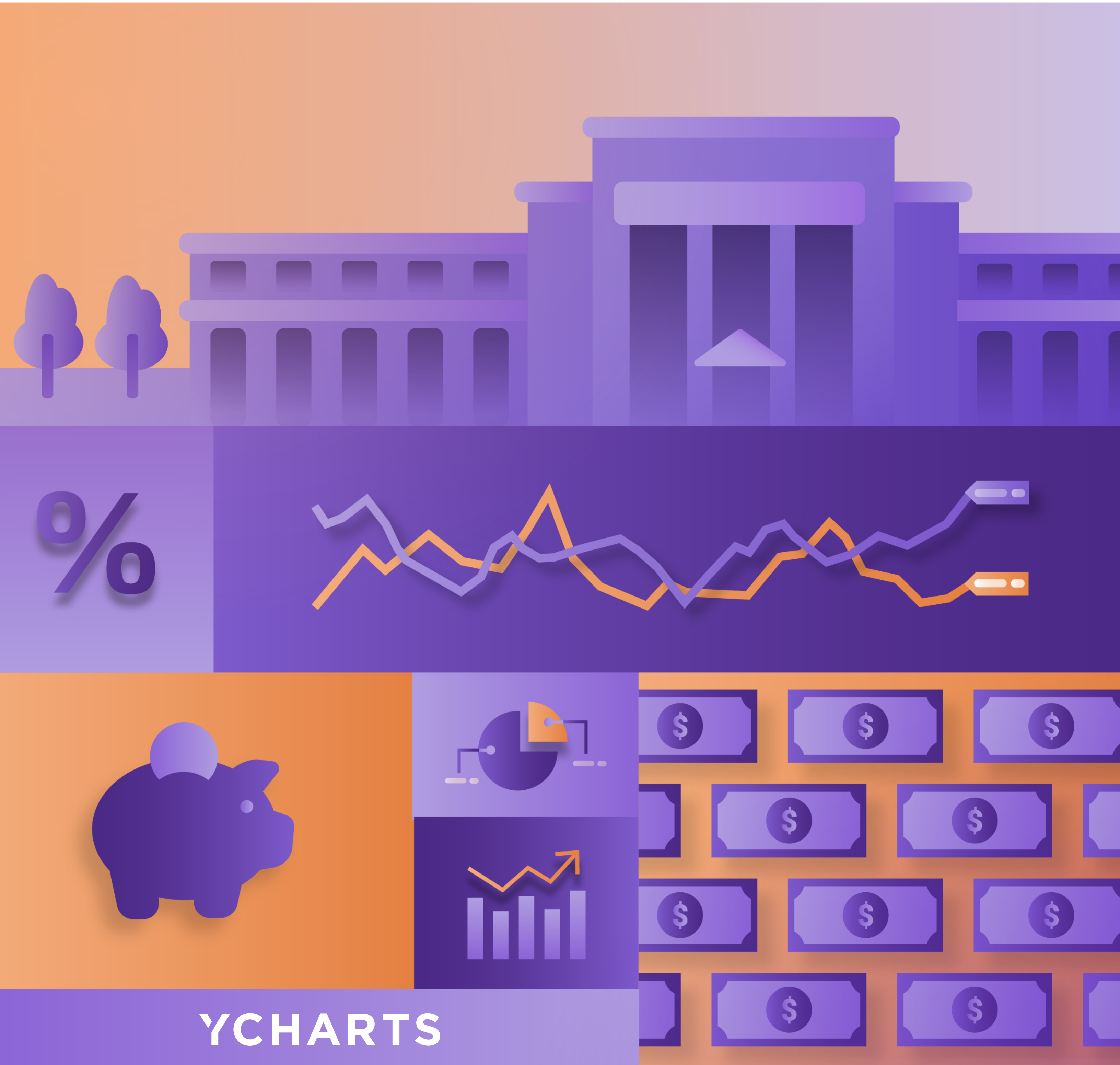
***Managing Rising Rate Environments*:**
Which Portfolios and Asset Classes Perform Best?



Intro

The United States Federal Reserve has been at the center of pretty much everything lately. Similar to a car going 0 to 60 in 3 seconds flat, the central bank rapidly hiked its key Fed Funds Rate from 0% to 5% over the course of just one year in an effort to combat inflation levels not seen in over four decades. This comes shortly after the Fed slashed the Fed Funds Rate to 0% for the first time ever, made no raises for seven years, and quickly cut it following a rate hike cycle to 0% again in 2020.

The Fed has the power to shape domestic and international monetary policy while influencing interest rates all across the spectrum. Given that the Fed, in the span of one decade, went from the unchartered territory of 0% interest rates for a prolonged period to a rapid hike cycle for fighting 40+ year high inflation, it's understandable how investors—as well as the advisors who oversee client assets—might feel uncertain about how the Fed's movements may affect their portfolios.

There's a mantra that goes "Don't Fight the Fed", meaning investors should align their investment choices with the actions of the Fed. But how exactly has changing asset allocation during rate hike cycles affected the outcome of portfolios? Would tactical changes such as moving to cash in a rising rate environment have been in clients' best interests, or best to avoid panic and "stay the course" instead?

We studied how ten different portfolio allocations performed across the four most recent rate hike cycles, including the ongoing cycle between 2022-2023. We also illustrated which asset classes performed best and worst in each cycle. Read on to discover our findings.

Questions We'll Answer:

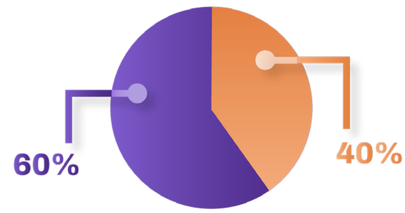
- What are the best & worst performing asset classes during & after hike cycles?
- Does any one portfolio or asset class outperform the rest in every rate hike cycle?
- How do different asset allocations perform during Fed rate hike cycles?
- How do allocations perform one year after the end of each rate hike cycle?
- What happened if you exited the market entirely & moved to 100% cash amid rising rates?
- What are the impacts of reducing equity position and increasing bond position?
  - → Conversely, what are the impacts of "fighting the Fed" by upping equity exposure in a rising rate environment?

Key Findings

1

No particular asset class consistently outperformed or underperformed across all four rate hike cycles studied.

2



A balanced 60/40 Portfolio was the most consistent performer relative to other asset classes throughout all four rate hike cycles.

3

Investing in either an All-Stock or All-Cash portfolio on March 16th, 2022—the first rate hike of the current cycle–would have delivered you the same 4.2% return as of July 26th, 2023, following 11 rate hikes totaling 525 basis points worth of increases.

4

Portfolios with a cash position performed best in the current 2022-2023 rate hike cycle versus those comprised of just stocks and bonds. An All-Cash portfolio is generating the greatest positive return of all studied portfolios in the current cycle.

5

Portfolios declined toward the end of the 1999-2000, 2004-2006, and 2015-2018 cycles. For the latter two cycles, portfolios performed to the upside once the Fed ceased hiking rates.

Background & Information

A Sample 60/40 Portfolio, 60% equity and 40% fixed income, was created using five mutual funds (listed below) to represent the risk and performance characteristics of an average portfolio. The Sample 60/40 was then adjusted accordingly to reflect different allocation types. Portfolios with a cash position use a money market fund, the Schwab Value Advantage Money Fund (SWVXX), which represents moving assets to a cash-like position that can generate a return during the holding period.

The four most recent rate hike cycles were studied:

- 6/30/1999 - 5/16/2000 (1999-2000)
- 6/30/2004 - 6/29/2006 (2004-2006)
- 12/16/2015 - 12/19/2018 (2015-2018)
- 3/16/2022 - 7/26/2023 (2022-Present)

The start date marks the first rate hike of the cycle, while the end date marks the final hike of the cycle. (In the case of the ongoing "2022-Present" cycle, the most recent hike occurred on 7/26/2023) Toward the end of this research is a small "bonus" section that looks at any differences or similarities from the Paul Volcker era (1979-1987).

