Creating a Risk Framework

Q3 2023 Commentary

The optimistic atmosphere that seemed to lift the stock market out of a bear market has waned. The Federal Reserve had a mantra of "higher (interest rates) for longer," which displaced previous expectations that rates would soon fall. Meanwhile, leadership in stocks becomes narrower – only seven companies represent more than 27.98% of the S&P 500 Index.

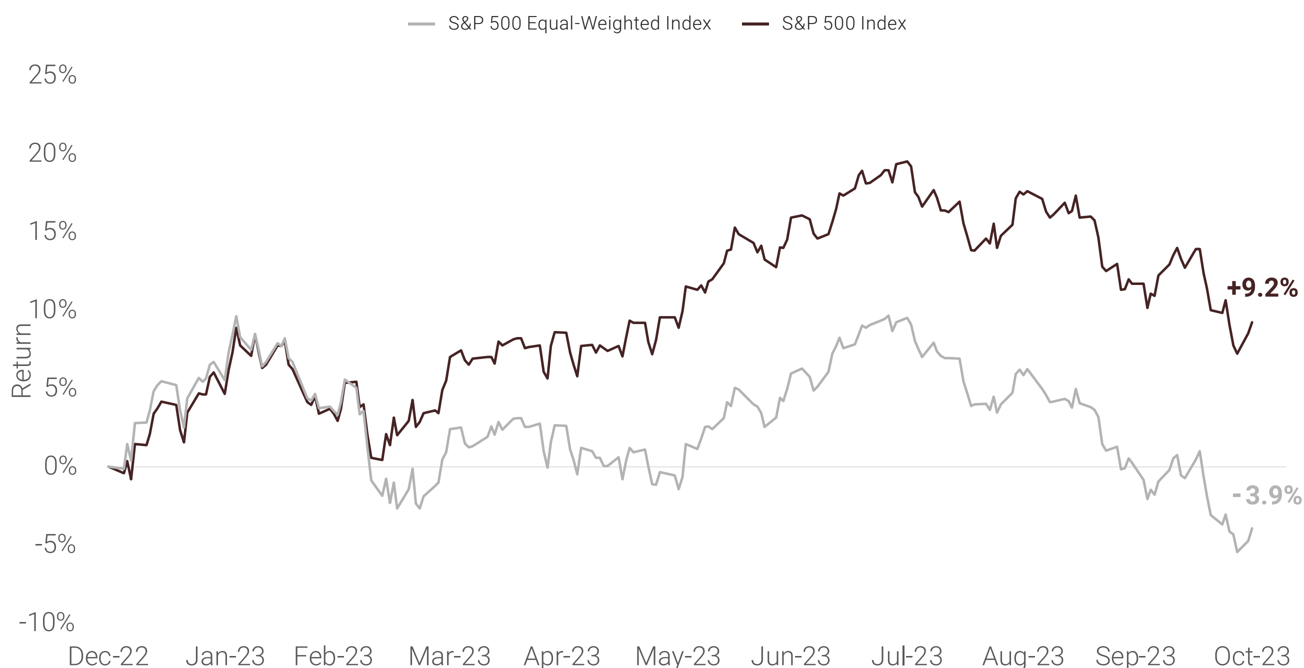
Fixed income challenges are leading the bond markets down for the third consecutive year. The sell off in the fixed-income market has resulted in bonds offering their highest yields in more than 15 years, but the risks may be higher than ever.

Amidst the increased turbulence seen in the third quarter, it's clear that an intelligent focus on risk management has been beneficial. Traditional "buy-and-hold" tactics, including using investment-grade fixed income as a safety net for stocks, have revealed their shortcomings. We use quantitative methods to navigate portfolio risk – and innovations to access unique markets may help individual investors stay on the right path within their broader financial plans.

A Real Difference

Equities have displayed remarkable resilience, with the S&P 500 index nearly revisiting its all-time highs before experiencing a modest pullback in Q3. Despite the downtick, the S&P 500 is still up 9% year-to-date at the end of October. However, it's essential to scrutinize the underlying data. The S&P 500 is a market cap-weighted index, with around 25% of the entire index represented by just five stocks. This concentration significantly impacted the performance of the index, particularly during the tech-driven AI boom, creating a disparity between robust and top-heavy stock markets.

In reality, the average performance of most companies in the S&P 500 lags behind the positive year-to-date return. Many stocks are performing considerably worse, to the extent that the S&P 500 equal-weighted index, where all stocks have the same weight, is negative for the year. At least 58% of stocks in the index are down year-to-date as of 10/31/2023. While comparing performance to a broad index like the S&P 500 is convenient, a deeper analysis is necessary to understand the attribution and why such comparisons can be misleading.



