First Republic Private Wealth Management
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Positioning your portfolio in a rising rate environment

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Introduction to the Federal Reserve

At the highest level, the Federal Reserve, also known as the Fed, is the central bank of the United States and performs several functions to promote the effective operation of the U.S. economy and, more generally, the public interest. The framers of the Federal Reserve Act purposely rejected the concept of a single central bank and instead opted for this network of regional banks with the Board of Governors overseeing it. The Fed, at a rudimentary level, is a central bank that serves other banks and the U.S. government. The Fed is an independent organization that is overseen by Congress, and its chairman is appointed by the U.S. president.

The Fed's goals are twofold: 1) maximum sustainable employment and 2) price stability. To satisfy the price stability portion of its mandate, the Federal Open Market Committee (FOMC) at present has a long-run inflation target of 2%. If prices for goods and services are relatively stable, then that preserves the purchasing power of consumers' money. The FOMC has indicated one of its goals is price stability with a low, measured rate of inflation.

Monetary policy is in fact the sum of the Federal Reserve's actions, as a central bank, to achieve the dual goals mandated by Congress of maximum employment and stable prices in the United States. The Fed creates monetary policy by using a variety of tools to manage financial conditions that encourage this dual mandate. The most common tool is the changing of the federal funds rate, or short-term interest rate. The changes to short-term rates or to the anticipated path of short-term rates affect the supply of money and overall financial conditions, including long-term interest rates, stock prices, the value of the dollar and many other asset prices. An increase in interest rates is what is known as a "tightening cycle."

It is important to put the current economic backdrop into perspective when comparing it to other Fed tightening cycles. The Fed's current approach reflects a very different economic backdrop today than in prior tightening cycles (see Table 1). When economic growth is fairly strong, a tight labor market will drive wages higher, causing an increase in inflation. Current real interest rates are deeply negative, which leads to financial conditions that are very accommodative. The playbook for how assets will respond to rising rates varies by tightening cycle, and the current macroeconomic backdrop differs greatly from previous tightening cycles.

Table 1 | Fed Dashboard

Fed Dashboard (indicator is as of the start of the tightening cycle)					
Historical Rate Hiking Cycles:	Inflation	Labor Market	Economic Growth	Financial Conditions	Equity Valuation
Currently	Unfavorable	Favorable	Favorable	Favorable	Neutral
12/2015–12/2018	Neutral	Neutral	Unfavorable	Neutral	Neutral
6/2004–8/2006	Neutral	Neutral	Neutral	Neutral	Neutral
7/1999–7/2000	Neutral	Neutral	Favorable	Neutral	Unfavorable
2/1994–3/1995	Unfavorable	Unfavorable	Neutral	Unfavorable	Neutral
12/1986–9/1987	Unfavorable	Unfavorable	Unfavorable	Unfavorable	Favorable

Unfavorable Neutral Favorable

Source: First Republic Investment Management, Bloomberg and FactSet. Data as of March 2022.

So, why would the Fed tighten now?

Let's first discuss the Fed's goal of maximum sustainable employment. The government began tracking the unemployment rate in 1947. Over the past 70+ years, the average unemployment rate has been 5.8%. It has reached double-digit levels three times over this period: November 1982 (10.8%), October 2009 (10.0%) and April 2020 (14.7%), when it reached an all-time high (see Figure 1). The rate has since declined to 4.0%.

While the Labor Force Participation Rate (LFPR) dropped during the pandemic, it's worth noting that a) the LFPR rate had been declining since early 2000 (+67.3%), and b) it remains very close to its historic average (current +62.2% vs. average of +62.8%).