For each rate hike cycle, we looked at portfolio performance for two time frames:

1. The full rate hike cycle, from start date to end date
2. The start of the cycle through one year after the last rate hike

	60/40	100/0	80/20	50/50	40/60	55/35/10	45/25/30	30/20/50	All-Cash	All-Bond
VTSMX	35.00%	58.33%	46.66%	29.17%	23.33%	32.08%	26.25%	17.50%	-	-
VGTSX	20.00%	33.33%	26.67%	16.66%	13.34%	18.34%	15.00%	10.00%	-	-
VEIEX	5.00%	8.34%	6.67%	4.17%	3.33%	4.58%	3.75%	2.50%	-	-
VBMFX	30.00%	-	15.00%	37.50%	45.00%	26.25%	18.75%	10.00%	-	75.00%
VBISX	10.00%	-	5.00%	12.50%	15.00%	8.75%	6.25%	5.00%	-	25.00%
SWVXX	-	-	-	-	-	10.00%	30.00%	50.00%	100.0%	-

1st Rate Hike Period, 1999-2000

Cycle Duration: 6/30/1999 - 5/16/2000
Rate Hike: 4.75% to 6.50%
Total Increase: 175 basis points

The first of four rate hike cycles studied lasted 10.5 months and encompassed the dot-com bubble. Six total rate hikes occurred during this cycle; the S&P 500 reached its peak of 1,527.46 a little less than two months prior to the sixth and final rate hike on May 16th, 2000, which was also the sole 50 basis point increase of the cycle. The Fed kept the Fed Funds Rate unchanged at 6.50% for its next five meetings, and began cutting at its January 3rd, 2001 meeting.

The quilt below shows performance of several major asset classes during the 1999-2000 rate hike cycle:

Commodities was the best performing asset class from start to finish of the 1999-2000 rate hike cycle, followed by the Russell 1000 Growth Index–perhaps unsurprising given the boom in tech stocks at the time. Both US Real Estate and the Russell 1000 Value Index were low performers throughout the rate hike cycle. Cash was beneficial shortly after the first rate hike, but became less effective further out.

6/30/99 - 5/16/00 Total Return	1 Month Total Return	3 Month Total Return	6 Month Total Return	1 Year Total Return	3 Year Total Return
Commodities 24.8%	Developed Markets 3.0%	Commodities 11.9%	Russell 1K Growth 20.4%	Commodities 26.8%	Russell 1K Growth 29.6%
Russell 1K Growth 21.9%	Commodities 1.4%	Developed Markets 4.5%	Developed Markets 12.2%	Russell 1K Growth 25.7%	S&P 500 (Large Cap) 22.6%
Developed Markets 15.8%	Cash 0.4%	Cash 1.2%	Commodities 11.7%	Developed Markets 17.4%	Commodities 20.5%
Russell 2K (Small Cap) 11.7%	Aggregate Bonds -0.4%	Aggregate Bonds 0.7%	60/40 Portfolio 9.7%	Russell 2K (Small Cap) 14.3%	Russell 1K Value 15.7%
Emerging Markets 10.3%	60/40 Portfolio -0.9%	60/40 Portfolio -1.5%	Russell 2K (Small Cap) 9.2%	60/40 Portfolio 9.7%	Russell 2K (Small Cap) 12.8%
S&P 500 (Large Cap) 7.9%	Emerging Markets -2.7%	Russell 1K Growth -3.7%	S&P 500 (Large Cap) 7.4%	Emerging Markets 9.5%	60/40 Portfolio 12.0%
60/40 Portfolio 7.6%	Russell 2K (Small Cap) -2.7%	Emerging Markets -5.2%	Emerging Markets 5.6%	S&P 500 (Large Cap) 7.2%	Aggregate Bonds 5.5%
Cash 4.5%	Russell 1K Value -2.9%	S&P 500 (Large Cap) -6.2%	Cash 2.1%	Cash 5.6%	Cash 5.3%
US Real Estate 2.0%	S&P 500 (Large Cap) -3.1%	Russell 2K (Small Cap) -6.3%	Aggregate Bonds 0.8%	Aggregate Bonds 4.6%	US Real Estate 2.6%
Aggregate Bonds 1.4%	Russell 1K Growth -3.2%	US Real Estate -8.8%	Russell 1K Value -5.4%	US Real Estate 2.6%	Emerging Markets -17.7%
Russell 1K Value -3.0%	US Real Estate -3.6%	Russell 1K Value -9.8%	US Real Estate -9.8%	Russell 1K Value -8.9%	Developed Markets -18.3%

**Custom Period Return: 6/30/99 - 5/16/00. Returns over 1 year are annualized. Data as of 5/31/23.*

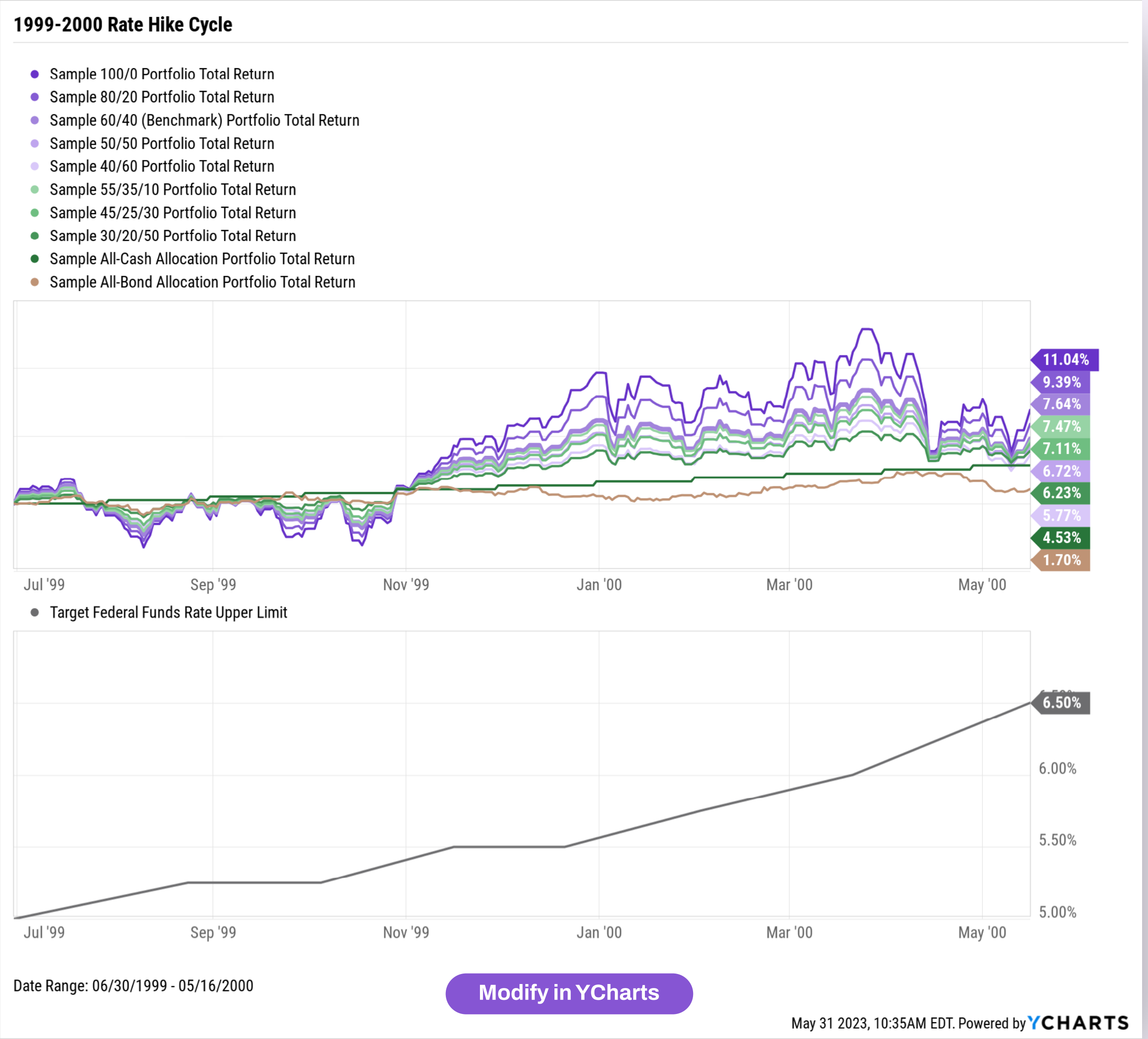
YCHARTS

1st Rate Hike Period, 1999-2000

Cycle Duration: 6/30/1999 - 5/16/2000
Rate Hike: 4.75% to 6.50%
Total Increase: 175 basis points

Below is a chart showing how each portfolio allocation performed from the first announced rate hike on June 30th, 1999 through the final hike of the cycle on May 16th, 2000.

