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PROFESSIONAL

Federal Reserve Tightening Cycles: A Brief History

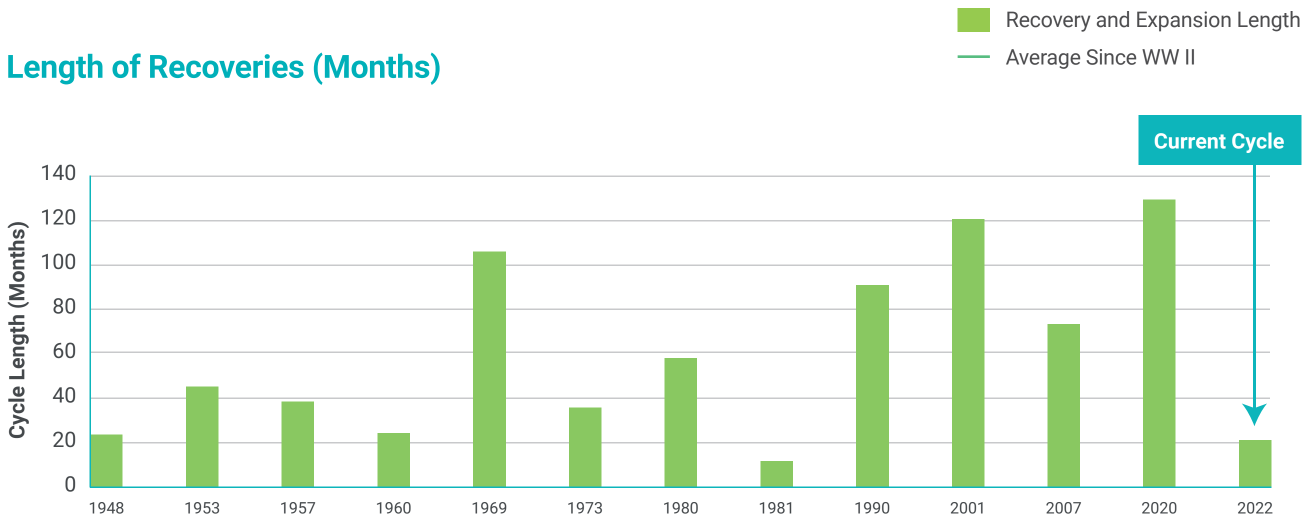
The Federal Reserve (the Fed), has had a generally accommodative monetary policy in recent years, lowering its key policy rate, the Federal Funds Rate (FFR), from 2.0% – 2.25% in July 2019 to 1.0% – 1.25% by March 2020. In response to the negative effects of the COVID-19 pandemic, the Fed went into full accommodative mode, further lowering its FFR range to 0.0% – 0.25%. The Fed also increased its balance sheet from $4.2 trillion at year-end 2019 to $8.8 trillion at year-end 2021. This program, known as Quantitative Easing (QE), involves the Fed buying U.S. Treasuries and other fixed income securities. These efforts were designed to keep borrowing costs low and to stave off a rise in bankruptcies due to the 2020 recession brought about by the pandemic.

The Fed's monetary policy coupled with additional fiscal stimulus resulted in the pandemic-induced recession being one of the shortest and sharpest recessions in U.S. history. After GDP growth fell 4.0% in 2020, growth rebounded to 5.7% year over year in 2021. Unfortunately, the pandemic caused labor and other supply shortages that curtailed the supply of goods and services while demand increased sharply. The result was a jump in the inflation rate to about 7.0% at the end of 2021. This rise in inflation beyond the Fed's target of roughly 2.0% has, in turn, led the Fed to conclude it may need to tighten monetary policy to help bring inflation back down; in fact, they've already raised the federal funds rate by 25 basis points in March with more increases expected throughout 2022. The Fed also plans to stop growing its balance sheet, ending QE, but may not actively shrink it for another year. As such, it may be useful to examine past Federal Reserve tightening cycles to see if there are any lessons that could be gleaned as to what may happen in the upcoming cycle.