With such a strong labor market recovery, the focus of the Fed has shifted over to inflation/price stability. By all metrics, inflation is running stubbornly "hot" for longer than anticipated and well above the Fed's 2% target. Current annualized inflation indexes (see Figure 2) include:

- Producer Price Index (PPI) at +12.2%
- Consumer Price Index (CPI) at +7.5%
- Personal Consumer Expenditures (PCE) at +5.8%

In December 2021, the Fed finally dropped the "transitory" inflation language from its official statement after nearly 20 years. While the initial belief was that inflation would quickly moderate and reach target levels by the end of 2023, forecasts indicate this will not be the case and that inflation will linger. The drivers for keeping inflation at these high current levels include:

- Supply-chain shortages (shipping, rail, truck freight delays)
- Strong demand for goods vs. services
- Increasing labor costs
- Housing costs that are largely recovered and poised to move higher
- Surging food and energy costs

With the pandemic extending the "stay at home" environment, it's not surprising that demand for goods (furniture, appliances, technology, etc.) is exceeding demand for services (travel and leisure, dining out, etc.). This directly fuels supply shortages, as demand far exceeds supply in several sectors. Historically, goods inflation runs well below services inflation — even negative for several multiyear periods. The most recent pressures are elevating goods inflation, which is contributing significantly to overall inflation.

While the labor market has made a remarkable recovery, labor shortages in certain sectors are pushing wages higher. Looking at Average Hourly Earnings (AHE) since tracking began in 2007, annual average AHE has increased 2.8%. Today's level is a whopping +5.7%. Despite an overall recovering economy and vastly improving labor market indexes, it is estimated that 2 million jobs remain unfilled.

Increasing housing and energy costs are materially feeding into headline inflation prints. Specifically, housing accounts for about 1/3 of inflation indexes, with energy accounting for roughly another 7%. With that combination totaling 40%, with both components expected to remain high (or go even higher) over the next several months, we forecast 2022 headline inflation ending the year well above 5% YoY, before moderating in 2023 to 2.5–3.0% YoY.

With all this in mind, the Fed's price stability mandate is in jeopardy with the current monetary policy. Also, the Fed is at a lower-bound policy rate of zero and has plenty of room to raise rates in an effort to slow the inflation story. Real rates remain negative, and the current level of policy rates are inconsistent with just about every other economic metric (GDP, inflation, labor, etc.).

Figure 1 | The Employment Picture Remains Strong
Unemployment Rate (%) as of 01/31/2022

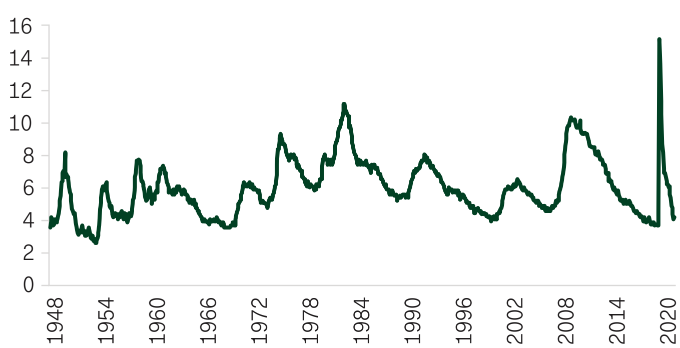
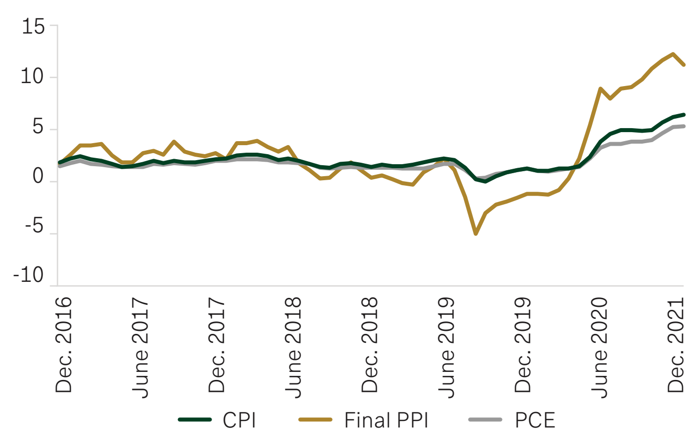


Figure 2 | Inflation continues to remain above the Fed's 2% target. Inflation Indexes (%) as of 12/31/2021



Source: Bloomberg and First Republic Investment Management.

