ALTAIR INSIGHT

20 YEARS

Quarterly Market Review

Iceland
Kara V. Schneider, Project Associate

First Quarter 2022
Key Topics

1.The Fed is embarked on a high-wire act of trying to raise rates aggressively to combat inflation without halting economic growth. We believe it would pause before tipping the economy into recession.

2. Inflation will remain elevated through 2022, exacerbated by the Russia-Ukraine war, even after it starts edging lower in the coming months.

3. The economy is holding up well even as growth moderates, bolstered by a revived labor market and other strong fundamentals. No recession should occur this year.

4. A rare slump in both stocks and bonds signifies heightened uncertainty in markets. We see a variety of potential paths and outcomes moving forward, which is why we advocate broad diversification.

5. Geopolitical risks are high, particularly in eastern Europe and China, but the global economy and markets are well-positioned to absorb shocks.

Noah Kroese Illustration for Altair Advisers

Ultimately, though, we retain a constructive outlook for the rest of 2022, rooted in expectations of continuing economic growth and an eventual decline in the rate of inflation, which we should see over the next few months.

Our cartoon portrays this as a tightrope walk for Chair Jerome Powell, trying to balance inflation and growth concerns without the economy being thrown off by turbulence from the Ukraine war and U.S.-led sanctions against Russia. We do not mean to imply a binary outcome, however – that Powell either makes it across to Goldilocks conditions of price stability and maximum employment or he falls and takes the economy down with him.

"There is nothing so stable as change." – Bob Dylan

Change and new challenges are top of mind as we move into spring.

This was shaping up to be a season with extra reasons to celebrate, with COVID-19's grip weakening, restrictions lifting and the economy plowing forward amid renewed activity after two years of the pandemic. But that outlook became overshadowed by a tragic war in Ukraine and uncertainty over both the highest inflation in 40 years and the prospect of rapidly tightening monetary policy to corral it. Market performance has reflected this stress. Stocks and bonds delivered rare simultaneous losses in the first quarter and have headed still lower since.

Yet economic growth remains strong, backed by financially sound companies, resilient consumers and returning workers, and markets have shown flashes of regaining their upward momentum. The markets have a long record of recovering quickly from setbacks in the face of continuing geopolitical tension or elevated economic uncertainty. Investors were reminded of that in March, when a rally propelled the S&P 500 Index up 11% in three weeks before stocks retrenched.

We expect more than the usual share of sharp ups and downs in the months ahead as markets evolve in response to any changes in economic conditions and global consequences from the war.

It is very possible that he stops partway across, meaning a pause or halt to rate hikes, or that the economy simply slows without tumbling.

While his mission is risky, we would simply recall the success of Charles Blondin, the 19th-century French acrobat whose name became synonymous with tightrope walking. Blondin safely navigated his way across the 1,100-foot-long gorge spanning Niagara Falls an estimated 300 times without injury. We anticipate that Chair Powell meets with similar success in a less life-threatening challenge. But as was the case with Blondin, whose precedent-setting first walk across the "boiling cataract" in 1858 drew 25,000 spectators, many will watch Powell's risk-laden quest closely. We will be tracking the economy's health every step of the journey, looking for trouble signs.

As for our investment outlook, we are confident that the risk of a recession in 2022 is low but acknowledge there are various paths the economy and markets could take. We remain big believers in broad diversification of portfolio assets to achieve the best risk-adjusted returns, even though that strategy did not pay off in the first quarter. To that end, we are studying the best ways to further diversify client portfolios in this changing environment, focusing on investments beyond traditional stocks and bonds.

On to further discussion of five key issues in the markets and our positions:

1.The Fed is embarked on a high-wire act of trying to raise rates aggressively to combat inflation without halting economic growth. We believe it would pause before tipping the economy into recession.

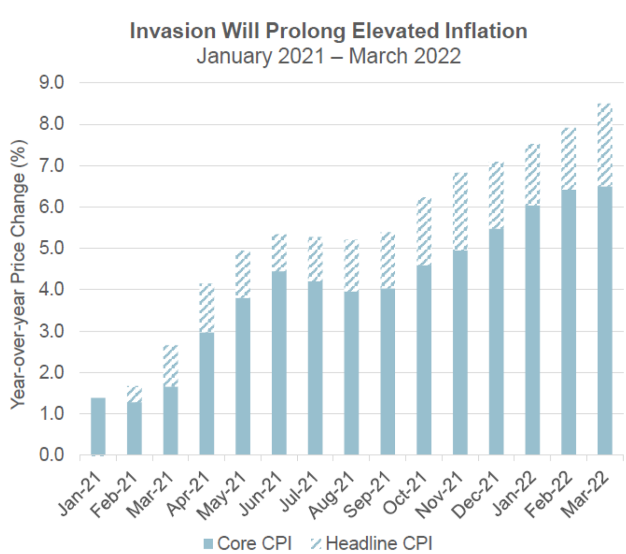
Markets have relied heavily on the Federal Reserve's easy-money policies over the past decade, particularly since COVID-19 struck. Now they must put their faith in the Fed and a strong economy as the central bank navigates its way through an ambitious series of interest-rate hikes aimed at reining in high inflation without precipitating a severe slowdown. We believe this mission can succeed, as history suggests, but the outcome will be determined by more than the Fed's actions alone. Consumers, homebuyers and the private sector all must retain their confidence if this is to work. But inflation must come down, too, aided by smoothing in the global supply chain.