The Sample 60/40 Portfolio returned 7.64% during the ten-and-a-half month rate hike period. Shifting to equity-heavy allocations, such as an 80/20 or All-Stock Portfolio, resulted in choppy waters through 1999 but ultimately delivered higher returns at the end of the cycle. The next best performing allocations were the 55/35/10 Portfolio and 45/25/30 Portfolio. Allocating a portion to cash instead of a higher bond position proved more favorable as rising rates caused bond values to fall (but not too much, as evidenced by the weaker performances of the 30/20/50 and All-Cash Portfolios).

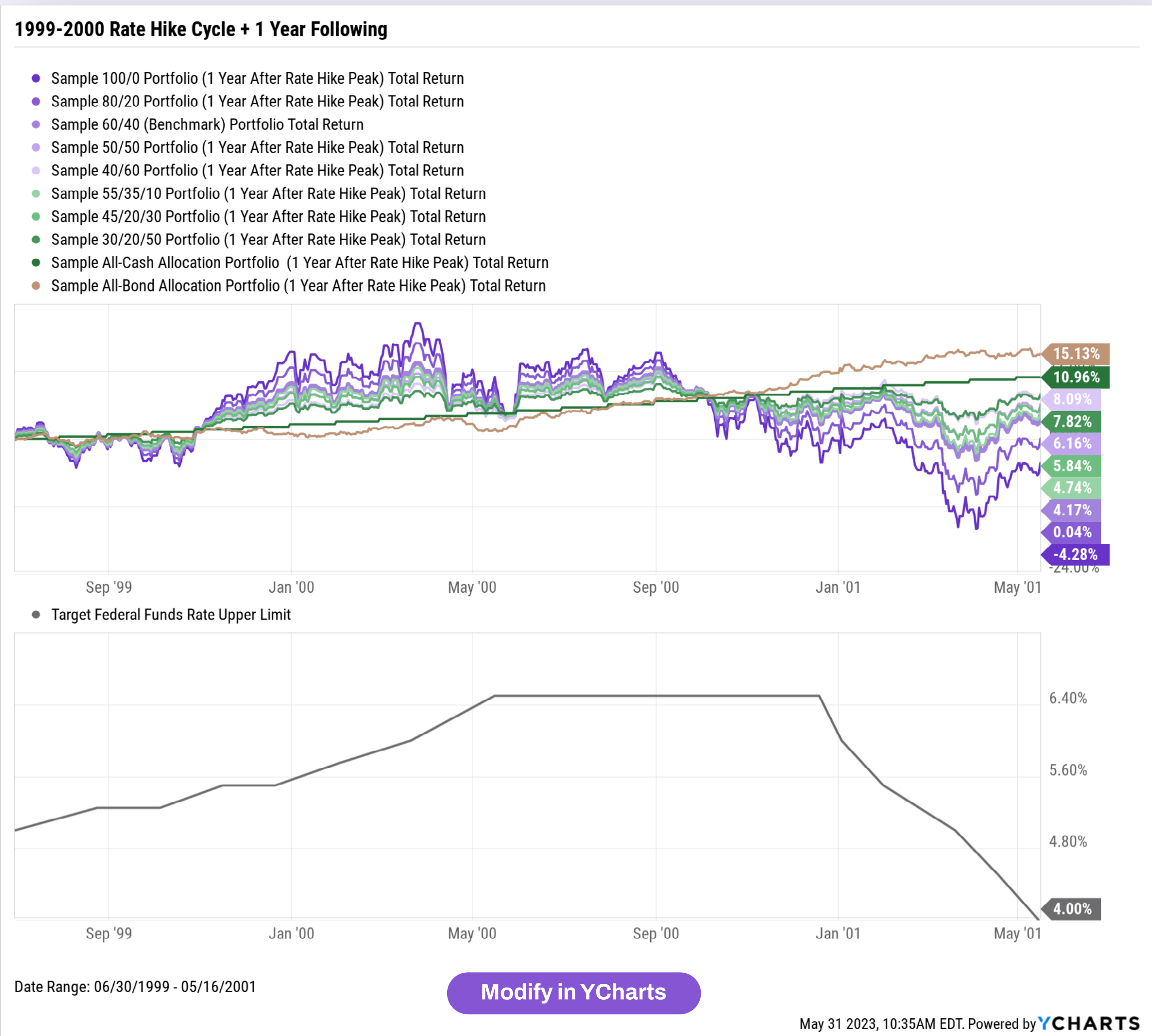


1st Rate Hike Period, 1999-2000

Cycle Duration: 6/30/1999 - 5/16/2000
Rate Hike: 4.75% to 6.50%
Total Increase: 175 basis points

Below is a chart showing how each portfolio allocation performed from the first announced rate hike on June 30th, 1999 through May 16th, 2001, one year following the final hike of the cycle.

When the dot-com bubble burst, the S&P 500 tumbled as much as 25% in the one year following the Fed's final rate hike of the cycle. As a result, the order of portfolio returns "one year later" completely reversed compared to during just the rate hike cycle, with the All-Stock and 80/20 Portfolios coming in last. The All-Bond Portfolio went from worst to first and the All-Cash Portfolio vaulted from second-to-last to second-best thanks to higher bond values stemming from the Fed's rate cuts. In the one year that followed the last hike of the cycle on May 16th, 2000, the Fed Funds Rate was actually cut more than it was raised during the hiking cycle (250 basis point cut vs. 175 basis point increase).



2nd Rate Hike Period, 2004-2006

Cycle Duration: 6/30/2004 - 6/29/2006
Rate Hike: 1.00% to 5.25%
Total Increase: 425 basis points

The second of four rate hike cycles studied lasted 24 months and came as inflation breached 2%. Seventeen consecutive rate hikes occurred during this cycle, an equal 25 basis points for each. The Fed kept the Fed Funds Rate at 5.25% for the next ten FOMC meetings that followed. In response to the onset of the Great Financial Crisis, the Fed issued a 50 basis point rate cut on September 18th, 2007, 15 months following its final hike of the 2004-2006 cycle.

The quilt below shows performance of several major asset classes during the 2004-2006 rate hike cycle.

US Real Estate was a top performer during this rate hike cycle, from one month following the initial rate hike to three years after and everywhere in between. Emerging Markets started out as a laggard after the first rate hike of the cycle, but quickly became the best performer six months after and beyond. Both Cash and the Russell 1000 Growth Index largely were underperformers after the first hike. The Sample 60/40 Portfolio was right in the middle for the first six months following the initial hike, and only deviated by as much as one position thereafter.