Source: Bloomberg, Redwood. Data as of 11/1/2023. Date range from 1/1/2023 - 10/31/2023.

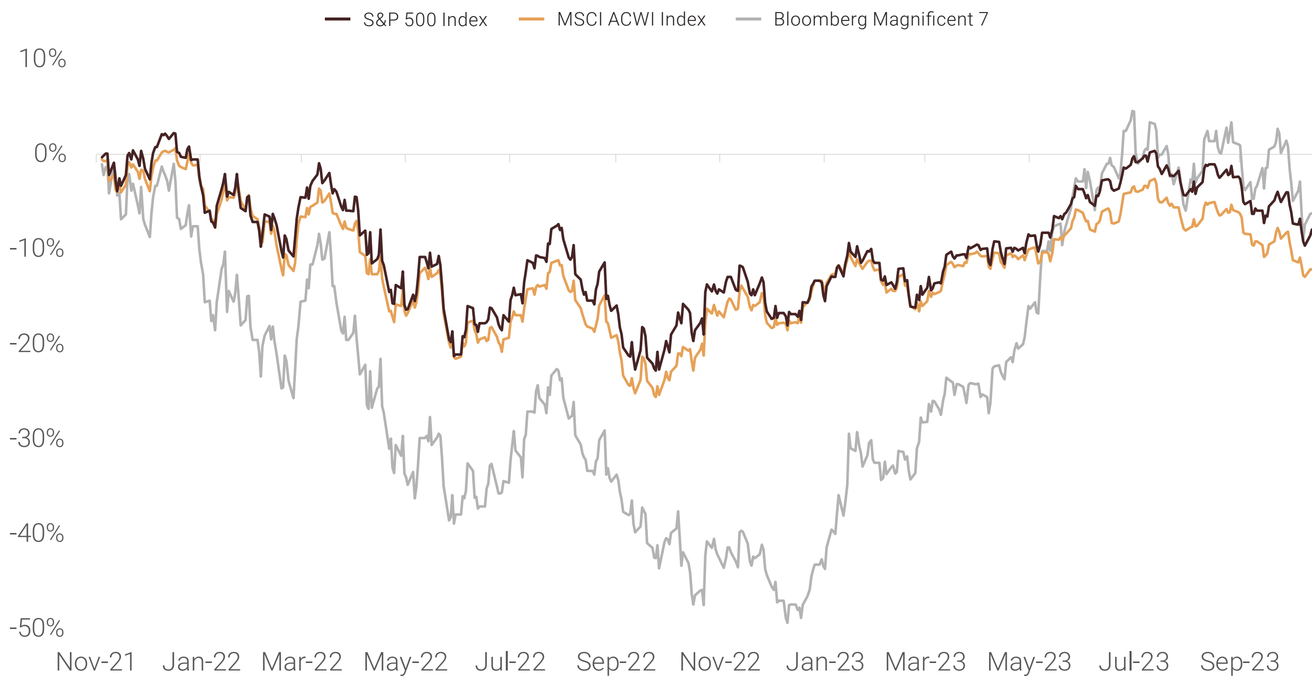
Not so Magnificent 7

Amidst the current market conditions, the impressive resilience of megacap tech stocks, affectionately known as the 'Magnificent Seven' (Amazon, Apple, Alphabet, Meta (formerly Facebook), Microsoft, NVIDIA, and Tesla), has been nothing short of remarkable. Despite market challenges such as inflation and interest rates, these stocks have surged by 85% over the past year. This performance makes them a tempting reallocation choice for many investors, driven by a classic behavioral trait known as 'recency bias.' However, comparing single return numbers in isolation may not be a viable solution for all investors.

Investors must ensure their choices align with their genuine risk tolerance. It's easy to appear risk-tolerant when the market is up, but the accurate measure of one's risk tolerance becomes evident during market downturns. In the context of the 'Magnificent Seven,' investors should be prepared for the possibility of losing half of their portfolio's value, as recently demonstrated in 2022.