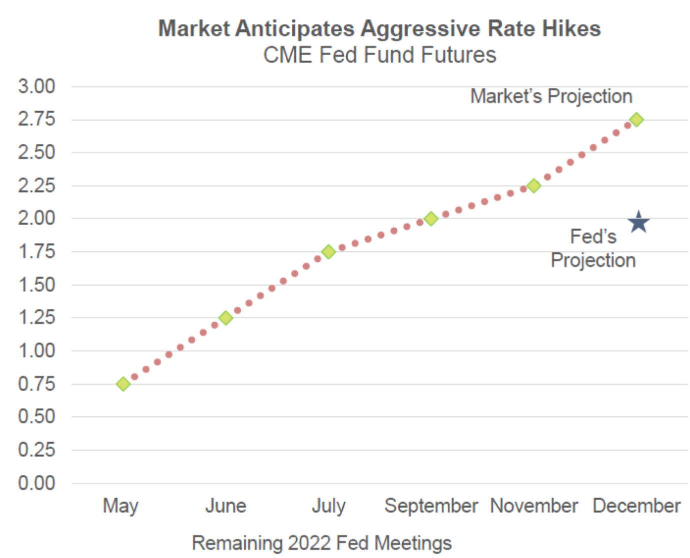
The benefit of 20/20 hindsight makes it easy to blame the Fed for this predicament. Chair Powell himself acknowledged regret in March that the decision to tighten rates was not made until inflation was at a four-decade high, telling a reporter that such action "obviously" should have been taken sooner. Waiting to launch rate hikes is understandable from the standpoint of not wanting to jeopardize last year's expansion with the Delta and then Omicron variants lurking. Much less defensible in our view: Pumping an additional nearly $300 billion in stimulative bond purchases onto its balance sheet since deciding in November to wind down the program, even as inflation mounted and the pandemic waned.

Now the Fed is forced to tighten more rapidly than planned even just six months ago, entailing more risk for the economy. It lifted the federal funds rate off zero with a quarter-percentage-point increase in March and is expected by markets to bump up the pace to half-point hikes in May and June with a series of increases to continue into 2023. Market expectations are for the Fed to lift short-term rates to 2.75% by December and above 3% next year.

The Fed's mixed track record in achieving "soft landings" for the economy has unsettled markets but does provide some reason for encouragement. Six of the eight Fed rate-hike cycles in the past 40 years have ended in recession. However, the three most recent recessions (2001, 2007-09, 2020) were caused by unrelated shocks or crises. The Fed managed to successfully complete such cycles in 1965, 1984 and 1994 without triggering recessions, a fact Powell made sure to note publicly. The first cycle was followed by three straight modestly positive years for the stock market and the latter two cycles ushered in some of the strongest, longest return streams in history.

Cooling inflation while maintaining a thriving economy is a difficult task even without factoring in a war and historically high price growth, not to mention a lingering pandemic. Higher borrowing costs will ultimately filter through the economy by tamping down consumer demand, company expansion plans and home purchases, tempering inflation but hopefully not the growth cycle itself.





Why will it work this time? We view the economy and most notably the labor market as starting from very solid positions – more on that under topic #3 below – and thus able to withstand the downshifting of economic gears without stalling. The economy's strength should enable the Fed to enact larger than usual half-point increases – at least at the outset – aimed at preventing high inflation from becoming entrenched.

As if steep rate hikes are not enough of a challenge, Fed officials are poised to begin quantitative tightening in May – shedding up to $95 billion of assets a month from a swollen balance sheet that they doubled in size during the pandemic. On the plus side, this should help tame inflation faster.

We have confidence in the Fed's initial plan and believe the bank will end tightening if economic warning signs begin flashing and growth sputters. If inflation begins moderating, Fed officials can slow down their rate hike plans. On the other hand, if they tighten too aggressively without heed to the consequences, a recession would likely follow. But based on the Powell-led Fed's past assurances, we are confident that they will do everything they can to attempt to avoid a recession, including a pause or full stop.

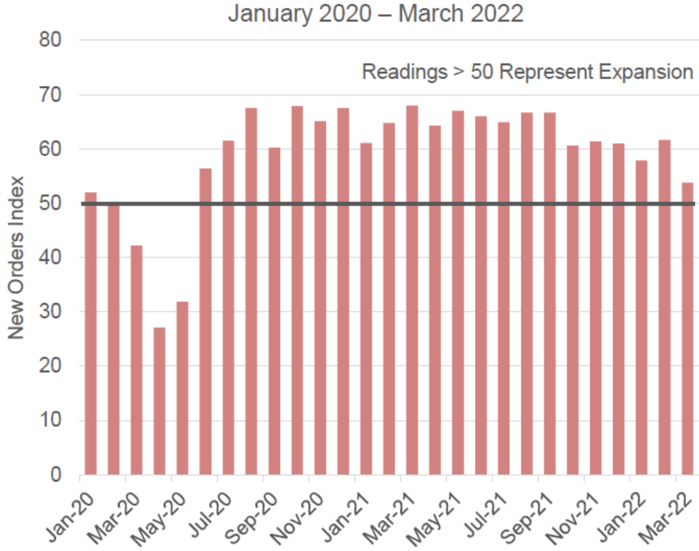
2. Inflation will remain elevated through 2022, exacerbated by the Russia-Ukraine war, even after it starts edging lower in the coming months.

At the start of the year we saw signs of inflation's fast rise beginning to moderate and anticipated it would soon start coming down. Russia's invasion of Ukraine on February 24th changed the timeframe. The war, with the resulting surge in oil and commodity prices along with disruptions to parts of the global supply chain, ensures that uncomfortably high prices remain with us for longer than expected. Inflation now has no chance of returning anywhere near the Fed's 2% sweet spot before next year at the earliest.