6/30/04 - 6/29/06 Total Return	1 Month Total Return	3 Month Total Return	6 Month Total Return	1 Year Total Return	3 Year Total Return
Emerging Markets 33.3%	Commodities 1.8%	US Real Estate 8.4%	Emerging Markets 26.2%	Emerging Markets 34.9%	Emerging Markets 33.2%
US Real Estate 25.8%	Aggregate Bonds 1.0%	Emerging Markets 8.3%	US Real Estate 25.3%	US Real Estate 33.3%	US Real Estate 26.1%
Developed Markets 18.3%	US Real Estate 0.5%	Commodities 6.8%	Developed Markets 15.1%	Developed Markets 14.1%	Developed Markets 22.7%
Russell 1K Value 13.1%	Cash 0.1%	Aggregate Bonds 3.2%	Russell 1K Value 12.2%	Russell 1K Value 14.1%	Russell 2K (Small Cap) 18.1%
Commodities 12.4%	Russell 1K Value -1.4%	Russell 1K Value 1.5%	Russell 2K (Small Cap) 11.1%	60/40 Portfolio 9.9%	Commodities 16.8%
Russell 2K (Small Cap) 11.2%	60/40 Portfolio -1.7%	60/40 Portfolio 0.9%	60/40 Portfolio 8.9%	Russell 2K (Small Cap) 9.4%	Russell 1K Value 15.6%
60/40 Portfolio 9.7%	Emerging Markets -1.8%	Cash 0.3%	S&P 500 (Large Cap) 7.3%	Commodities 8.6%	60/40 Portfolio 11.5%
S&P 500 (Large Cap) 7.6%	Developed Markets -3.2%	Developed Markets -0.2%	Aggregate Bonds 4.0%	Aggregate Bonds 6.8%	S&P 500 (Large Cap) 11.2%
Russell 1K Growth 4.0%	S&P 500 (Large Cap) -3.3%	S&P 500 (Large Cap) -1.9%	Russell 1K Growth 3.6%	S&P 500 (Large Cap) 6.3%	Russell 1K Growth 8.4%
Cash 2.8%	Russell 1K Growth -5.7%	Russell 2K (Small Cap) -2.9%	Commodities 2.0%	Cash 1.9%	Cash 2.1%
Aggregate Bonds 2.8%	Russell 2K (Small Cap) -6.7%	Russell 1K Growth -5.2%	Cash 0.7%	Russell 1K Growth 1.7%	Aggregate Bonds 2.0%

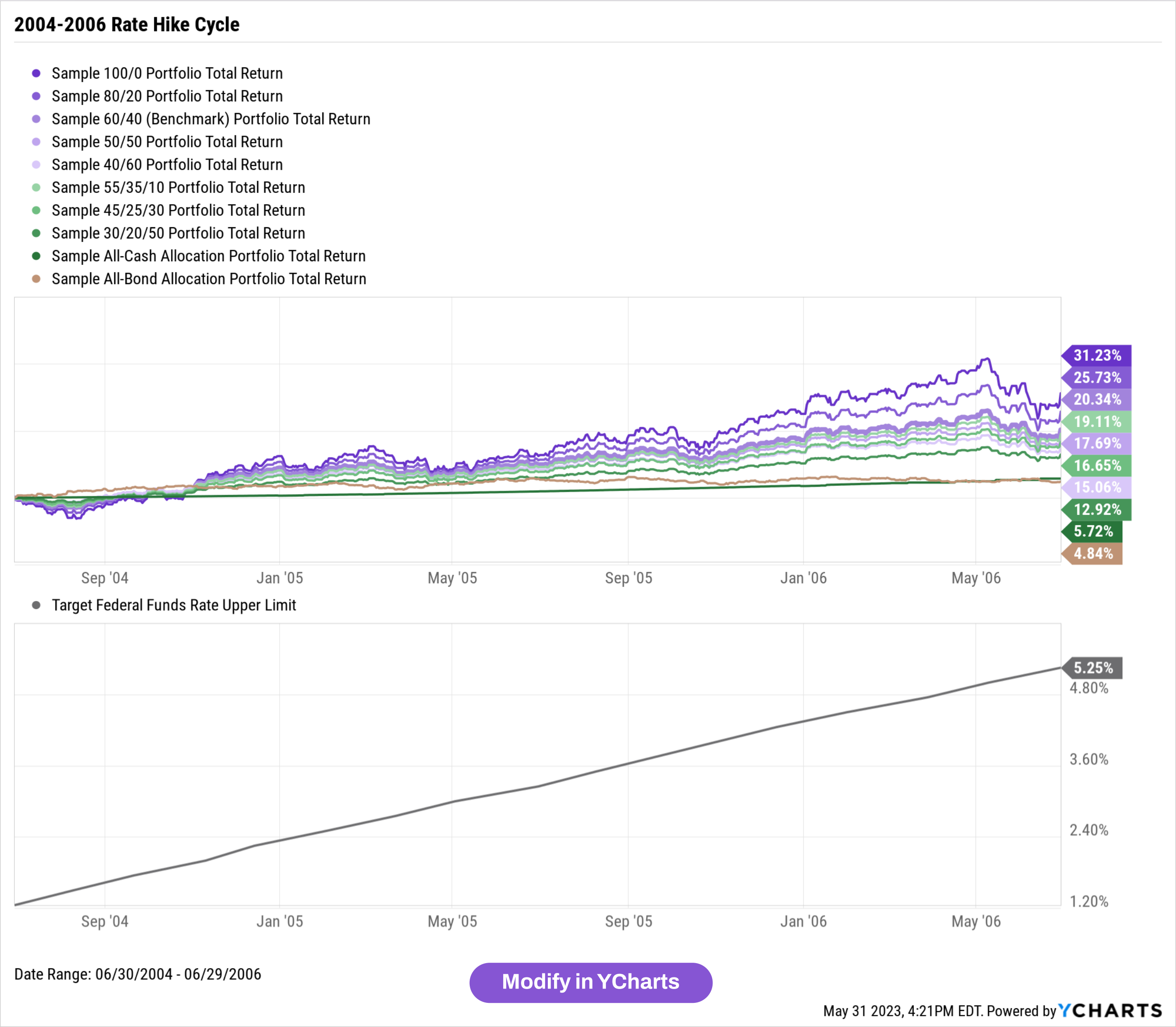
**Custom Period Return: 6/30/04 - 6/29/06. Returns over 1 year are annualized. Data as of 5/31/23.* YCHARTS

2nd Rate Hike Period, 2004-2006

Cycle Duration: 6/30/2004 - 6/29/2006
Rate Hike: 1.00% to 5.25%
Total Increase: 425 basis points

Below is a chart showing how each portfolio allocation performed from the first announced rate hike on June 30th, 2004 through the final hike of the cycle on June 29th, 2006.

The Sample 60/40 portfolio returned 20.34% during the two-year rate hike period. Much similar to the first rate hike cycle, holding a higher equity concentration delivered greater returns in the end despite some early turbulence, and choosing a 10% cash allocation outperformed a 50/50 portfolio. However, unlike the 1999-2000 cycle, the 50/50 portfolio outperformed the 45/25/30 portfolio, and the 40/60 portfolio edged the 30/20/50 at the end of the 2004-2006 cycle.

