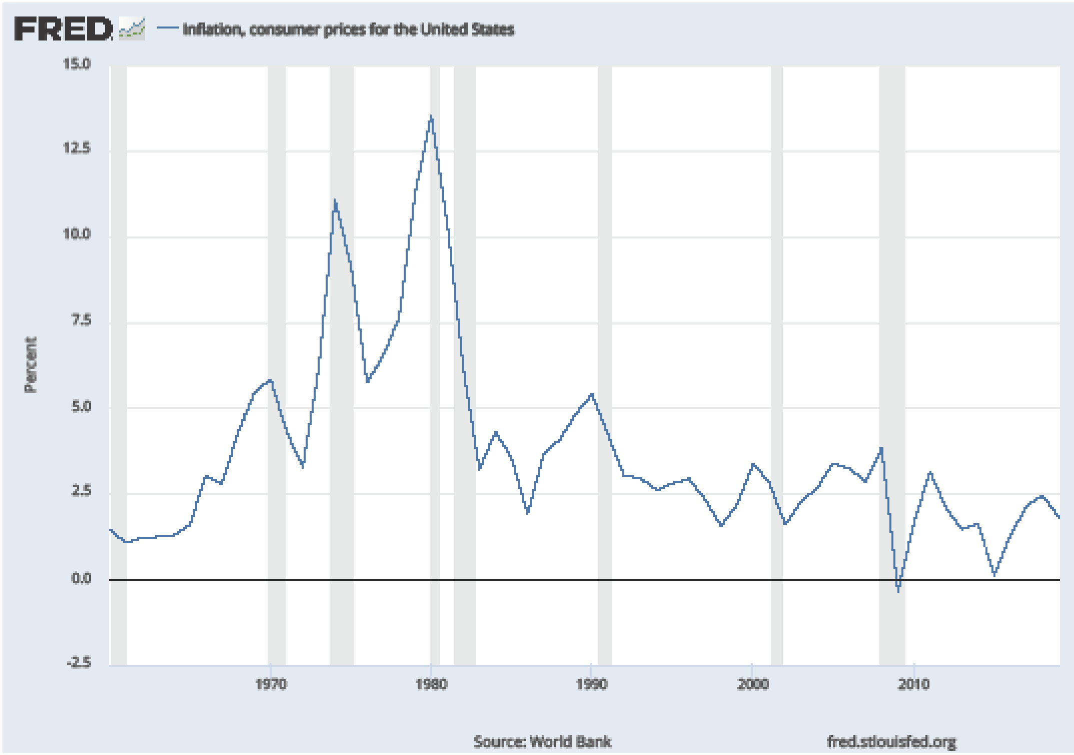
Recent studies explore the causes for Zombie enterprises. In recent years the failure to normalize monetary policy, and pursuit of non-conventional monetary policy has been a major factor in this Zombification. By lowering interest rates and purchasing bonds directly, central banks reduce the pressure on zombie firms to restructure or exit the industry (Borio and Hofmann 2017; Borio et al. 2017; Banerjee and Hofmann 2018a, 2018b). Weak banks have an incentive to keep zombie firms from defaulting on their loans, by rolling over the loans (Storz et al. 2017; Schivardi et al. 2017). This link between non-conventional monetary policy and Zombification is documented for Japan since the onset of the lost decade of the 1990s (Caballero et al. 2008). This Japan disease is also evident in the U.S.as the Fed shifted from conventional to non-conventional monetary policy over the past decade.

During the 'Great Moderation' of the 1980s and1990s the Fed pursued conventional monetary policies designed to bring inflation under control. The primary objective was to reduce inflation rates from the double digit inflation rates of the 1970s. The Fed implemented this monetary policy mainly through open market operations, i.e. buying and selling short term Treasury securities. By conducting open market operations, the Fed controlled the amount of money in the banking system, thereby increasing or decreasing the amount of credit that banks could extend.