Length of Recoveries

The chart below shows that, on average, economic recoveries tend to last about five years, but the last four cycles have lasted much longer, averaging almost nine years. Also note that the average GDP growth in the last four cycles has dropped in each successive recovery, with the last recovery cycle averaging GDP growth of 2.2% annually, below the 4.2% historical average.

Length of Recoveries (Months)



Cycle End	1948 Q4	1953 Q3	1957 Q3	1960 Q2	1969 Q4	1973 Q4	1980 Q1	1981 Q3	1990 Q3	2001 Q1	2007 Q4	2020 Q1	Average	Current
Cycle Length (months)	22	45	39	24	106	36	58	12	92	120	73	128	63	21
Average Growth (%)	2.7	7.0	3.9	6.2	5.0	4.7	4.3	3.1	4.3	3.6	2.9	2.2	4.2	3.2

Source: Macrobond

This history raises the possibility that growth in the current cycle may be less likely to attain the levels of the prior cycles. We believe current GDP growth in the U.S. to be slightly under 2.0% based on labor force growth and productivity trends, which would indicate to us that, after the strong rebound in 2021 of 5.7% growth, GDP growth is likely to trend down over time.

We have less conviction on the length of the recovery based on the data. While the past four cycles have been longer than average, we suspect that secular trends in deglobalization and the supply chain issues seen during the pandemic may mean that companies carry larger inventories compared to the past two decades. This will likely increase business cycle volatility as companies react by drawing down and rebuilding inventories, which could result in shorter economic cycles than we have seen since the 1990s.

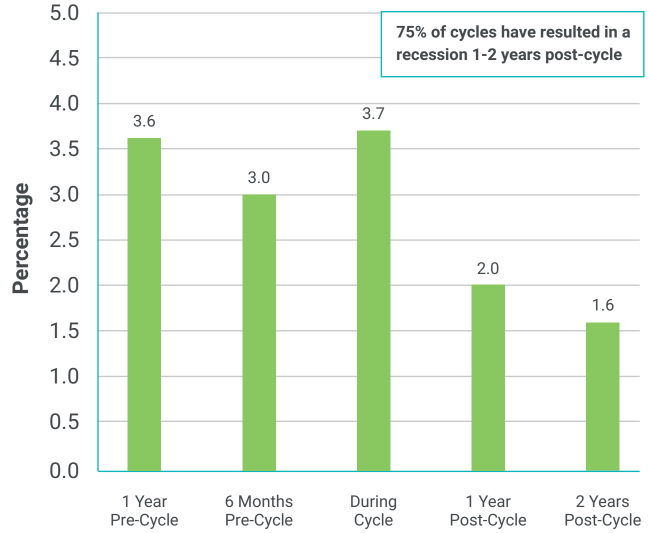
Economic Impacts of Tightening Cycles

The charts on the right show the impact of the past four Fed tightening cycles on key economic indicators: GDP growth, inflation, and employment. Looking at the past four cycles versus the full history of Fed tightening cycles does show some differences, but we believe the experience of the U.S. since the 1990s may be more relevant to what can happen in the future. Bear in mind that Fed tightening cycles usually last about two years, so the following consideration of what happens during the cycle to various indicators is over a two-year period.

GDP Growth: One can typically observe solid GDP growth during the Fed's tightening cycles, which historically drops sharply one to two years after the cycle ends. In three of the past four cycles, the U.S. fell into a recession, indicating a lag in the effects of the Fed's actions.

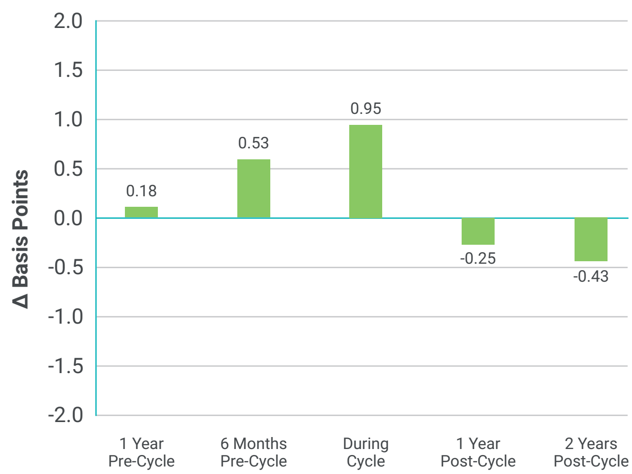
Inflation: The data indicates that inflation tends to rise during a Fed tightening cycle but then generally falls in the following one to two years. This is to be expected since if inflation didn't fall after the Fed hiked rates, the Fed would continue to hike rates. The second chart on the right shows the change in the inflation rate over the past four cycles. We note that this is the one area where there's a marked difference between the past four cycles and the full history, as the latter shows a full percentage point drop in the inflation rate one to two years after the cycle ends. It's possible that this current cycle will show a larger drop in the inflation rate as well.