The Full Picture

Index	2022 Drawdown	2023 Recovery	Total Period Return
Bloomberg Magnificent 7	-49%	85%	-6%
S&P 500 Index	-23%	19%	-8%
MSCI ACWI Index	-26%	17%	-12%

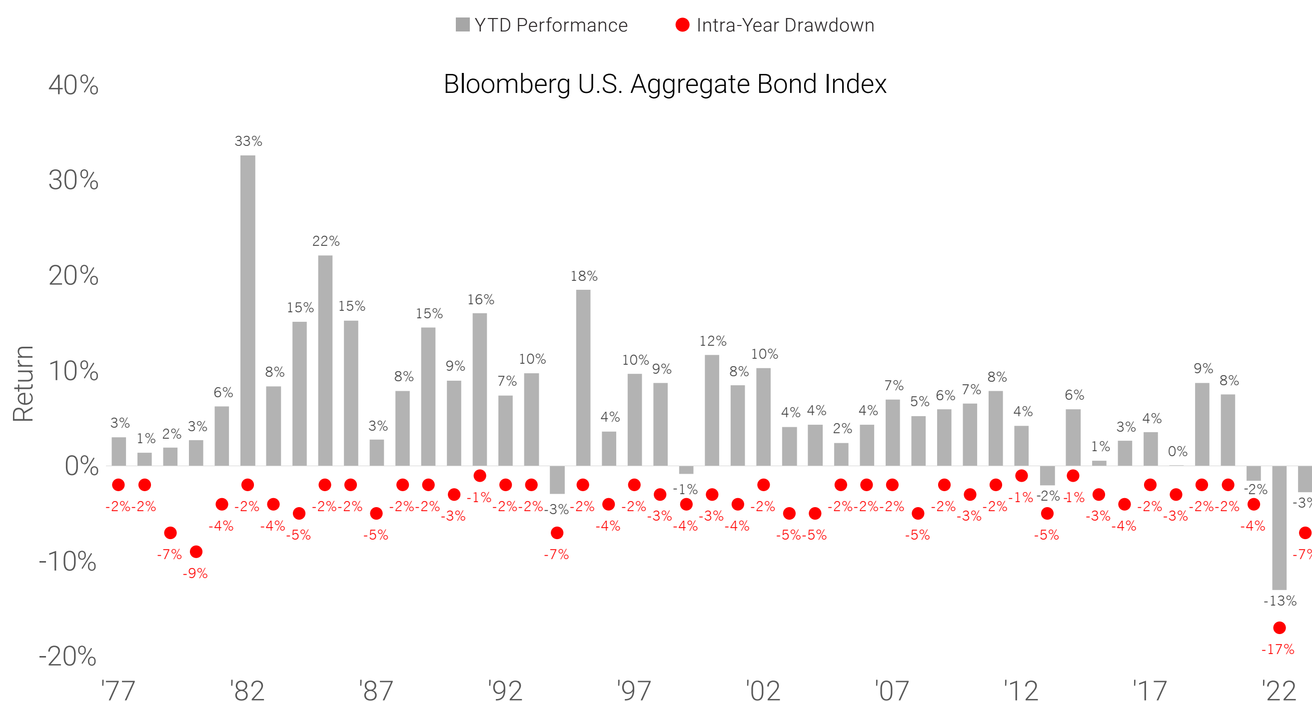


Source: Bloomberg, Redwood. Data as of 11/1/2023. Date range from 11/22/2021 - 10/31/2023.

Bonds Still in Distress

In the third quarter of this year, bond investors continued to face challenges due to the Federal Reserve's stance of keeping interest rates elevated. Elevated yields have a negative impact on bond prices, particularly affecting intermediate- and long-term Treasury bonds. The U.S. 10-Year Treasury yield has jumped to its highest level in over a decade, reaching 4.93% at the end of October.

The bond market's significant level of volatility is raising concerns. The Bloomberg U.S. Aggregate Bond Index (AGG), which had recently recorded its worst annual return and drawdown in 2022 of over 17%, is on track to record another historical intra-year drawdown of 7%, its third most significant in history. These movements' frequency and heightened volatility are particularly problematic, especially because bonds are typically included in investor portfolios to reduce, not increase, portfolio volatility. As of 10/31/2023, the AGG, an index widely considered to be "conservative" given its focus on "investment-grade" bonds, is down 17% from its all-time high and has been in a drawdown for 1,181 days.