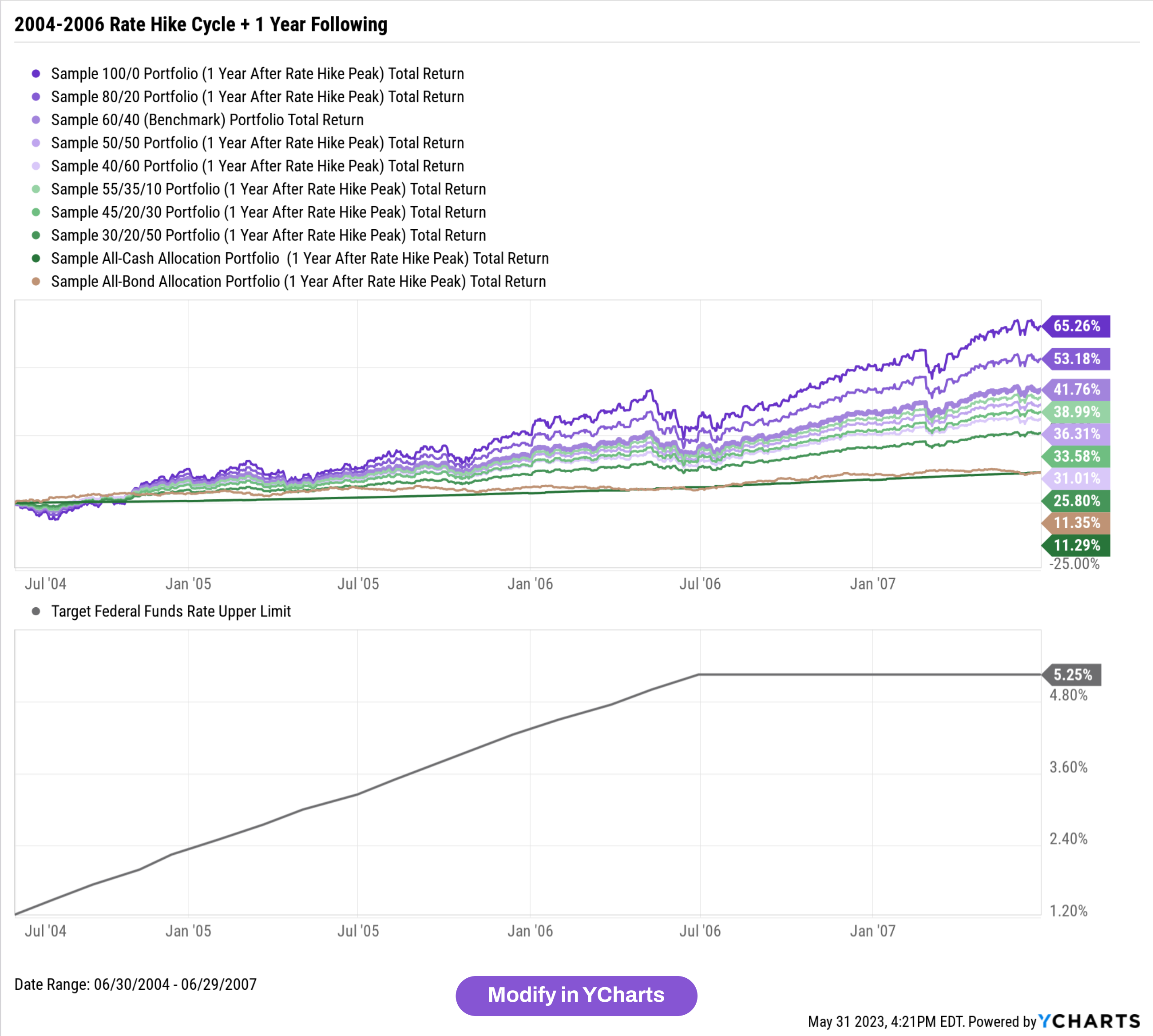


2nd Rate Hike Period, 2004-2006

Cycle Duration: 6/30/2004 - 6/29/2006
Rate Hike: 1.00% to 5.25%
Total Increase: 425 basis points

Below is a chart showing how each portfolio allocation performed from the first announced rate hike on June 30th, 2004 through June 29th, 2007, one year following the final hike of the cycle.

The Fed left rates unchanged for over a year following its last hike of the cycle. The correction that occurred near the end of the cycle turned into a bull market for all portfolios right around when the Fed stopped hiking rates. The only difference in the order of portfolio returns was that the extra year allowed the All-Bond Portfolio to surpass the All-Cash Portfolio by six basis points of marginal total return.



3rd Rate Hike Period, 2015-2018

Cycle Duration: 12/16/2015 - 12/19/2018
Rate Hike: 0.25% to 2.50%
Total Increase: 225 basis points

The Great Financial Crisis prompted the Fed to do the unprecedented: slash the Fed Funds Rate to 0%. For nearly seven years, the Fed kept the Fed Funds Rate at the historic low of 0-0.25% then raised it to 0.25-0.50% for one year. Subsequent rate hikes took place in a gradual fashion thereafter, amid strong employment data and inflation ticking above the Fed's 2% target. All in all, the third of four rate hike cycles studied in this research lasted 36 months and consisted of eight rate hikes in total.

The quilt below shows performance of several major asset classes during the 2015-2018 rate hike cycle.

No individual asset class was consistently at the top or bottom of this list after the cycle's first rate hike on December 16th, 2015. Staying invested with a 60/40 Portfolio was the best way to achieve consistent performance in both the short and long term.

12/16/15 - 12/19/18 Total Return	1 Month Total Return	3 Month Total Return	6 Month Total Return	1 Year Total Return	3 Year Total Return
Russell 1K Growth 10.5%	Aggregate Bonds 1.0%	US Real Estate 3.4%	Commodities 13.3%	Russell 2K (Small Cap) 20.6%	Russell 1K Growth 11.7%
Emerging Markets 9.9%	Cash 0.0%	Commodities 3.3%	US Real Estate 9.0%	Russell 1K Value 16.8%	S&P 500 (Large Cap) 10.0%
S&P 500 (Large Cap) 8.7%	US Real Estate -2.8%	Aggregate Bonds 2.1%	Aggregate Bonds 4.9%	Commodities 13.4%	Emerging Markets 9.9%
Russell 2K (Small Cap) 7.0%	Commodities -5.3%	Emerging Markets 0.6%	Russell 1K Value 3.4%	S&P 500 (Large Cap) 11.3%	Russell 2K (Small Cap) 7.9%
Russell 1K Value 6.6%	60/40 Portfolio -5.5%	Cash 0.0%	Emerging Markets 2.4%	Emerging Markets 11.3%	Russell 1K Value 7.8%
60/40 Portfolio 5.0%	Developed Markets -6.4%	60/40 Portfolio -0.3%	60/40 Portfolio 1.8%	US Real Estate 7.1%	60/40 Portfolio 5.5%
Developed Markets 4.2%	S&P 500 (Large Cap) -7.8%	Russell 1K Value -0.8%	S&P 500 (Large Cap) 1.4%	Russell 1K Growth 6.5%	US Real Estate 4.6%
US Real Estate 4.0%	Russell 1K Value -7.9%	S&P 500 (Large Cap) -1.6%	Russell 2K (Small Cap) 0.7%	60/40 Portfolio 6.1%	Developed Markets 4.4%
Commodities 2.3%	Russell 1K Growth -8.2%	Russell 1K Growth -2.8%	Cash 0.1%	Developed Markets 1.9%	Commodities 2.1%
Aggregate Bonds 2.0%	Emerging Markets -8.7%	Developed Markets -3.3%	Russell 1K Growth -0.5%	Aggregate Bonds 1.6%	Aggregate Bonds 1.9%
Cash 0.9%	Russell 2K (Small Cap) -10.8%	Russell 2K (Small Cap) -6.1%	Developed Markets -5.2%	Cash 0.2%	Cash 0.9%