In this conventional monetary policy banks regularly lent and borrowed reserves in the federal funds market to satisfy their legal reserve requirements. The interest rate in the federal funds market was a market determined rate depending on the supply and demand for excess reserves. While the Fed did not determine the federal funds rate, it set a target for that rate depending on macro-economic conditions. Targeting the federal funds rate is a key part of a rules based or conventional monetary policy. Taylor rules provide for adjustments in the target federal funds rate based on the rate of inflation and unemployment.

Normalization of monetary policy during the 'Great Moderation' of the 1980s and 1990s is clear in the following graphs. Prior to the 'Great Moderation' the inflation rate exhibits an upward trend peaking at 14 percent in 1980. During the 1970s the inflation rate fluctuated widely, between 3 and 14 percent. The federal funds rate also exhibits an upward trend peaking at 19 percent in 1980. The federal funds rate is also volatile in the 1970s, fluctuating between 4 percent and 14 percent.


FRED
Effective Federal Funds Rate
20.0
17.5
15.0
12.5
10.0
7.5
5.0
2.5
0.0
Percent
1960
1970
1980
1990
2000
2010
2020
Source: Board of Governors of the Federal Reserve System (US)
fred.stlouisfed.org


FRED
Inflation, consumer prices for the United States
15.0
12.5
10.0
7.5
5.0
2.5
0.0
-2.5
Percent
1970
1980
1990
2000
2010
Source: World Bank
fred.stlouisfed.org

The conventional monetary policies pursued in the 1980s and 1990s were effective in taming inflation. Inflation was reduced to less than 2 percent by the end of the period. Volatility in inflation was also significantly reduced. This normalization of monetary policy was accompanied by a sharp reduction in the federal funds rate. During the decade of the 1990s the federal funds rate fluctuated between 3 percent and 6 percent. Taylor argues that the normalization of monetary policy was abandoned in the following decade, when the federal funds rate varied between 1 percent and 5 percent (Taylor 1993, 2000, 2009. 2010, 2014, 2017).

The major break with conventional monetary policy occurred during the financial crisis that began in 2008. The Fed introduced the first quantitative easing program, purchasing large quantities of long term financial assets. Soon after the Fed began allocating credit directly to certain firms to keep them afloat. These nonconventional monetary policies significantly increased liquidity and reserves in the banking system. In order to maintain control over the federal funds rate and the money supply, the Fed sterilized its liquidity operations by selling short term treasuries from its portfolio. By selling treasury securities the Fed took reserves out of the banking system at the same time that it was injecting reserves into the system (Kroeger et al. 2017; Michel 2014, 2021).

During the financial crisis the Fed set a target for the federal funds rate at 2 percent, but this interest targeting approach was falling apart. The Fed was running out of short term treasuries to sell, exhausting its ability to sterilize emergency lending. By 2010 the federal funds rate had been reduced to close to zero. The Fed had no choice but to lower its target federal funds rate (Bernanke, 2015). At that point the Fed introduced a new non-conventional monetary policy. For the first time the Fed began to pay interest on reserves, including interest on excess bank reserves (IOER). The goal was to sterilize the large quantity of excess reserves created by the lending operations. The Fed accomplished this goal by setting the interest rate on excess reserves higher than the banks could earn lending the reserves in the federal funds market. Initially the IOER rate was below the target federal funds rate, but by early 2008 the IOER exceeded the target federal funds rate, a practice that continues to this day (Bernanke, 2015).

By setting an attractive interest rate on reserves, the Fed can induce banks to hold excess reserves rather than make new loans. This aspect of the new operating framework has had far reaching consequences for monetary and fiscal policy. When the Fed purchases assets this no longer automatically translates into expansionary monetary policy. In effect the Fed can purchase as many assets as it likes regardless of monetary policy objectives, by paying firms to hold the money as excess reserves. The new policy framework breaks the nexus between purchasing assets and the inflationary process. The enormous buildup of reserves during the 2008 financial crisis eventually caused the interbank lending markets to break down and contributed to the Fed abandoning its traditional operating procedures. The Fed adopted a new operating procedure that relies on bureaucratically administered interest rates rather than the traditional approach that depended on market forces and targeting a market rate. This new framework divorces the Fed's monetary policy from the size of its balance sheet (Dutkowsky and VanHoose. 2017, 2018; Dorn, J. 2020).