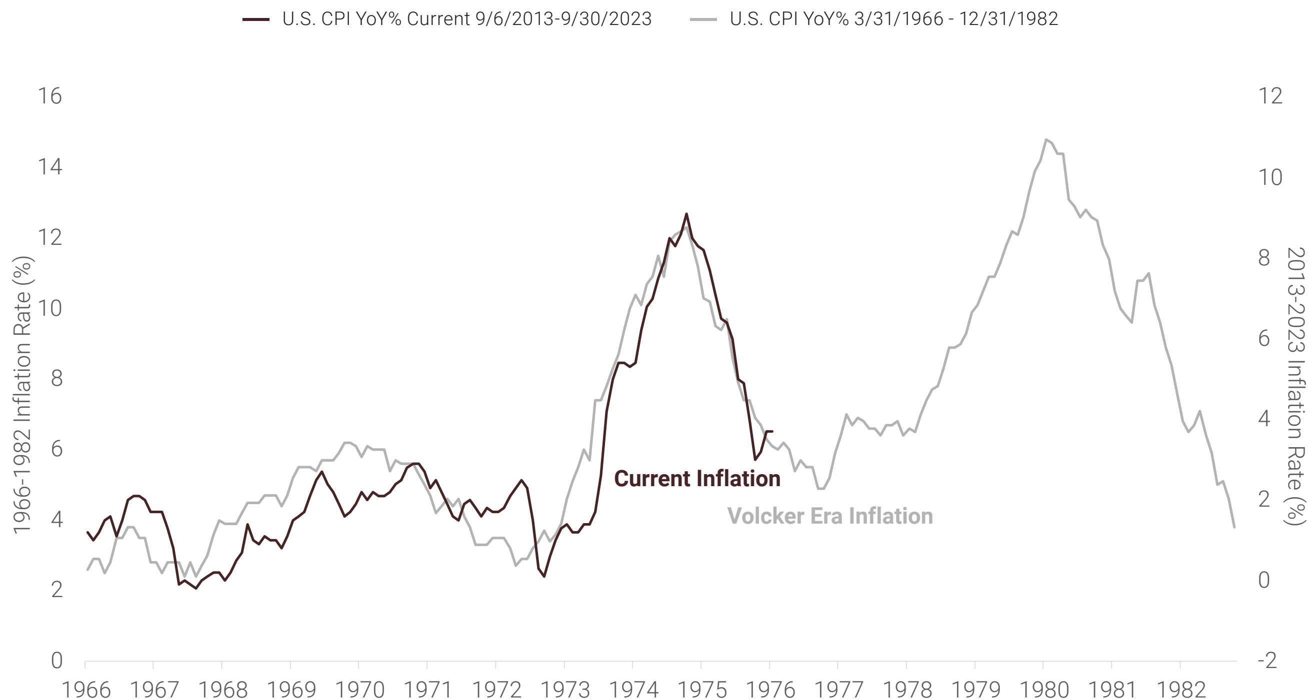
Source: Bloomberg, Redwood. Data as of 11/1/2023. Date Range from 12/31/1977 – 10/31/2023.

Fool Me Once

Analyzing the current economic landscape reveals a noteworthy trend: a decline in inflation. The primary inflation metric used by the Federal Reserve to shape its policies, referred to as the deflator for personal consumption expenditures, excluding food and energy, has registered only marginal increases in recent months. When scrutinizing its three-month rate of change, it closely aligns with the Fed's target of 2% inflation.

Some of the positive developments witnessed in financial markets this year can be attributed to the belief that the Fed has adeptly managed inflation and might soon commence reducing interest rates. However, history has demonstrated the perils linked to premature interest rate cuts. Notably, the current trajectory of the Consumer Price Index, a widely followed gauge for inflation, mirrors that of the 1970s. During this period, Fed Chairman Paul Volcker hastily lowered interest rates after signs of declining inflation. Unfortunately, this untimely rate cut led to a resurgence in inflation, even surpassing the previous peak inflation level.

While history doesn't always repeat itself, it can offer some parallels. Perhaps the Federal Reserve is committed to avoiding past mistakes, which can serve as a guiding principle in the present economic landscape.



Source: Bloomberg, Redwood. Data as of 11/1/2023. Date Range from 1966-1982 and 2013-2023.

Which Way?

The Federal Reserve has communicated its intention to maintain stable interest rates for an extended period. However, several complexities surround this decision. The prospect of the Fed potentially raising rates in either November or December could surprise the market, triggering significant fluctuations.

A key element for investors to understand in this context is 'duration risk.' It refers to how the prices of bonds, including traditionally safe ones such as Treasury bonds, can fluctuate as interest rates change. The longer you plan to hold your funds in bonds, the more susceptible they become to these rate shifts.

When the Federal Reserve hints at possible rate hikes, concerns arise about the impact on longer-term bonds. Consequently, we've witnessed notable losses in long-term Treasuries due to expectations of rising interest rates. If rates were to reverse, longer-term treasuries may benefit the most. Given potential flight-to-safety trades if rates fall in response to a recession, this dynamic may reset the need for duration.