Real GDP Annualized (Last 4 Cycles)



Source: Macrobond

Δ Inflation Rate (Last 4 Cycles)



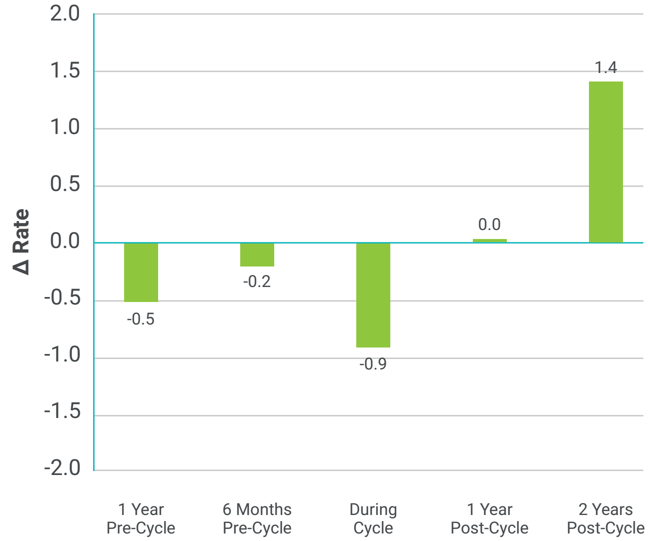
Source: Macrobond

Unemployment Rate: It's not surprising that one to two years after the Fed's cycle ends and the economy enters a recession we see that, historically, the unemployment rate rises. Note that there's a lagged effect as the data only shows the unemployment rate increase entering a recession; generally, during and even after a recession, the unemployment rate continues to rise.

Market Impacts of Tightening Cycles

Interest Rates: The table below shows the various Fed tightening cycles and the beginning and ending rates for Fed funds, 3-month Treasury bills, and 10-year Treasury rates. What can be seen in the historical data is that the yield curve flattens significantly in a Fed tightening cycle as short-end rates rise much faster than 10-year rates. We would expect this dynamic to play out in a similar manner in this current cycle. As context, in the last three rate cycles, the 10-year rate only increased by 40 to 60 basis points from the start to the end of the cycle. While no cycle follows the same path as prior cycles, this may indicate that 10-year yields are unlikely to go much above 2.0% unless inflation pushes rates higher than in prior cycles.

Δ Unemployment Rate (Last 4 Cycles)