More important than this break in operating procedures was a more fundamental change in monetary policy. During the 'Great Moderation' the primary objective of monetary policy was price stabilization. The fed was able to accomplish this objective, while fulfilling its other mandate to achieve and maintain full employment.

In the aftermath of the financial crisis in 2008 a subtle shift occurred in monetary policy that would become explicit in later years. During the financial crisis the inflation rate fell below zero for the first time in half a century. In 2010 the inflation rate recovered above the inflation ceiling of 2 percent set in Fed policy. Disinflation then set in with the inflation rate falling to zero again in 2015. The unemployment rate hit a peak at about 10 percent in 2011. With slow economic recovery the unemployment rate remained high for several years, and full employment was not reached again until 2016 (Kroeger et al. 2017).

Normalization of monetary policy was not pursued until 2016. For half a decade after the financial crisis the Fed used its new operating framework to pursue expansionary monetary policy. The Fed balance sheet increased from $870 billion in 2007 to $4.5 trillion in 2015. The federal funds rate remained below .5 percent until 2016. In its open market committee meeting in 2016 the Fed committed to formally adopt 'policy normalization'. Over the next few years the Fed balance sheet fell to $3.8 trillion, and the federal funds rate rose to 2.4 percent. But, before this 'policy normalization' could be fully implemented the coronavirus pandemic brought a new economic shock (Kroeger et al. 2017).

In contrast to monetary policy during the 'Great Moderation', monetary policy in the post financial crisis era places a lower priority on price stabilization, and a high priority on achieving full employment. This shift in monetary policy would become explicit under the chairmanship of Jerome Powell. The new monetary framework was in place when the coronavirus hit in 2020. The Fed responded with a more vigorous policy of monetary easing than that pursued during the financial crisis. In 2020 the Fed increased total assets in the balance sheet to more than $7 trillion. The federal funds rate was again reduced to close to zero (Powell 2020; Clarida, R. 2021).

The Fed tweaked the policy framework by shifting from an inflation ceiling of 2 percent, to an average inflation rate of 2 percent over the business cycle. While it is not clear how much inflation in excess of 2 percent will be tolerated or for how long, price stabilization now has a significantly lower priority. During the 'Great Moderation' the Fed increased the target federal funds rate whenever unemployment fell to levels that economists believed would cause wages and prices to rise too much. In the new framework the Fed will not increase the target federal funds rate until inflation exceeds 2 percent, and is on track to exceed that target for some time to offset previous shortfalls. Chairman Powell stated that "the kind of troubling inflation that people like me grew up with seems far away and unlikely (Wall Street Journal 2021c)".

Chairman Powell underscored his determination to achieve full employment. The Fed further tweaked the policy framework by redefining full employment to reflect underemployment and the large numbers of workers who have left the labor force. Chairman Powell stated that the Fed will not begin to tighten easy monetary policies until it sees much more improvement in labor markets. Chairman Powell stated that, "We've shown that we can get to low levels of unemployment, and that the benefits to society, including particularly lower and moderate income people - are very substantial" (Wall Street Journal 2021a, 2021b).

The new policy framework allowed the Fed to provide monetary stimulus through low federal funds rates, large scale asset purchases, direct extension of credit, and other refinancing operations. The macroeconomic performance of the U.S. economy appears increasingly like Japan's 'lost decades'.

Both countries experienced deflationary pressures characterized by low interest rates and 'zombie lending'. Zombie lending involves the extension of credit to weaker firms, often by banks that are weakly capitalized. The U.S. is not unique in this regard. Those trends are also evident in European countries over the past decade. We refer to this as the 'Japan disease' because these countries exhibit similar macroeconomic trends, i.e. a persistent low interest rate environment which sets the stage for zombie lending. Zombification refers to the outcome when this type of lending keeps nonviable firms afloat (Caballero et al. 2008; Acharya et al. 2020; Borio and Hofmann 2017).

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