Bond Market Risk/Return

Average Historical Returns Based On Different Yield Movements Since 2001

	300 BPS Fall	**150 BPS Fall**	**50 BPS Fall**	**50 BPS Rise**	**150 BPS Rise**	**300 BPS Rise**
2-Year Treasury	5.86%	3.61%	1.52%	0.29%	0.37%	0.54%
5-Year Treasury	8.72%	5.67%	2.50%	-0.06%	-0.61%	-1.38%
10-Year Treasury	9.63%	6.66%	3.25%	-0.34%	-0.81%	-1.94%
30-Year Treasury	14.13%	9.31%	5.46%	0.20%	-0.43%	-2.44%

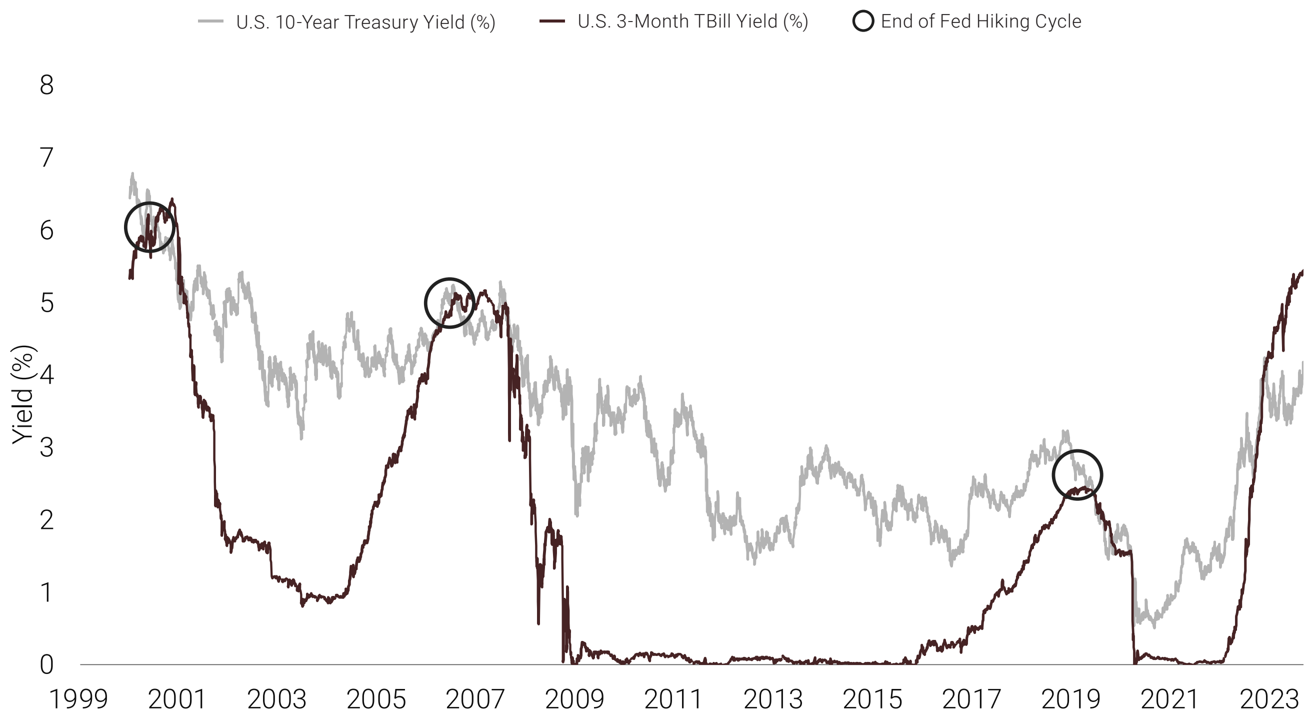
Source: Bloomberg, Redwood. Data as of 11/1/2023. Date Range from 2001-2023.

Cash Dilemma: Good Yields?

With growing concern about bonds, investors are turning to the safety of cash and money market instruments, resulting in a substantial increase of about $5.5 trillion in money market allocations. Cash and short-term treasury bills offer stability during market turbulence and presently provide attractive yields, luring some to reduce risk. However, historical trends suggest these advantages may diminish as the Federal Reserve concludes its rate hikes.

If short-term rates decline, reinvesting at these lower rates can reduce future returns, known as 'reinvestment risk.' Longer maturity bonds are less affected by this risk. While cash and short-term investments currently yield well, this income may diminish without significant capital growth as rates return to normal.