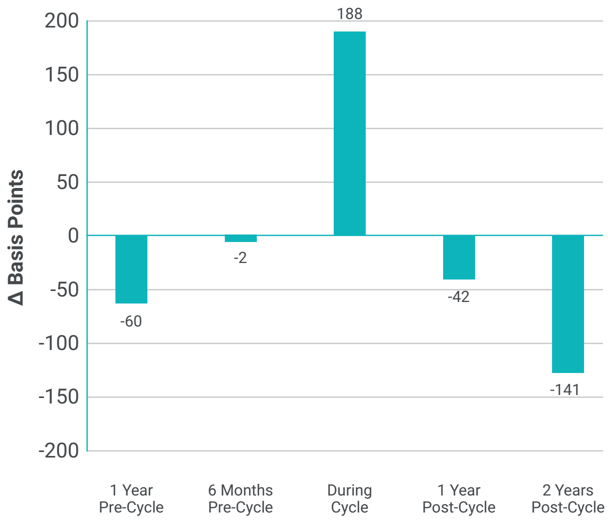


Source: Macrobond

		LEVELS AT START OF CYCLE			LEVELS AT END OF CYCLE		
Start of Cycle	End of Cycle	Fed Funds	3-Month Treasury Bill Rate	10-Year Rate	Fed Funds	3-Month Treasury Bill Rate	10-Year Rate
Jul 1954	Oct 1957	0.8	0.7	2.3	3.5	3.6	4.6
May 1958	Nov 1959	0.6	0.9	2.9	4.0	4.2	4.5
Jul 1961	Nov 1966	1.2	2.2	3.9	5.8	5.3	5.1
Jul 1967	Aug 1969	3.8	4.2	5.2	9.2	7.0	6.8
Mar 1971	May 1974	3.7	3.4	5.5	11.3	8.2	7.5
Dec 1976	May 1981	4.7	4.4	6.8	18.5	16.3	13.5
May 1983	Aug 1984	8.6	8.2	10.8	11.6	10.5	12.8
Dec 1986	Feb 1989	6.9	5.5	7.2	9.4	8.5	9.3
Feb 1994	Feb 1995	3.3	3.3	6.2	5.9	5.8	7.2
Jun 1999	May 2000	4.8	4.6	5.8	6.3	5.8	6.3
Jun 2004	Jun 2006	1.0	1.3	4.6	5.0	4.8	5.2
Dec 2015	Dec 2018	0.2	0.2	2.3	2.3	2.4	2.7

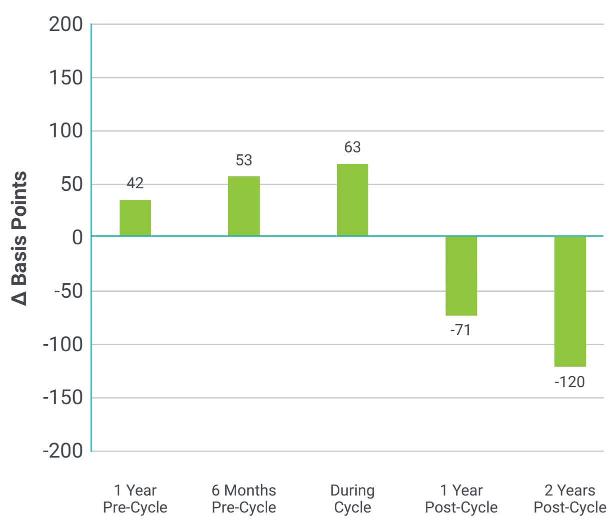
Source: Macrobond

Δ 10-Year Treasury Yield (Last 12 Cycles)



Source: Macrobond

Δ 10-Year Treasury Yield (Last 4 Cycles)



Source: Macrobond

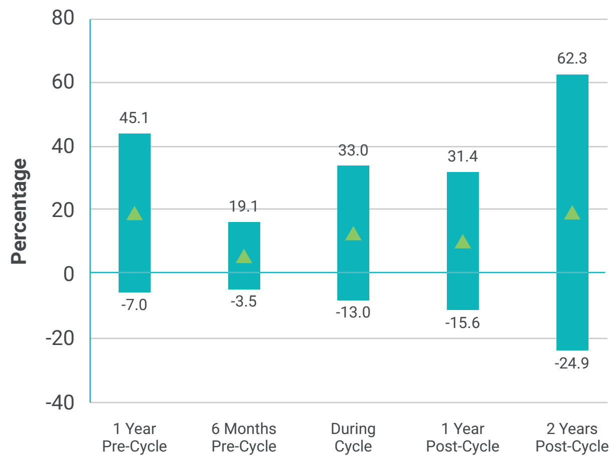
However, focusing solely on 10-year Treasury rates, there's an interesting dynamic in the historical data across all tightening cycles as well as the past four cycles.

As one can see in these charts, the 10-year Treasury yield generally rises during the cycle but then falls quite sharply one to two years after the hiking cycle ends, usually as the economy enters a recession. Note the sharp difference in the increase in the 10-year Treasury yield for all cycles versus the past four cycles – yields moved more than 120 basis points higher during cycles before 1990 versus cycles after 1990. Also note that yields in the past four cycles rose one to two years before the tightening cycle, perhaps indicating that the markets have become more efficient at anticipating the Fed's actions.