What are the effects of Fed tightening on the economy and markets?

Central banks don't tighten without having a desired outcome in mind. They generally will consider the potential outcomes for both Main Street and Wall Street in their calculus, given the symbiotic relationship between them. Interest rate hikes can increase the marginal cost of mortgages and business loans, which puts pressure on the desirability of debt, as it would become more onerous to service. Higher rates provide a greater incentive for saving, as it generates more interest on deposits or lending.

Higher interest rates serve as a means of dampening the demand for businesses and citizens to consume goods and services within an economy. The knock-on effects of this transmission mechanism can also feed into the labor market, as lower demand for goods and services might lessen the need for more employees or wage growth. The combined supply and demand headwinds that originate from higher rates serve as a time-tested effective tool for cooling the output of an economy.

What happens on Main Street tends to affect Wall Street, and vice versa, although we're careful to note that they are not a perfect reflection of the other. While higher interest rates grind through the machinations of the real economy, capital markets are likely to discount those presumed effects beforehand. Investors won't wait for policymakers to pull the trigger before allocating in anticipation. To the extent that rate hikes reflect the intention of the Fed to increase borrowing costs and slow down growth, the direct and indirect effect on markets is considerable.

Fixed income: It's in the math

Higher interest rates push down the price of fixed income, as the value of the payments to bondholders at a set rate diminishes when higher prevailing interest rates permeate the market. When rates go up, bond prices fall, and when rates move lower, their values increase in what is referred to as an inverse relationship. The measure of bonds' interest rate sensitivity is known as duration, which can be expressed by the change in a fixed-income instrument's value given a shift in interest rates or the weighted-average time for a bondholder to earn all of the cash flows associated with the holding. An asset with a higher duration is interpreted to mean that it has greater sensitivity to changes in interest rates.

The Federal Reserve traditionally has set monetary policy through changes to their policy federal funds rate, which is the rate that banks charge each other to lend overnight and effectively serves as the cost of money in the ultra-short term. The overnight rate is the basis for all rates, and changes to this base rate impact all rates. Said differently, when the Fed raises the overnight rate, all interest rates rise. Also, unconventional measures within the Fed's toolkit, including their sales and purchases of securities in the marketplace, can have more direct impacts on bond yields for longer-dated maturities. In some segments, such as the Treasury Inflation-Protected Securities (TIPS) market, the Fed is one of the largest participants and materially influences prices and yields. This all goes to say that a more restrictive Fed policy stance, which can include rate hikes and more unconventional measures of tightening, will increase yields, thus lowering bond prices.

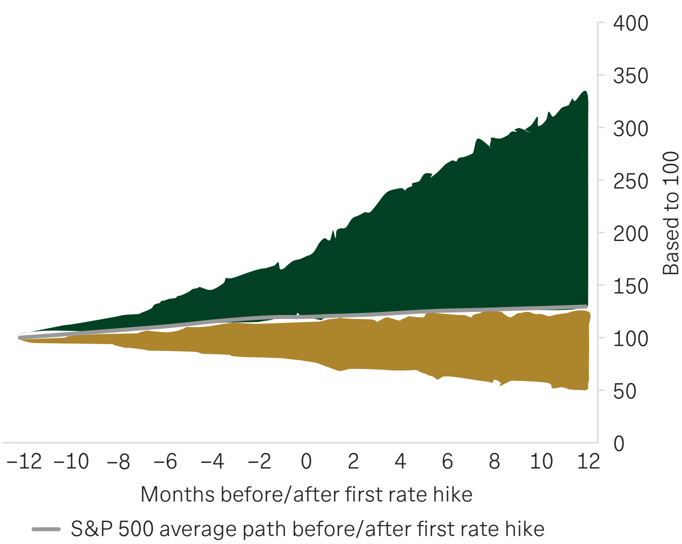
The knock-on effects of slowing the economy by encumbering borrowers with higher costs and disincentivizing consumption could increase credit, or default risk, for riskier borrowers. Investors who believe that the risks of not being paid back have increased will likewise demand to be compensated for assuming that chance, which will be reflected in the requirement of a higher yield and/or spread to risk-free assets. As a result, bonds deemed lower in quality will generally see yields rise and spreads widen if the Fed tightens policy to the extent that market participants feel that the economic backdrop is on shakier ground.