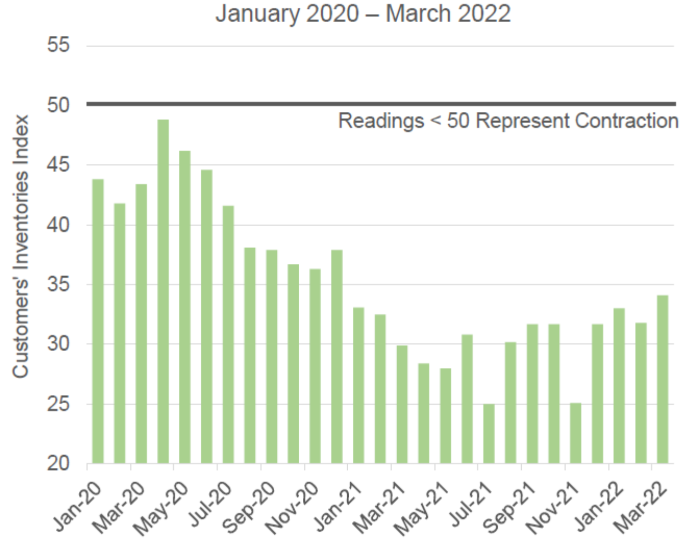
The worsened outlook added urgency to the Fed's decision to finally begin attacking inflation by initiating rate hikes less than three weeks after the invasion. Perhaps more significantly, the heightened inflation influenced the speed of the central bank's plans, with Fed officials now considering multiple half-percentage-point increases rather than a modest series of quarter-point moves.

The latest data fuels concerns of "sticky" inflation – price rises that persist so long that they spread through the economy and are hard to reverse. The Federal Reserve's favorite inflation measure, the core PCE price index, rose to its highest annual level (5.4%) since 1983 in February. Including food and energy, headline PCE was higher at 6.4% and the Consumer Price Index still higher in March at 8.5%. Wage growth is a contributing factor to overall inflation and has risen to its strongest in years as businesses compete for talent. With companies' costs inflated by rising wages as well as higher prices for energy, fuel and other raw materials, the burden gets passed along to consumers.

Demand Continues to Expand
January 2020 – March 2022



… Yet Customer Inventories Have Not Recovered
January 2020 – March 2022



Consumer price inflation is thus likely to stay near its peak as we move through the spring because of the disruption in the supply of Russian oil that has doubled prices to over $100 a barrel. Fed rate hikes are unlikely to tamp down price growth immediately. Inflation's pace could start declining by this summer, however, signifying easier year-over-year comparisons if not meaningful price relief. Already, the monthly increase in core inflation decelerated in March as used car prices that had skyrocketed since last year began heading lower. Whether that moderating trend can fully offset the inflationary impact of China's Covid-related shutdowns on the global supply chain remains to be seen.

If the rate increases help bring inflation down to between 4% and 6%, history shows that can be a positive scenario for stock returns. The S&P 500 has averaged 12% annual returns in such an environment since 1970 compared to under 5% returns when inflation tops 6%. Looking further ahead, when inflation eventually returns to between 2% and 4%, such a scenario has produced even better average annual stock returns over that period at just above 15%.

As the pent-up consumer demand sparked by the pandemic fades, the Fed's battle with inflation may become easier. So too may a loosening of the supply-chain bottlenecks that resulted in clogged ports and lengthy shipment delays. Both would result in an improved inflation picture by year-end.

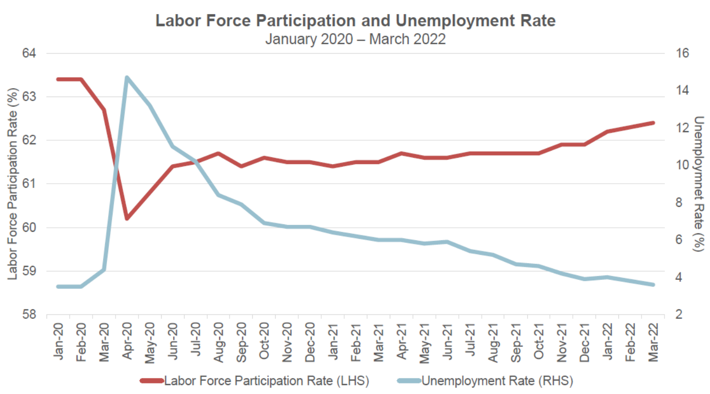
3. The economy is holding up well even as growth moderates, bolstered by a revived labor market and other strong fundamentals. No recession should occur this year.

The economy still stands firmly on solid ground. The world economy remains on track to keep expanding in 2022 despite new challenges, according to the International Monetary Fund. And U.S. economic activity remains vigorous thanks to solid company earnings, resilient consumers and other positive signs.

The Leading Economic Index, a U.S. gauge of 10 key variables intended to help forecast future economic activity, remains well above its historical norm even after cooling modestly in recent months.

Yet recession risks unquestionably have risen this year with the added burdens of the Ukraine conflict and monetary tightening by central banks after two years of stimulative policy. And not every sector of the U.S. economy is booming, as may have seemed to be the case last year when the annual growth pace of 5.7% was the fastest since 1984.

No indicator better signifies the U.S. economy's vitality in our view than the improving labor market. Nearly 2 million people rejoined the labor force in the three months ended in February. With fewer people quitting their jobs, the labor force participation rate – the percentage of the 16-and-over civilian population that is working or actively looking for work – has edged up to a two-year high of 62.4% – 82.5% for the prime working-age category of 25 to 54. Employers have added back 20.4 million of the 22 million jobs initially lost to pandemic lockdowns in March and April 2020. And the unemployment rate has fallen to its lowest since the start of the pandemic at 3.6%.