For this cycle, the historical data would indicate that while 10-year yields may rise during the cycle, it's fairly likely that rates would fall again, almost making a complete round trip one to two years after the tightening cycle ends. For long-term investors, riding out the oscillations of the Treasury yield may be the preferred course of action. Shorter-term investors might consider shorter duration bonds or floating rate securities during the cycle. Of course, the inflation dynamic is very different in this cycle, so the uncertainty around the path of interest rates should make one cautious about trying to time the cycle.

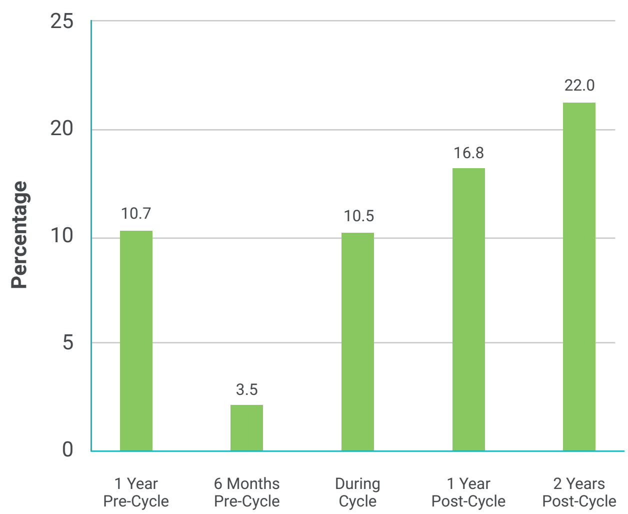
Equities: The historical data on returns on equities before, during, and after a Fed tightening cycle tends to be positive, as can been seen in the charts on the left. Note that we are only referring to the performance of the S&P 500® Index in the charts. Generally, for the past four tightening cycles, the S&P 500 performed quite well when looking at one year before the cycle started, during the cycle, and even one to two years after the cycle ended. However, the range of performance is quite large, with significant drawdowns occurring during the tightening cycle and one to two years after the cycle ends.

S&P 500 (Last 12 Cycles)



Source: Macrobond

S&P 500 (Last 4 Cycles)



Source: Macrobond

For this current cycle, the historical data suggests positive equity returns overall, but points to the strong likelihood of a double-digit drawdown in equities at one or more points during and after the tightening cycle.

Conclusion

Generally, the Federal Reserve tightening cycles see an increase in volatility, a rise in short maturity interest rates, a high probability of a correction in equity markets, and an increased risk of a recession one to two years after the cycle ends. We believe the current cycle may track previous cycles, with the aforementioned impacts likely to occur. However, the current cycle may not look like other cycles as the **inflation dynamic is quite different and perhaps more pernicious than any period since the 1990s.** If inflation proves harder to control, we may harken back to tightening cycles from the 1970s and 1980s, where the Fed may have to be even more aggressive in raising rates than the market is currently expecting. This, in turn, increases the possibility of more negative market impacts in terms of higher rates, a sharper correction of the equity markets, and a deeper recession.

We are closely watching multiple economic indicators, especially the yield curve, as a flatter yield curve usually points to a possible recession. At this point, our proprietary recession index is pointing to a higher possibility of a recession, but it is by no means conclusive. Recall that a Fed tightening cycle ends in a recession roughly 67% of the time, so there is a one in three chance that this cycle could simply result in a midcycle slowdown, where growth slows appreciably but the economy doesn't tip into an outright recession. Nonetheless, with a less accommodative Federal Reserve and uncertainty about GDP growth, interest rate and inflation outlooks are likely to be consistent themes throughout 2022 along with political noise from the midterm elections in November 2022. As a result, we anticipate more equity and interest rate volatility over the next several months.

About Phil Melville
Chief Risk Officer
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Phil Melville is a Managing Director and the Chief Risk Officer for Brighthouse Financial. He is responsible for developing and communicating the firm's global macroeconomic and market outlook as well as managing the $40 billion credit portfolio.

Data and charts were gathered from Macrobond.

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