**Custom Period Return: 12/16/15 - 12/19/18. Returns over 1 year are annualized. Data as of 5/31/23.*

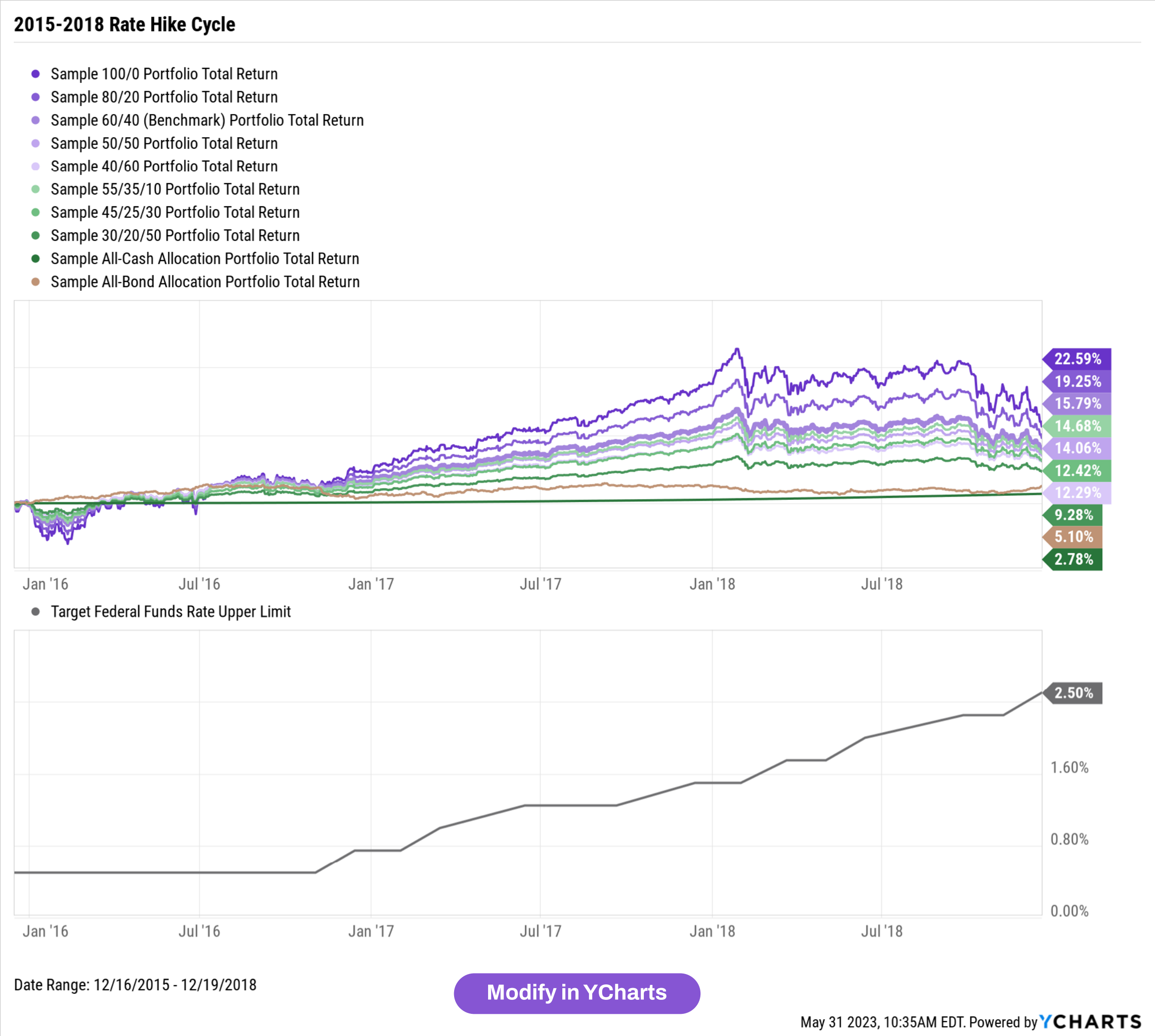
YCHARTS

3rd Rate Hike Period, 2015-2018

Cycle Duration: 12/16/2015 - 12/19/2018
Rate Hike: 0.25% to 2.50%
Total Increase: 225 basis points

Below is a chart showing how each portfolio allocation performed from the first announced rate hike on December 16th, 2015 through the final hike of the cycle on December 19th, 2018.

The Sample 60/40 portfolio returned 15.79% during the 36-month rate hike period. Investors remember all too well the “flash crash” that took place in 2015; shortly after the first rate hike in nearly a decade, the S&P 500 suffered another swift correction in early 2016, that time of 12%. But the 2015-2018 cycle showed several similarities to the 2004-2006 rate hike cycle; after a rocky start, portfolios with a greater equity concentration ended up with greater returns at the conclusion of the cycle. A correction also took place around the end of the rate hike cycle. Finally, the order of portfolio performance from best-to-worst was also the same, the only exception being an All-Bond allocation outperformed All-Cash across the 2015-2018 cycle.

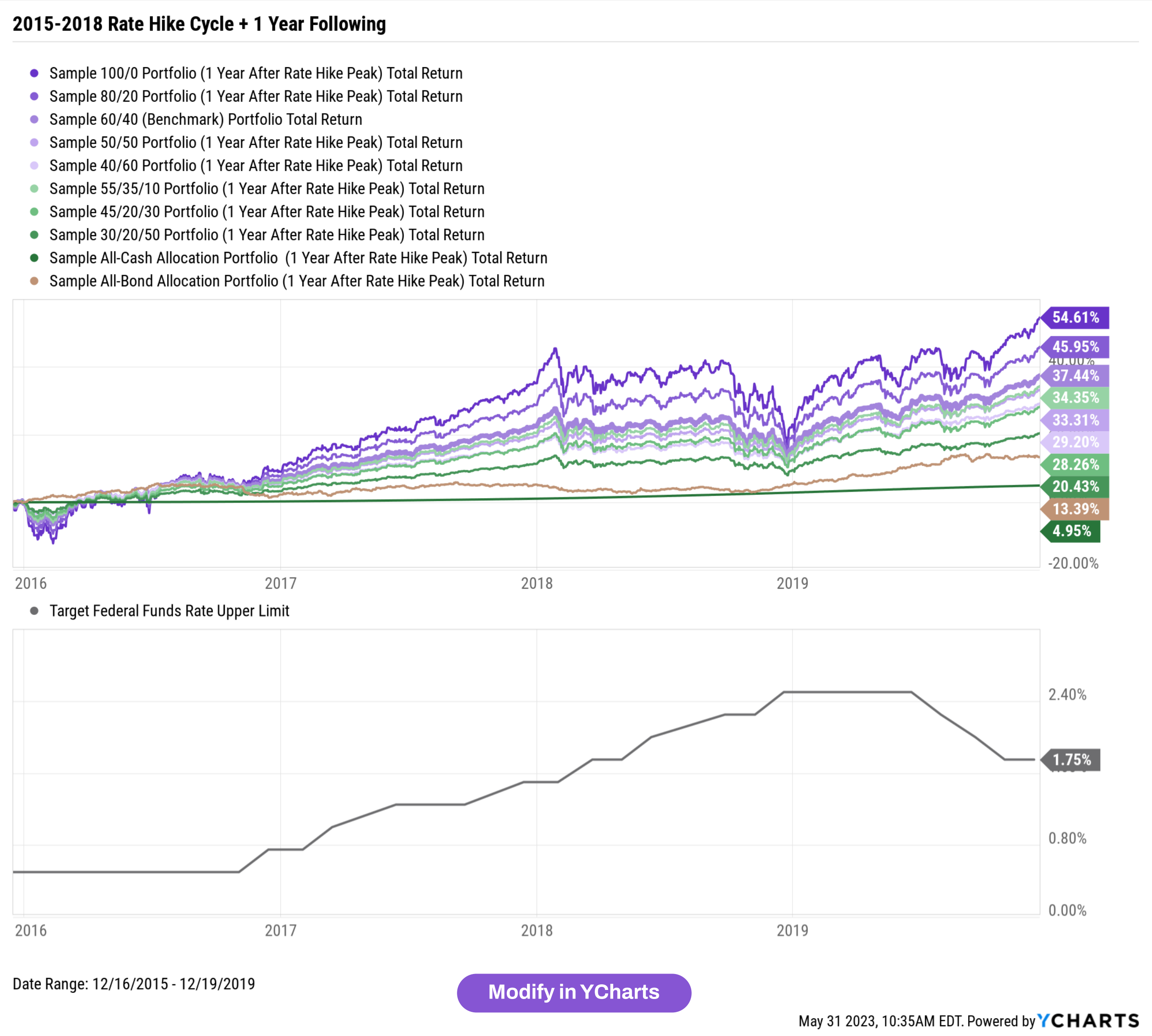


3rd Rate Hike Period, 2015-2018

Cycle Duration: 12/16/2015 - 12/19/2018
Rate Hike: 0.25% to 2.50%
Total Increase: 225 basis points

Below is a chart showing how each portfolio allocation performed from the first announced rate hike on December 16th, 2015 through December 19th, 2019, one year following the final hike of the cycle.

In another similarity to the 2004-2006 rate hike cycle, portfolios embarked on a bull run around the time the Fed ceased hiking rates. However, in contrast to that cycle, the Fed issued rate cuts within one year of the last rate hike on December 19th, 2018. For comparison, portfolio values declined when the Fed cut rates between 2000 and 2001 in response to the dot-com bubble. The opposite happened when the Fed cut rates in 2019.