Equities

Owning a stock, as opposed to a fixed income issue, grants the shareholder a conceptual claim on a proportionate share of a company's cash flows in perpetuity. As a result, the impact of rate hikes or tighter Fed policy on equities is less arithmetic and more nebulous. Rather than discounting a series of known cash flows, the equity investor must make more fluid assumptions regarding payouts and a terminal value, which can often represent the lion's share of a stock's intrinsic worth. Higher interest rates should result in higher discount rates, meaning that the present value of payments expected to be received in the future are worth less. However, if higher interest rates are a reflection of economic strength, then this would suggest that corporate earnings and cash flows might actually be higher than otherwise expected, which should increase the value of a stock. The push-pull between higher rates and the trajectory of economic growth is a crucial contextual factor for determining the fate of equities during a tightening cycle.

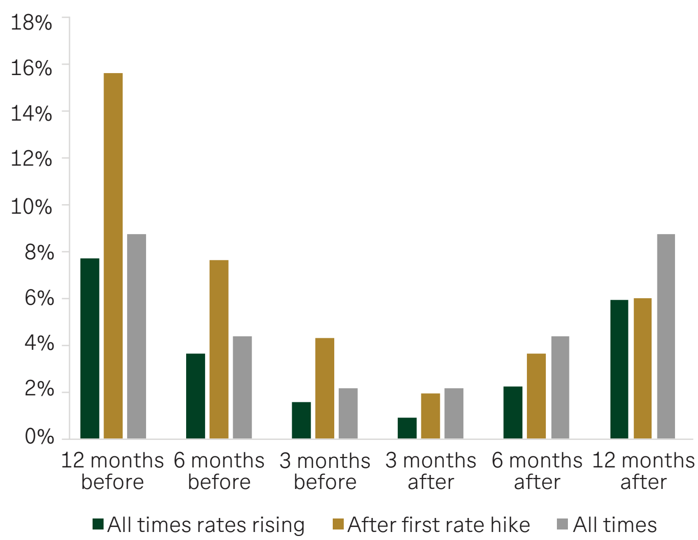
Historically, stocks have trended higher leading into and during rate-hike cycles. The S&P 500 has enjoyed positive returns in the six months following the first rate hike in 13 of the last 18 tightening cycles since 1954. The average price return of the index in the 12 months following the first rate hike of each cycle studies was 6.5%, which trails the all-time average of approximately 7.9% during the same period but is still positive and significant. Alternatively, the performance of equities leading into the first rate hike is more pronounced, with the average price return exceeding 17.2% in the 12 months prior. There is wide dispersion in the historical outcomes for equities given tightening cycles. However, the performance skew has tilted to the upside across time (see Figure 3). What seems apparent is that equities tend to speed into rate tightening cycles before slowing down thereafter (see Figure 4). The causality behind this observation is likely that the macroeconomic environment, including the nominal growth trajectory that powers corporate revenues and earnings, is typically strong heading into tightening cycles and does not face material headwinds until the transmission mechanism of tightening filters through to stress multiples and valuations. Tightening cycles that do not result in an economic recession have historically led to much more benign outcomes for equities than those tightening cycles that preceded negative growth environments.

Figure 3 | Equities tend to rise before and after rate hikes with a positive skew of outcomes



Source: Bloomberg and First Republic Investment Management. Data as of February 2022.

Figure 4 | The first rate hike has been less deleterious for equities than the persistent tightening cycle



Source: Bloomberg and First Republic Investment Management. Data as of February 2022.