An additional rise in inflation will ratchet up pressure on employers to boost prices and wages further, perhaps cutting into their ability or willingness to hire. But for now the signs of weakness are limited. A recession is unlikely with a strong labor market – especially when it is bolstered by other areas:

Corporate earnings - Rising energy costs and stubbornly high inflation have yet to darken the outlook for S&P 500 companies' profits. In fact, analysts' estimates for the next four quarters and 2023 actually rose in March in a reflection of the economy's strength. While wary of inflation's impact, businesses have reduced their debt loads and are investing in growth.

Consumer spending - Even with inflation worries sending the University of Michigan's sentiment gauge to the latest decade low in March before firming in April, Americans have a historically large level of personal savings to draw from. That has helped drive retail sales higher in the latest monthly readings and should enable consumers to spend more on leisure and travel with COVID-19 limitations easing. Household finances are in much sturdier shape after nearly two years of pandemic stimulus. The National Retail Federation estimates that retail sales should still grow between 6% and 8% in 2022.

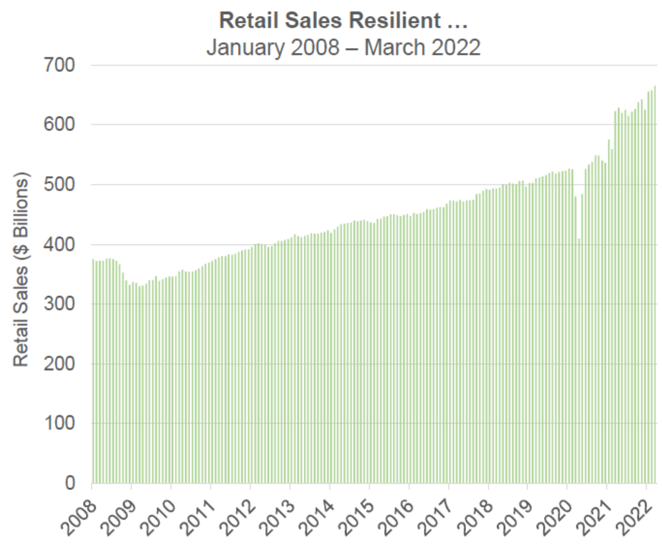
Housing market - The housing boom continues unabated, with the median home cost up 19% over a year ago and U.S. prices reaching a record high for a 36th straight month.

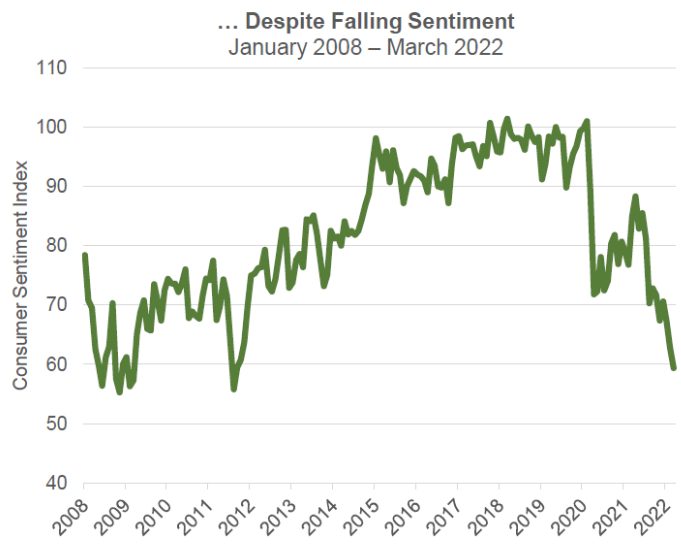
Rents are up 17% over the same period. Rising mortgage rates will slow but should not puncture this growth. There is little to no comparison to the explosive housing market that preceded the Great Recession in 2007. Lax lending practices and heavy speculation fueled that bubble. Today there is more oversight and homebuyers are in fundamentally better financial shape; prices have shot up from both demand and a lack of supply tied to the pandemic.

Globally, the IMF reduced growth projections for 2022 and 2023 due to the war and associated heavy sanctions on Moscow from the United States, the European Union and U.S. allies and partners. The fund urged countries to brace for the war's impact on higher prices for commodities, which will weigh on demand; hardships in neighboring economies due to trade disruptions and a surge in refugees; and reduced business confidence along with higher investor uncertainty.

Earnings estimates are down only fractionally for developed countries and substantially for emerging markets amid China's regulatory crackdown and lockdowns. Europe's dependence on Russia's oil and gas poses heightened risk in that region. The United States will feel the effect of higher commodity prices but to a lesser extent since it is more self-sufficient on energy and agriculture.

Certainly the U.S. economy will be increasingly vulnerable to the consequences of high inflation the longer it persists. Growth already was moderating early in the year before the war worsened the outlook and shrank the Atlanta Fed's forecast for first-quarter expansion to an annual pace of just 1.3%. Much of the decline, though, was inevitable after last year's historic bounceback and with fiscal and monetary aid waning.





The economy would have to weaken significantly from its current state before approaching a recession. Stagflation, which describes an economy experiencing a simultaneous increase in inflation and stagnation of economic output, is a possibility. But with companies and consumers strong for now and no alarm signals flashing, the economy appears in healthy condition to absorb current challenges.

4. A rare slump in both stocks and bonds signifies heightened uncertainty in markets. We see a variety of potential paths and outcomes moving forward, which is why we advocate broad diversification.