4th Rate Hike Period, 2022-Present

Cycle Duration: 3/16/2022 - 7/26/2023
Rate Hike: 0.25% to 5.50%
Total Increase: 525 basis points

2022 was an abnormal year as both stocks and bonds fell, causing the 60/40 portfolio to log its worst year since 1937. This was in addition to other notable events such as decades-high inflation, record gold-buying by central banks and…historic 75 basis point Fed rate hikes. As such, the fourth and final rate hike cycle studied in this research has been underway for 16 months, and so far has stretched a whopping 525 basis points across 11 total hikes.

This quilt shows the performance of several major asset classes during the current rate hike cycle:

It was tough to find winning asset classes in the first 12 months of the current rate hike cycle. Even the often-regarded bellwether 60/40 Portfolio sank 6.8% in the one year following the first rate hike on March 16th, 2022. Nonetheless, a rising tide in spring and summer 2023 lifted all boats, pushing all 11 asset classes higher and turning seven of them from negative to positive between March 16th, 2023 and July 26th, 2023. The 2022-2023 rate hike cycle has proven to be one where "cash is king". Cash was the only positive asset class for the 6 months and 1 year that followed the cycle's initial rate hike, and is the fourth-best asset class throughout the cycle so far.

3/16/22 -7/26/23 Total Return	1 Month Total Return	3 Month Total Return	6 Month Total Return	1 Year Total Return
Developed Markets 6.5%	Emerging Markets 8.7%	Commodities 8.2%	Cash 0.5%	Cash 2.5%
Russell 1K Growth 6.3%	Commodities 7.0%	Cash 0.1%	Commodities -2.4%	Developed Markets -2.5%
S&P 500 (Large Cap) 5.2%	Russell 1K Growth 6.3%	Emerging Markets -6.0%	Aggregate Bonds -7.3%	Aggregate Bonds -6.0%
Cash 3.1%	S&P 500 (Large Cap) 5.4%	Aggregate Bonds -6.3%	Russell 1K Value -8.2%	Russell 1K Value -6.8%
Russell 1K Value 2.8%	US Real Estate 5.3%	60/40 Portfolio -10.6%	60/40 Portfolio -9.5%	60/40 Portfolio -6.8%
Commodities 0.7%	Russell 1K Value 4.8%	Developed Markets -10.9%	S&P 500 (Large Cap) -10.4%	S&P 500 (Large Cap) -7.6%
60/40 Portfolio 0.7%	Developed Markets 3.8%	Russell 1K Value -12.3%	Emerging Markets -10.6%	Russell 1K Growth -9.6%
Emerging Markets 0.3%	Russell 2K (Small Cap) 3.4%	S&P 500 (Large Cap) -15.5%	Russell 2K (Small Cap) -10.8%	Emerging Markets -10.0%
Russell 2K (Small Cap) -0.4%	Cash 0.0%	US Real Estate -17.9%	Russell 1K Growth -13.0%	Russell 2K (Small Cap) -11.5%
Aggregate Bonds -4.3%	60/40 Portfolio -0.8%	Russell 2K (Small Cap) -18.5%	Developed Markets -13.3%	Commodities -12.3%
US Real Estate -7.5%	Aggregate Bonds -3.0%	Russell 1K Growth -19.8%	US Real Estate -14.7%	US Real Estate -19.0%

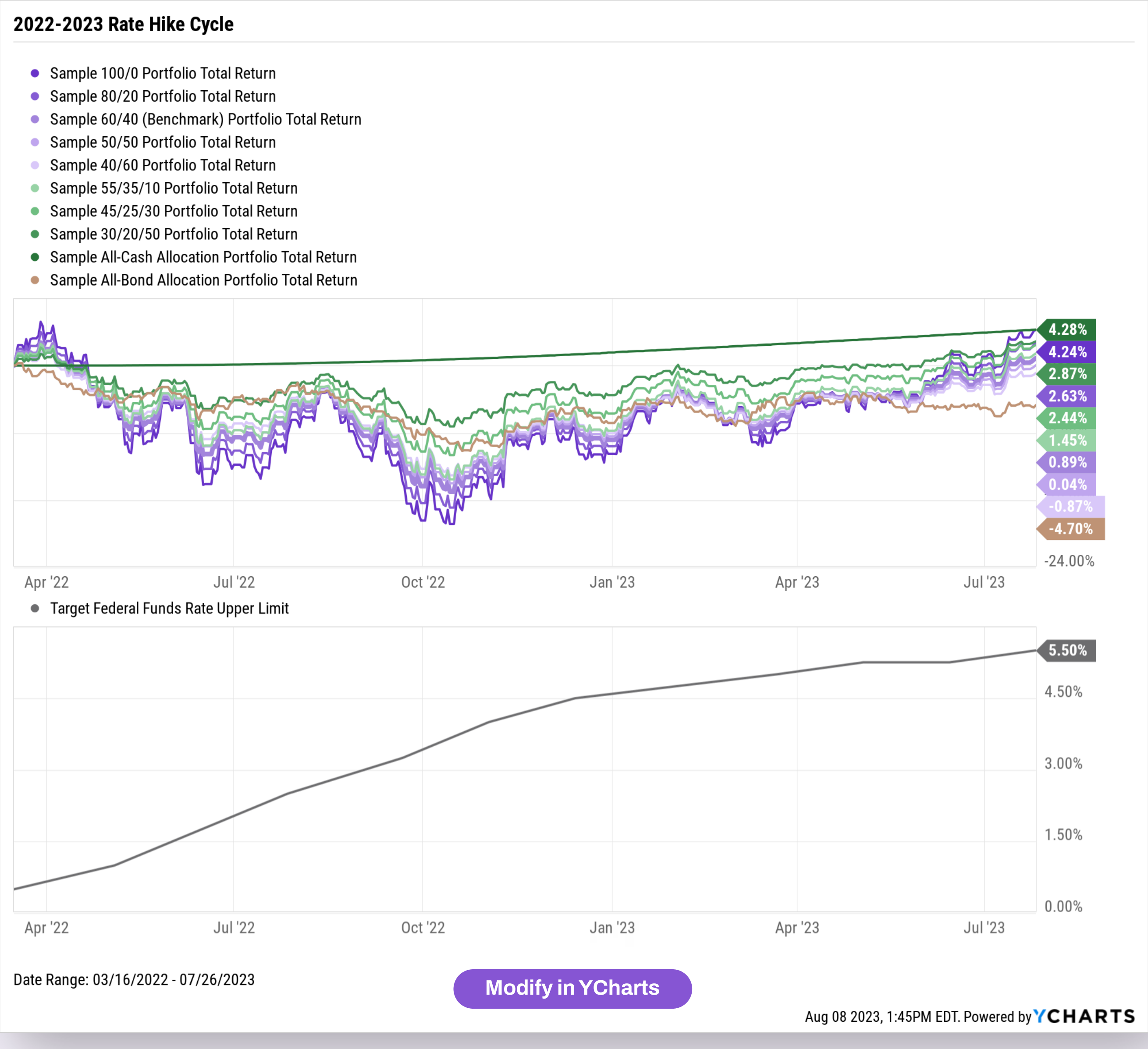
**Custom Period Return: 3/16/22 - 7/26/23. Returns over 1 year are annualized. Data as of 7/31/23.* YCHARTS

4th Rate Hike Period, 2022-Present

Cycle Duration: 3/16/2022 - 7/26/2023
Rate Hike: 0.25% to 5.50%
Total Increase: 525 basis points

Below is a chart showing how each portfolio allocation performed from the first announced rate hike on March 16th, 2022 through the most recent hike of the cycle on July 26th, 2023:

You would have arrived at the same destination 16 months and 525 basis points of rate hikes later if you chose to ride with either an All-Stock or All-Cash portfolio at the cycle's first rate hike on March 16th, 2022. The only difference: volatility. An All-Stock portfolio drew down as much as 18.8% before roaring back to post a 4.2% return as of the most recent rate hike on July 26th, 2023. Adding increasingly larger bond positions dragged on total portfolio returns, while a portfolio too heavily weighted in bonds (40/60 or All-Bond portfolios) would have delivered you a negative return through the rate hike cycle.