Mitigating reinvestment risk can help investors maintain a consistent yield. Risk assets can offer price appreciation when interest rates fall, contributing to total performance return. In contrast, short-term investments like Treasury Bills lack this growth potential.



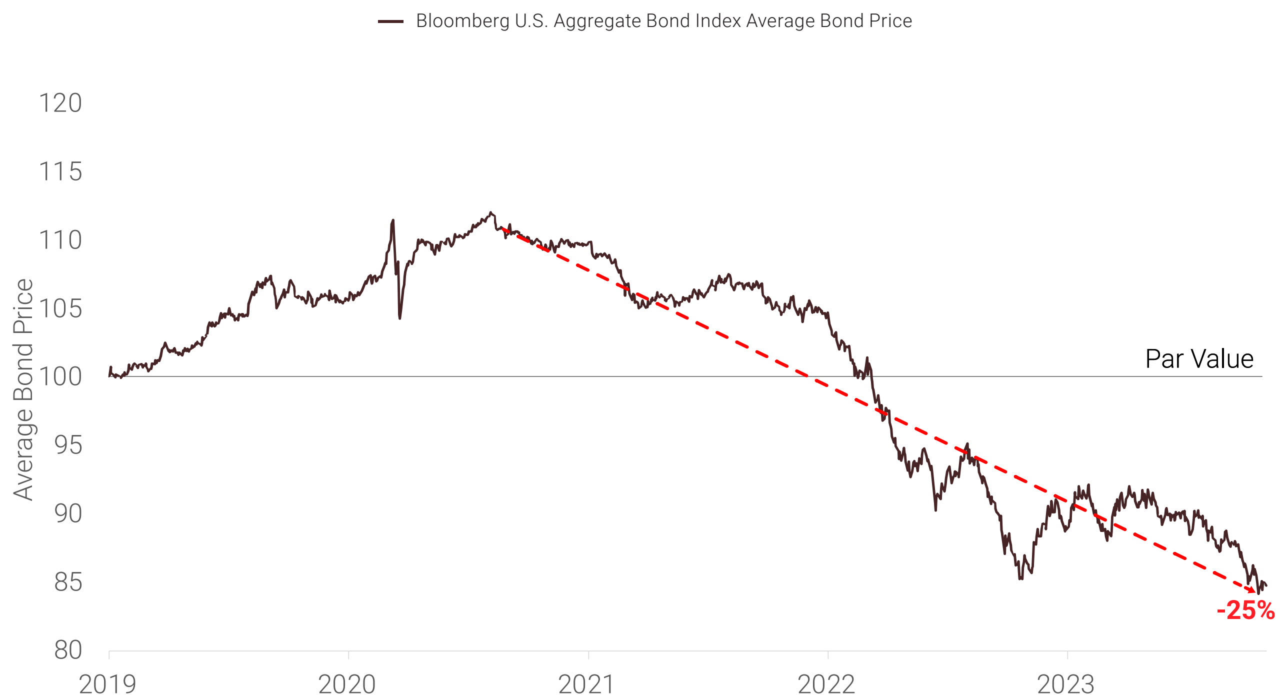
Source: Bloomberg, Redwood. Data as of 11/1/2023. Date Range from 12/31/2018 – 10/31/2023.

A New Low

The decline in fixed income is undeniable, affecting even prominent bond managers. 99% of the funds in the Morningstar Core and Core-Plus Bond Category have shown negative returns over the past three years, with the average fund declining over 13% in this time period. Investors in these bond funds face uncertainty. Low prices can become lower prices.

While some may consider holding for a recovery, it's important to note that bonds historically offer limited upside compared to stocks, and the timing for a rebound is uncertain.

In response to these challenges, some investors are exploring tax-loss harvesting for 2023. This strategy involves selling investments at a loss to offset gains elsewhere in their portfolio, potentially reducing tax liabilities in April 2024. A practical step is harvesting losses from Core Bond funds and reallocating the proceeds to other core or alternative investments, adapting to the current market landscape.