Not all equities are created equal as it pertains to interest-rate-change sensitivities and Fed policy. There is a wide range of outcomes of equity returns before and after the Fed raises rates, depending on the hiking cycle and place in the economic cycle. Some equities can be thought of as "shorter duration;" these types of stocks historically have front-loaded returns or cash flows that give investors near-term gains. Companies with higher dividends and buybacks fit the bill and typically include Utilities, Energy and Telecoms. Alternatively, in periods of economic weakness when growth is scarce, investors often pay a premium for segments of the market that consistently enjoy above-average earnings growth. The Information Technology sector is a representation of this.

The S&P 500 sector performance during each of the five tightening episodes since 1990 reveals that the median returns for Energy, Telecoms, Materials and Utilities were highest relative to the broader index during the three-month period following the first rate hike while Healthcare, Financials and Staples trailed. The narrative becomes a bit more mixed with a longer time horizon as Technology, Energy and Utilities led in the following 12 months while Materials, Consumer Discretionary and Staples lagged (see Figure 5). From a style perspective, Value has tended to outperform Growth in both Large and Small Cap after rate hikes with Small Cap Growth significantly underperforming other segments. The Large Cap Tech sector has been the one standout for growth as it otherwise more broadly trails. From a regional perspective, data is more limited, but Emerging Markets have fared best while Developed International equities have lagged. This historical perspective is likely skewed by contextual factors unique to the limited sample, but we can deduce that rate hikes tend to strengthen the U.S. dollar and ultimately can provide a headwind to global growth, which suggests weakness for international equities.

Case Study: Volcker's Gambit

On October 6, 1979, Fed Chair Paul Volcker convened an unscheduled FOMC meeting and thereafter announced a shock-and-awe shift in monetary policy, aimed at stopping the precipitous rise of inflation in its tracks. In the preceding press conference, Volcker stated that "the inflation rate has been moving at an excessive rate and . . . inflation and the anticipation of inflation have been unsettling to markets both home and abroad. That unsettlement, in itself and its reflection in some commodity markets, is, I think, contrary to the basic objective [of] an orderly development of economic activity." As a result, the Fed shifted the way in which it conducted policy changes to limit what it saw as excessive growth in money supply.

At that point, year-over-year core PCE inflation topped 7.6% and would peak at 9.8% one year later. The federal funds rate would peak around this time to by around 18–20% while real yield dipped closer to zero. By 1984, both inflation and the federal funds rate would be nearly half those levels as Volcker's aggressive Fed effectively "broke the back of inflation" and real yields were approximately 7.5%. Assets performed quite well during the episode, illustrating that a tightening cycle isn't always negative for returns or growth. From October 1979 through November 1983, the S&P 500's total return was 102%, the Bloomberg U.S. Aggregate Bond Index generated 62% and the Commodity Total Return Index was tallied at 30%.

Figure 5 | A mix of safety, yield and growth tended to perform well after rate hikes

		Months Before and After Rate Hikes			
		–3	3	6	12
Sectors +/– S&P 500	Tech	2.4%	1.0%	0.9%	11.0%
	Energy	0.5%	4.4%	9.0%	14.0%
	Financials	–0.5%	0.8%	1.6%	–0.8%
	Discretionary	–2.5%	0.5%	–2.8%	–6.6%
	Healthcare	–1.5%	–1.4%	–1.5%	–3.4%
	Industrials	–0.4%	1.6%	3.7%	2.1%
	Staples	–1.1%	0.9%	0.8%	–6.1%
	Telecomm	–4.8%	9.7%	12.5%	–1.3%
	Materials	–1.9%	3.4%	7.0%	–7.8%
	Utilities	5.6%	3.3%	6.2%	9.5%
Median	**S&P 500**	**4.5%**	**–1.6%**	**1.4%**	**11.3%**

Finally, we acknowledge the relationship that the Fed's balance sheet has had with equities. Whereas Fed rate hikes have had a rather inconsistent historical effect on stocks, the balance sheet has been more straightly correlated. In theory, the expansion of the Fed's balance sheet should not have an outsized effect given that the market capitalization of U.S. equities dwarfs the balance sheet. In practice, the experience has been different, with equities more closely mirroring the size and direction of Fed purchases. Prior to the pandemic, the total market cap of the U.S. equity market, as reflected by the Wilshire 5000, was nearly 8x the size of the total assets of Federal Reserve banks. Today that figure is approximately 5x the total market cap of the U.S. equity market as the balance sheet has swelled and even outpaced the gains in U.S. equities. Alternatively, from the pre-pandemic balance sheet peak in January 2015 to its trough in August 2019, the annualized return for the S&P 500 was 11%, or approximately 2.5% lower than the annual average across the entire decade. In effect, a reduction of the Fed's balance sheet may prove to be a headwind for equities.