The Volcker Era

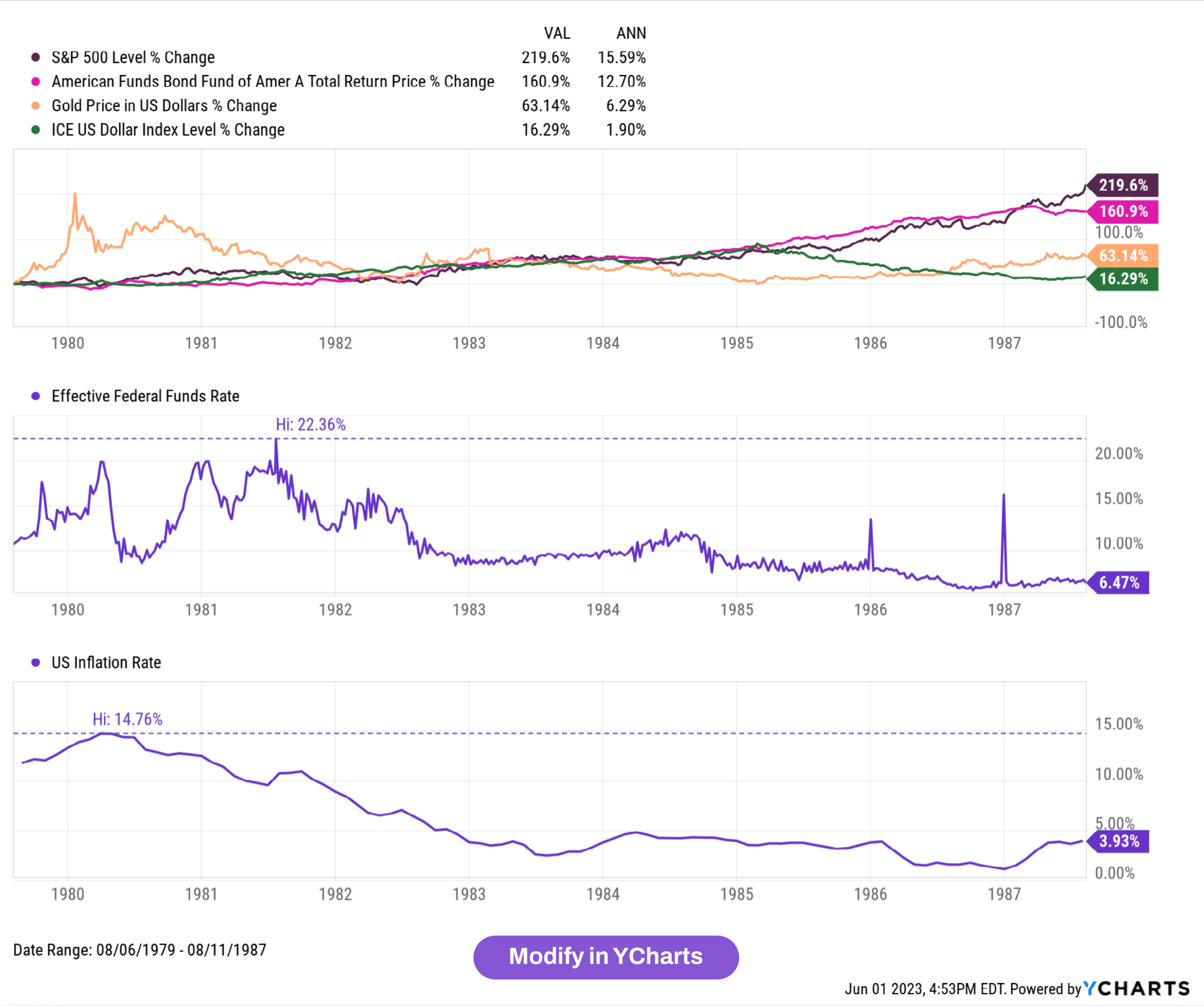
Time in Office: 8/6/1979 - 8/11/1987
Effective Fed Funds Rate at Start of Term: 10.72%
Effective Fed Funds Rate at End of Term: 6.47%

Net Change: 425 basis points
Highest Effective Fed Funds Rate During Term: 22.36%

Paul Volcker served as chairman of the Federal Reserve for eight years. Volcker is widely known for waging a war on double-digit inflation in the 1980s, in part by aggressively escalating the Effective Fed Funds Rate to as high as 22.36%. Given that inflation in 2022 reached levels last seen in the Volcker era, it's worth taking a quick look at the 1980s as well to answer the question some are wondering about today vs. past rate hikes: are things different this time?

Gold was the place to be while inflation and the Fed Funds Rate were high, but then lost its shine as the Fed cut rates and inflation fell. Like gold, the US Dollar strengthened during the first six years of Volcker's tenure, but weakened as rates were cut.

Stocks and bonds followed a similar pattern in the Volcker era as they did during rate hike cycles in the 21st-century. Equity returns diminished during a high Fed Funds Rate, but took off as the Fed cut rates. Bonds also increased in value as the Fed Funds Rate came off its highs.



Conclusion

It's difficult to predict outperforming asset classes. Each of the four cycles produced different best and worst performing asset classes, and the 2015-2018 cycle produced no clear winner across multiple look-ahead periods. Different underlying reasons for rate hikes and subsequent cuts as well as different market environments contribute to the relative unpredictability around which asset class will be the shining star in any given rate hike cycle.

It pays to stay the course. Tactically shifting portfolio allocations during an ongoing rate hike cycle may have led to diminished returns at the end of a cycle. Portfolios with greater equity concentration suffered drawdowns at the start of each rate hike cycle, but when exactly those drawdowns started varied. Switching allocations in the middle of a cycle could have resulted in doing so too early or too late, leading to increased risk, lower overall returns, or both.

Balanced portfolios help mitigate volatility. The 60/40 Portfolio ranked the most consistently among asset classes across all four rate hike cycles. Additionally, a 55/35/10 portfolio performed fourth-best among all ten sample allocations in the first three rate hike cycles, and sixth-best in the current cycle. Considering staying diversified with a balanced portfolio can help smooth out the ups-and-downs that occur during Fed rate hikes and mitigate risk.

6/30/99 - 5/16/00 Total Return	6/30/04 - 6/29/06 Total Return	12/16/15 - 12/19/18 Total Return	3/16/22-7/26/23 Total Return
Commodities 24.8%	Emerging Markets 33.3%	Russell 1K Growth 10.5%	Developed Markets 6.5%
Russell 1K Growth 21.9%	US Real Estate 25.8%	Emerging Markets 9.9%	Russell 1K Growth 6.3%
Developed Markets 15.8%	Developed Markets 18.3%	S&P 500 (Large Cap) 8.7%	S&P 500 (Large Cap) 5.2%
Russell 2K (Small Cap) 11.7%	Russell 1K Value 13.1%	Russell 2K (Small Cap) 7.0%	Cash 3.1%
Emerging Markets 10.3%	Commodities 12.4%	Russell 1K Value 6.6%	Russell 1K Value 2.8%
S&P 500 (Large Cap) 7.9%	Russell 2K (Small Cap) 11.2%	60/40 Portfolio 5.0%	Commodities 0.7%
60/40 Portfolio 7.6%	60/40 Portfolio 9.7%	Developed Markets 4.2%	60/40 Portfolio 0.7%
Cash 4.5%	S&P 500 (Large Cap) 7.6%	US Real Estate 4.0%	Emerging Markets 0.3%
US Real Estate 2.0%	Russell 1K Growth 4.0%	Commodities 2.3%	Russell 2K (Small Cap) -0.4%
Aggregate Bonds 1.4%	Cash 2.8%	Aggregate Bonds 2.0%	Aggregate Bonds -4.3%
Russell 1K Value -3.0%	Aggregate Bonds 2.8%	Cash 0.9%	US Real Estate -7.5%

**Returns over 1 year are annualized. Data as of 7/31/23*

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