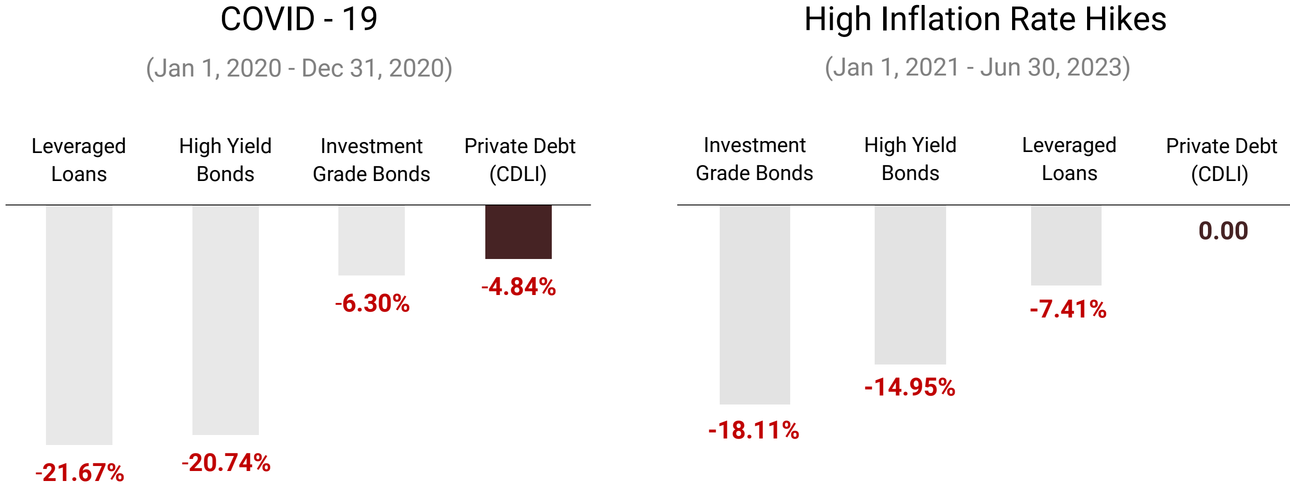
Source: Bloomberg, Redwood. Data as of 11/1/2023. Date Range from 12/31/2018 – 10/31/2023.

The Last Bastion: Private Debt

Many asset classes are still impacted negatively by the rout in 2022. In 2023, many of these securities have not made much progress in their recovery and are still in significant drawdowns. The AGG has been in a drawdown for over a thousand days. The math of loss is stacked against investors, requiring greater returns to break even than the decline itself.

The limited upside to many public fixed-income asset classes has investors in limbo. Historically viewed as "safe havens," these securities have failed retirees and pre-retirees who depend on these securities for capital preservation. It has never been more clear that drawdowns significantly impact a client's financial journey and can hinder them from reaching their goals.

The added historical risk puts a divot in traditional investment approaches. Investors have historically viewed investment-grade bonds as having a low-risk profile or "conservative" in risk and, therefore used as a core for fixed-income. However, that dynamic may be very different when building portfolios in the future.



Sources: Bloomberg, Redwood. Data as of 6/30/2023.
Past performance is not indicative of future results. Volatility is measured by standard deviation. "Private Debt" is represented by the Cliffwater Direct Lending index (CDLI). "Leveraged loans is represented by the S&P/LSTA leveraged loan index. "High-yield bonds" is represented by the Bloomberg US high yield index. "Investment grade bonds" is represented by the Bloomberg US aggregate bond index. For information purposes only. An investor can not invest directly in an index. Not for retail public distribution. There is no guarantee that any objective can be met.

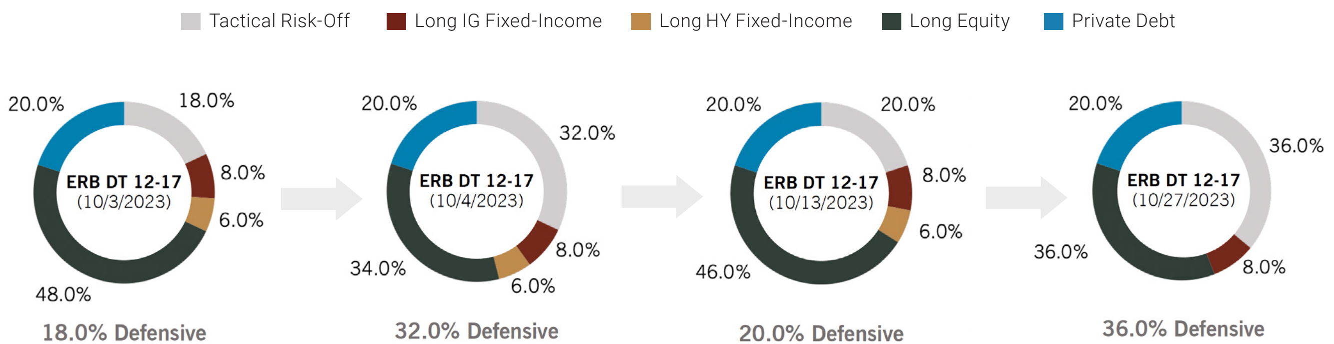
Portfolio Recap

In the third quarter, markets remained turbulent due to the Federal Reserve's unclear monetary policy communication. Most experts believe interest rates have peaked, and the Federal Reserve will keep them elevated for some time. This situation has significant implications for the fixed-income sector, as bonds issued in recent years at lower rates may not be refinanced at better terms.