Simultaneously negative returns for stocks and bonds have made for a disappointing 2022 so far. Portfolio diversification works over time to result in the highest return for a given level of risk; it did not do so in the first quarter. While it is possible for lightning to strike twice, particularly with both asset classes extending their poor start to the year into April, a repeat quarter would be exceedingly rare. Just four instances of back-to-back negative quarters for both have occurred since 1976, according to Strategas Research.

Historically Rare Quarter of Negative Stocks and Bonds
Q1 1976 – Q1 2022

Quarter-End	S&P 500 Return	U.S. Agg Return	Quarter-End	S&P 500 Return	U.S. Agg Return
Mar-77	-8.4%	-0.8%	Mar-94	-4.4%	-2.9%
Dec-77	-1.5%	-0.1%	Jun-94	-0.3%	-1.0%
Dec-78	-6.3%	-1.4%	Mar-05	-2.6%	-0.5%
Dec-79	-1.3%	-3.1%	Jun-06	-1.9%	-0.1%
Mar-80	-5.4%	-8.7%	Jun-08	-3.2%	-1.0%
Jun-81	-3.5%	-0.3%	Sep-08	-8.9%	-0.5%
Sep-81	-11.5%	-4.1%	Jun-15	-0.2%	-1.7%
Jun-84	-3.8%	-2.1%	Mar-18	-1.2%	-1.5%
Mar-90	-3.8%	-0.8%	Mar-22	-5.0%	-5.9%
Mar-92	-3.2%	-1.3%			

Markets clearly are being buffeted by the transition from an era dominated by pandemic limitations and quantitative easing to one defined so far by high inflation and monetary tightening. We are studying the likeliest implications of these changes and intend to remain flexible and poised to make revisions that ensure client portfolios best reflect these shifts.

While stocks are likely to experience more bouts with above-normal volatility this year, we expect them to resume their upward path in time. The seesawing in movement and changing trends heighten uncertainty, however, as markets attempt to find their footing in a new environment.

Despite this year's turbulence, the S&P 500 is within 7% of its all-time high as we write this commentary. And it has risen in 10 of 13 rising-rate cycles dating back to 1960, according to LPL Research.

Bonds have had an extremely rocky few months heading into a rate-hike cycle that already has pushed yields sharply higher. The market has priced in much of the future rate increases, adding to bonds' underperformance. We remain believers in bonds and the purpose they serve as a ballast in portfolios. However, the volatility in bond pricing may continue until the impact of rate hikes on the economy becomes clearer.

The bond market emitted a pessimistic signal about the economy recently when a closely watched part of the yield curve inverted, with two-year interest rates rising briefly above 10-year ones. An initial inversion can start the clock on a future recession. However, it does not mean a recession will follow immediately. The yield curve can invert multiple times over a long period leading up to a recession. Inversions' predictive power is limited. And we believe the labor market, consumer spending and other metrics convey a strong economy, not one on the verge of recession.

S&P 500 Performance Following Yield Curve Inversion

Date of Inversion	6 Months	12 Months	24 Months	Time to Recession
February 26, 1973	-9%	-14%	-28%	10 Months
August 17, 1978	-6%	3%	17%	18 Months
September 12, 1980	6%	-4%	-3%	11 Months
January 14, 1982	-4%	27%	45%	During
December 27, 1988	19%	26%	19%	20 Months
August 11, 1989	-4%	-2%	13%	12 Months
March 8, 1990	-5%	10%	19%	5 Months
May 26, 1998	8%	19%	26%	35 Months
February 2, 2000	2%	-4%	-22%	13 Months
December 27, 2005	-1%	14%	17%	24 Months
August 14, 2019	19%	19%	57%	7 Months

Another reason we do not view the inversion as a strong sign a recession is on the horizon is that the long end of the curve is artificially low as a result of the huge volume of Treasury bonds and mortgages the Fed bought to support the economy during the pandemic. That pushed the entire yield curve close to zero and left it overly sensitive to any fluctuations that could invert it.

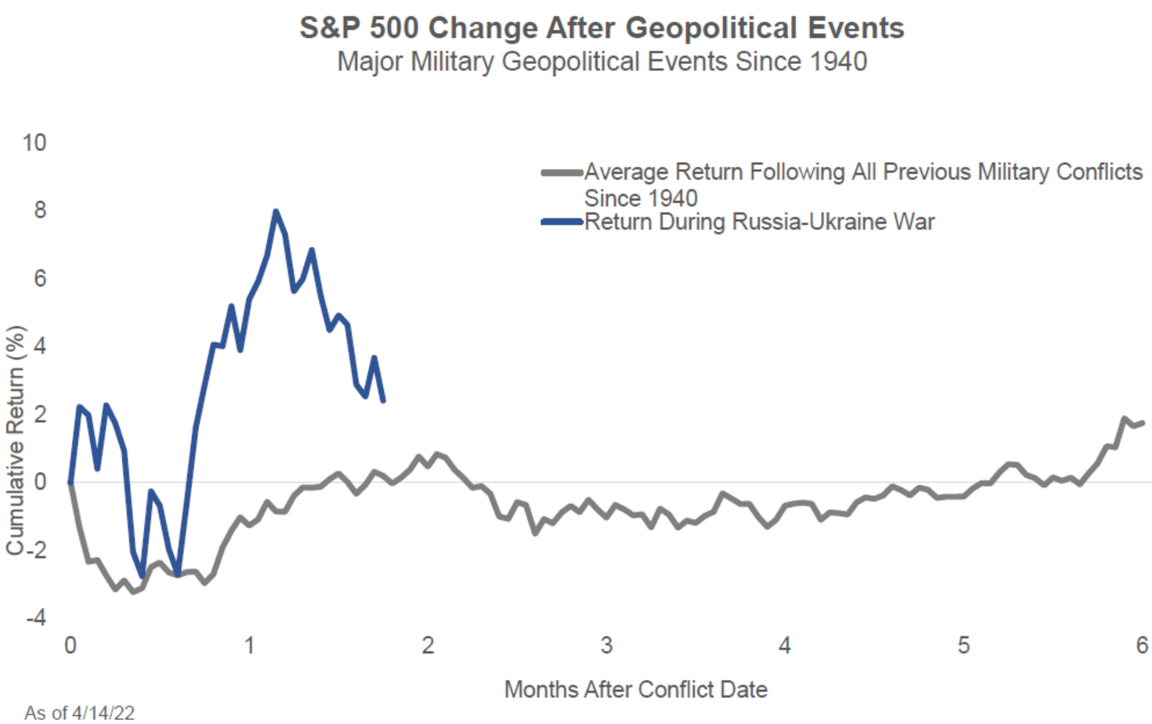
Our base case is that there is no recession in 2022. But we acknowledge there are various paths the economy and markets can take over the next several months and it will likely be bumpy. We believe maintaining and even increasing diversification will help portfolios weather this market environment.