Portfolio actions for a rising rate environment

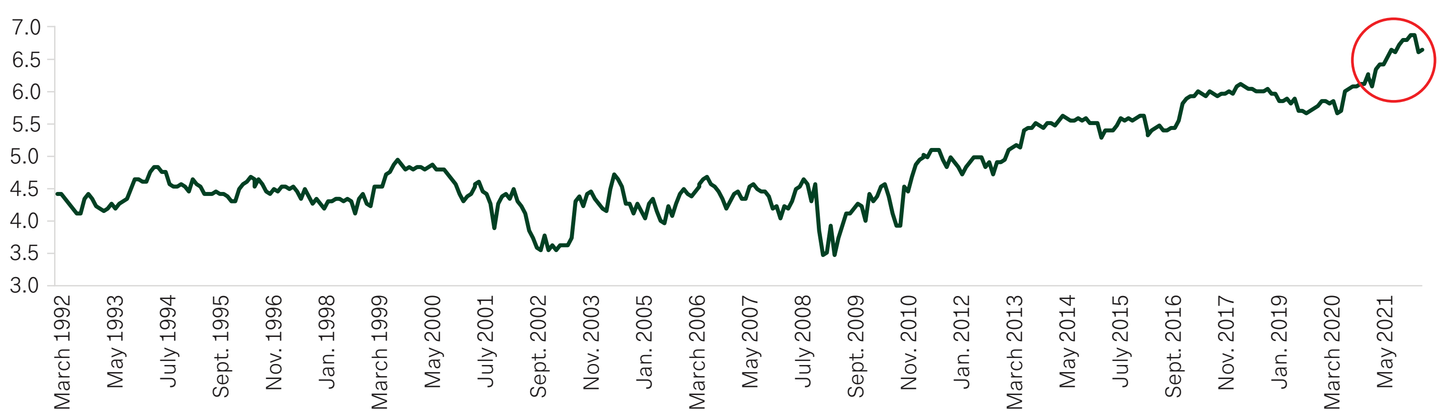
There are several actions investors can take in their portfolios to prepare for a rising rate environment. The first action we believe investors should consider is shortening duration in their fixed income portfolios. This includes looking at any ETFs or mutual funds that closely follow major fixed income indexes. One of the most widely used fixed income benchmarks is the Bloomberg U.S. Aggregate index, which currently has a duration of approximately seven years (see Figure 6). Another option within fixed income is "bond laddering," a strategy designed to provide current income while minimizing exposure to interest rate fluctuations. A "floating rate" strategy similarly reduces duration risk while accessing leveraged credit profiles that are potentially positioned to perform well during periods of supportive economic growth. The last consideration within fixed income would be to explore more active bond managers, as they can actively manage duration and security selection.

Within equities, some considerations would be to target higher-quality segments exposed to specific areas of cyclical strength and sectors that may benefit from higher rates, including Energy and Financials. We would also recommend diversifying sources of income to avoid concentration in high-dividend equities.

Another action worth examining is real assets, such as commodities or real estate. Commodities, like oil, have been a historically good inflation hedge. Recent curbs in oil production and the steady increase of demand for a broad range of commodities make this an attractive asset class. For currencies, market perception is shifting on USD — we expect to see the USD on a long upward march to end in 2022, based on expectations for higher rates globally.

Regardless of what asset class you are invested in, we are likely to see higher periods of episodic volatility going forward. We recommend investors keep an allocation to fixed income, as that can act as a ballast in your portfolio during times of episodic volatility.

Figure 6 | Bloomberg U.S. Aggregate: Modified Duration



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