5. Geopolitical risks are high, particularly in eastern Europe and China, but the global economy and markets are well-positioned to absorb shocks.

Markets have repeatedly shown their tendency to be counterintuitive – to look past current conditions to try to anticipate what may lie six months or more ahead.

Markets have repeatedly shown their tendency to be counterintuitive – to look past current conditions to try to anticipate what may lie six months or more ahead. We saw this when stocks surged in the early days of COVID-19 lockdowns in 2020 and kept rising almost without interruption through the darkest days of the pandemic. To a much lesser extent, we also witnessed it in the days following Russia's invasion of Ukraine when the S&P 500 rose 5% in three weeks before settling back.

Despite the grim brutality of events in Ukraine, investors knew that any initial setback from the war – in this case a nearly 3% drop on the day of the invasion that was quickly reversed – would likely be brief based on historical precedent involving geopolitical crises. Among 15 select major military events since 1940, from Germany's invasion of France and Pearl Harbor to Russia's invasions of Georgia and the Crimea, the S&P 500 usually headed lower initially before recovering to average returns of 1.8% for the six months following.



We are not minimizing the considerable risk posed to markets by this war. But unless it spills over into a neighboring NATO-member country or Russia deploys chemical or nuclear weapons in Ukraine, we expect the biggest consequences to be contained to that region.

The most widely felt impact may be from rising oil and gas costs since Russia is a major player in energy production. Oil prices briefly surged above $120 a barrel following the invasion, and the global trickledown effects already are being felt by motorists, homeowners and other consumers worldwide. Elevated inflation also will now persist much longer than previously anticipated, as mentioned earlier, and global supply-chain snags will take longer to resolve.

Another substantial geopolitical risk is posed by China's harsh zero-Covid restrictions, which have curtailed spending and business activity and could have larger global repercussions if the situation worsens. The country's financial capital, Shanghai, has been in total lockdown, contributing to a drop in China's services sector to the lowest level in two years and seriously threatening growth prospects in the world's second-largest economy.

Encouragement comes from Beijing's repeated pledges in recent weeks to take the necessary steps to stabilize the economy. The government has every political incentive to do so given that a failure to respond effectively could jeopardize President Xi Jinping's path to a third term at the Communist Party Congress this fall. But more setbacks with costly lockdowns and a failure of China's zero-Covid policy would pose substantial further risks for the global economy.

Our Outlook

- The Federal Reserve should be able to raise short-term interest rates sharply this year without causing the economy to go into recession. Whether it can carry out its entire planned rate-hike cycle with additional increases in 2023 or is forced to either halt or even hike more aggressively is less certain, dependent on the course of inflation and other economic pressures.
- The U.S. economy is showing resiliency, buoyed by robust corporate and consumer health and an improved job market. Growth is slowing from last year's sizzling pace but a recession is unlikely this year.
- Inflation will remain uncomfortably high through the rest of the year, persisting in large part due to consequences of Russia's invasion of Ukraine and lingering effects of the pandemic. We expect the rate of price growth to peak this spring and then begin gradually edging lower unless challenges within the global supply chain unexpectedly worsen due to the war and Covid-related restrictions in China.
- Bond investments have been hurt by rising rates and resurgent inflation but we remain believers in their role as a ballast during turbulent times. We believe much of the expected rise in interest rates has already been priced into the bond market.
- Given the uncertainty around the path of interest rates and persistently high levels of inflation, we believe it is appropriate to further diversify investor portfolios with assets whose returns have lower correlations to both stocks and bonds.

Quotes of the Quarter

"Inflation is much too high and is subject to upside risks. It is of paramount importance to get inflation down."

Lael Brainard, Federal Reserve Board governor and incoming vice chair

"Russia's actions represent an unacceptable affront to the rules-based global order and will have enormous economic repercussions in Ukraine and beyond."

Janet Yellen, U.S. Treasury secretary

"It is a good sign to get more people into the workforce. There are still challenges, but you can almost feel the mood of the country changing."

Marty Walsh, U.S. Labor secretary

Market Data

U.S. Stocks

Major stock indexes suffered their worst quarterly performance since 2020 to start the year as markets pulled back in the face of high inflation, war in Ukraine and monetary tightening following two years of stimulus.

ETF: The iShares S&P 500, Altair's investable benchmark for large-cap stocks, retreated by 4.6% after a late-quarter comeback reduced the decline. Giant tech stocks that have boosted markets over the past decade retreated as investors pulled back on risk, led lower by Netflix (-38%) and Facebook parent Meta (-34%). The tech-dominated Nasdaq Stock Market experienced a bear market (drop of 20% or more) before rallying to finish the quarter down 8.7%. The only stock sectors to post gains were energy, up an unprecedented 37.7% as oil prices surged to well over $100 a barrel because of the war, and utilities, up 4.0%.

Smaller stocks again struggled with the supply constraints and price rises that have hurt their performance since a strong first half of 2021. The iShares Russell 2000 ETF fell 7.5%. Value stocks outperformed growth stocks at all capitalization levels, though overall still finishing in the red for the quarter.

International Stocks

International developed stocks experienced a bigger setback than their U.S. peers amid the threat of the Ukraine war potentially causing more economic damage in Europe. The iShares MSCI EAFE ETF sank 6.3%. Once again the strong dollar muted dollar-based investments overseas. Without conversion to the greenback, which strengthened by 2.5% during the quarter, the EAFE index in local currencies was down only 3.6%.

Emerging-markets stocks were buffeted by the global turbulence and the start of tightening by central banks. The iShares MSCI Emerging Markets ETF plunged 7.5%, hurt by an ongoing stock slump in China, which accounts for about a third of index; the Shenzhen Component Index lost 18% in its worst quarter since 2015. Brazil was the best-performing market worldwide in dollar-denominated indexes, gaining 34.7%, while Russia was the worst, plummeting 78.8%.

Real Estate

Real estate suffered along with other markets in the quarter.

The Vanguard REIT Index Fund, proxy for the broad U.S. real estate market, was down 6.0% following a 40.4% climb in 2021. The outlook brightened late in the quarter as COVID-19 restrictions were lifted, more people returned to work and travel. Investors also responded to more attractive REIT valuations despite rising rates.

Global real estate as measured by the Vanguard Global ex-US Real Estate ETF also trimmed early-year losses in March, ending the quarter with a negative 3.6% return. The fund consists of more real estate stocks than REITs and is tilted toward Asia.

Hedged/Opportunistic

Our benchmark for securitized credit, or distressed debt, a blend of 65% mortgage-backed bonds and 35% high-yield bonds, fell by 4.8%. Credit spreads in general moved wider as 10-year Treasury rates rose as high as 2.48% before quarter-end, causing certain sectors such as mortgage-backed bonds to have their widest spread since April 2020.

Senior bank loans held up relatively well. The Invesco Senior Bank Loan Index returned -0.7%. They typically have floating interest rates that fluctuate with shorter-term rates and protect in rising rate environments.

Hedge funds outperformed both stocks and bonds but still posted losses. The HFRX Global Index, a measure of the average hedge-fund performance, declined 1.4% after having gained 3.7% in 2021 and 6.8% in 2020.

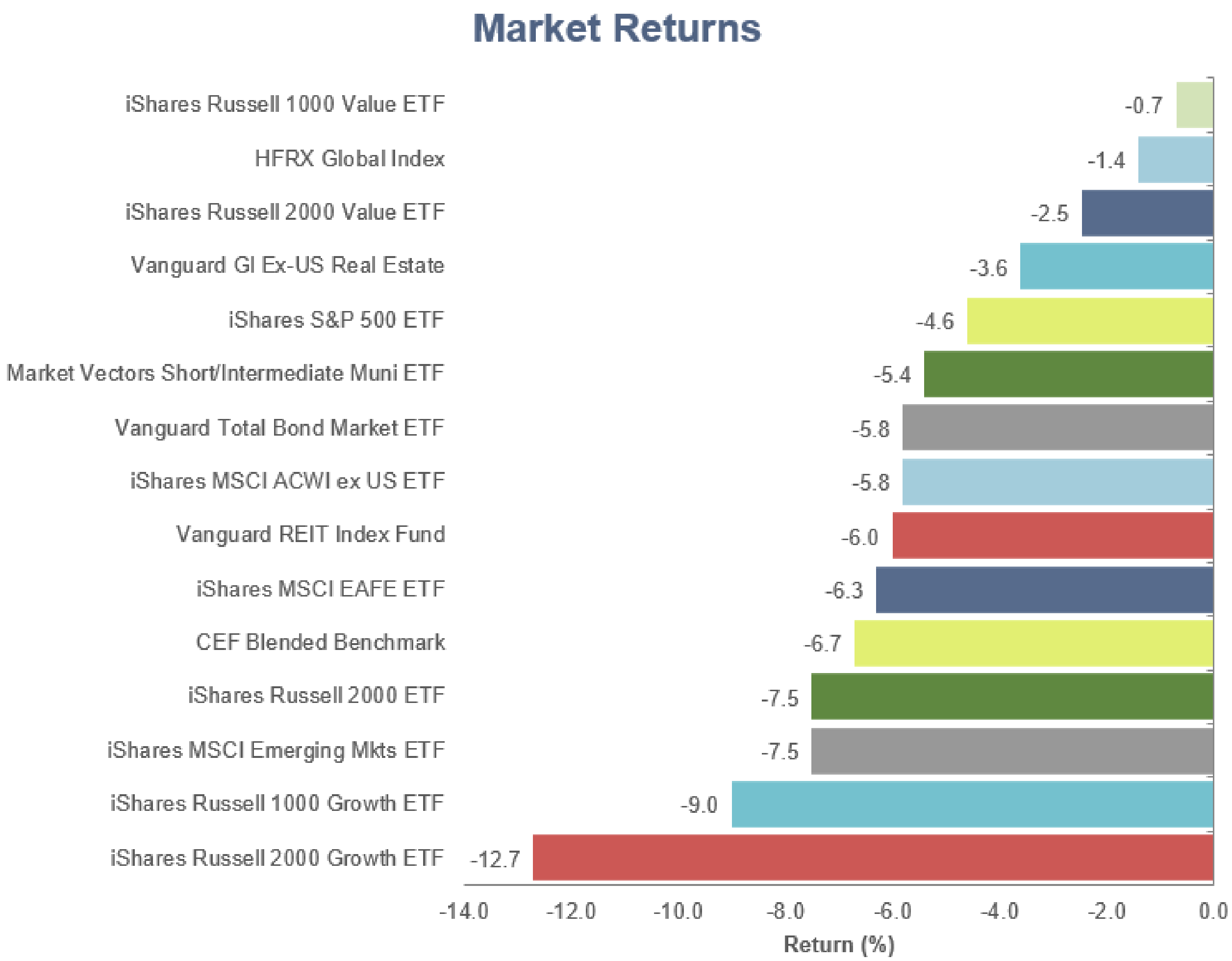
Fixed Income

The bond market retrenched at a historic pace as persistently high inflation forced the Fed to end its stimulative bond purchases and launch a rate-hike cycle sooner and much more aggressively than planned. As measured by the Bloomberg U.S. Aggregate bond index or "Agg," the long-time benchmark for the category, it was the biggest quarterly loss for bonds since 1980.

Taxable bonds as proxied by the Vanguard Total Bond Market ETF ended March down 5.8% for 2022. Altair's benchmark for tax-exempt municipal bonds, a blend of the Market Vectors short and intermediate ETFs, fared almost as poorly in falling 5.4%.

Bonds were hurt by the 10-year U.S. Treasury note yield increasing from 1.5% at year-end of 2021 to 2.3% at the end of March.

First Quarter 2022 Market Returns



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Investable Benchmark Returns through March 31, 2022

	Quarter (%)	Year-to-Date (%)	Annualized 1 Year (%)	Annualized 3 Year (%)	Annualized 5 Year (%)	Annualized 10 Year (%)
Large Cap Equity						
iShares S&P 500 ETF	-4.6	-4.6	15.6	18.9	16.0	14.6
iShares Russell 1000 Growth ETF	-9.0	-9.0	14.9	23.4	20.7	16.8
iShares Russell 1000 Value ETF	-0.7	-0.7	11.4	12.8	10.1	11.5
Small Cap Equity						
iShares Russell 2000 ETF	-7.5	-7.5	-6.2	11.6	9.7	11.0
iShares Russell 2000 Growth ETF	-12.7	-12.7	-14.7	9.7	10.3	11.2
iShares Russell 2000 Value ETF	-2.5	-2.5	2.8	12.5	8.4	10.4
International Equity						
iShares MSCI ACWI ex US ETF	-5.8	-5.8	-2.7	7.0	6.4	5.3
iShares MSCI EAFE ETF	-6.3	-6.3	0.3	7.4	6.5	6.1
MSCI EAFE Index - in local[1]	-3.6	-3.6	6.7	8.7	7.1	9.1
Vanguard FTSE Europe ETF	-8.5	-8.5	1.7	8.2	7.0	6.5
Vanguard FTSE Pacific ETF	-5.0	-5.0	-6.6	6.7	6.0	6.2
iShares MSCI Emerging Mkts ETF	-7.5	-7.5	-13.7	3.9	4.9	2.6
Fixed Income						
Market Vectors Sh/Inter Muni ETF	-5.4	-5.4	-4.8	0.7	1.5	1.6
Barclays 5 Yr Muni Index[1]	-5.1	-5.1	-4.5	0.8	1.5	1.8
SPDR Nuveen Barclays Muni Bond	-7.2	-7.2	-5.8	0.9	2.0	2.5
Vanguard Total Bond Market ETF	-5.8	-5.8	-4.1	1.7	2.1	2.2
Gl FixedInc Investable Benchmark	-7.0	-7.0	-7.6	0.0	1.2	0.6
iShares BarclaysInt Govt/Credit	-4.4	-4.4	-4.2	1.2	1.6	1.6
Alternative						
SPDR Barclays High Yield Bond	-4.9	-4.9	-1.7	3.3	3.7	4.3
Vanguard REIT Index Fund	-6.0	-6.0	21.4	11.4	9.7	9.7
Vanguard Gl Ex-US Real Estate	-3.6	-3.6	-0.7	0.5	4.3	5.6
HFRX Global Index	-1.4	-1.4	0.9	5.0	2.9	2.1
HFRX Equity Hedge Index	-0.3	-0.3	8.9	6.9	4.7	3.7
DRA Strategic Benchmark	7.2	7.2	20.2	10.8	8.0	4.3
CEF Blended Benchmark[1]	-6.7	-6.7	3.1	7.9	7.0	6.4
Other Common Benchmarks						
SPDR Dow Jones Industrial Avg	-4.1	-4.1	6.9	12.4	13.3	12.6
Fidelity Nasdaq Comp. ETF	-8.7	-8.7	8.8	23.8	20.2	17.7
iShares MSCI ACWI ETF	-5.6	-5.6	6.7	13.6	11.7	10.1
SPDR Barclays 1-3 Month T-Bill	0.0	0.0	-0.1	0.6	0.9	0.4
Inflation - CPI[1]	3.1	3.1	8.5	4.2	3.4	2.3

[1]There is no investable equivalent for this index

Source: Financial Times Interactive Data (IDC) and Charles Schwab.

This table was prepared using investment performance and other information obtained from third-party sources, which we believe to be reliable; however, we have not audited the data from these sources and are not responsible for its accuracy. Past performance is no guarantee of future results.

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