We believe our dynamic investment approach allows us to adapt to these challenges. Our active risk-managed strategies are positioned to allocate to cash or cash alternatives in a defensive stance, guided by a quantitative research process. This approach helps us respond to heightened risks, especially in the fixed-income market.

To address these challenges, we explore innovative solutions beyond traditional asset management, including the potential allocation to private debt. While market timing is uncertain, we maintain our commitment to well-defined success criteria and a systematic approach tailored to each client's risk profile. This structured framework ensures we continue to pursue our client's financial goals effectively.

Dynamic Shifts in ERB



Source: Bloomberg, Redwood. Data as of 10/27/2023. *Please see additional disclosures at the end of this commentary for more information.*

Conclusion: The Manageable Variable

The investment landscape grows in complexity each day. There will always be "outperformers" and "underperformers" in the markets. One's perspective and timing can influence an investor's satisfaction with investment returns. The specific time frame can bias an investor's perception of a return's adequacy or success. For instance, analyzing a portfolio's performance during a market downturn might paint a bleak picture, while a different view could reveal an impressive upward trajectory. Cognitive biases, such as recency bias — where recent events are given undue weight — can further distort an investor's judgment. The market noise doesn't help.

Selecting investments based solely on recent past performance without considering potential risks may not be a long-term winning strategy. Capital markets serve as instruments to help investors achieve their goals. However, the attainability of these goals is intrinsically tied to an investor's appetite for risk. This is why we focus and manage what we believe to be the most critical risk factor to the investor: drawdown.

Cutting Through Noise and Focusing on Risk

WEEKLY MARKET DATA	Index Returns (%)								
Equities	**Level**	**1 Week**	**QTD**	**YTD**	**1 YR**	**3 YR**	**5 YR**	**10 YR**	**Max DD**
S&P 500	4,117.37	-2.52	-3.90	8.64	15.92	10.50	11.10	12.79	-55.25
Dow Jones Industrial Avg.	32,417.59	-2.14	-3.16	-0.51	12.58	9.08	8.30	11.41	-53.78
Nasdaq Composite	12,643.01	-2.62	-4.34	21.60	19.87	6.89	12.62	15.84	-77.93
Russell 2000	1,636.94	-2.60	-8.25	-5.94	4.61	8.09	3.11	7.94	-59.89
MSCI EAFE	1,945.35	-0.76	-4.19	3.13	18.67	6.68	4.75	5.53	-61.85
MSCI ACWI ex USA	277.41	-0.89	-4.11	1.47	12.54	4.54	3.88	4.93	-62.17
MSCI Emerging Market	919.78	-0.61	-3.40	-1.39	1.63	-1.05	1.32	3.36	-66.06
S&P 500 Growth	2,653.43	-3.02	-3.85	13.56	13.37	6.86	11.70	14.44	-61.84
S&P 500 Value	1,458.05	-1.91	-3.96	3.28	17.23	14.24	9.50	10.40	-63.27
S&P High Dividend	8,382.74	-1.49	-4.17	-10.05	1.81	11.69	7.78	10.62	-54.72
S&P 500 Buy Backs	38,173.31	-2.72	-5.31	-0.98	10.93	15.45	9.34	11.90	-57.19
S&P 500 Low Volatility	9,253.64	-0.92	-1.97	-8.05	-0.57	6.19	6.75	9.81	-40.04
Fixed Income	**Yield**	**1 Week**	**QTD**	**YTD**	**1 YR**	**3 YR**	**5 YR**	**10 YR**	**Max DD**
U.S. Aggregate	5.58	0.68	-4.47	-2.48	-1.19	-4.41	0.49	1.48	-18.41
IG U.S. Corporates	6.17	0.74	-4.39	-1.40	0.85	-4.08	1.32	2.47	-21.31
Municipals	4.71	0.02	-1.09	-2.14	1.79	-1.08	1.57	2.89	-15.11
High Yield Municipals	6.44	-0.20	-1.62	-1.62	0.52	0.47	2.37	4.73	-30.59
High Yield Corporates	9.35	0.40	-1.46	4.32	7.16	1.81	3.32	4.47	-35.34
S&P/LSTA Leveraged Loan	9.75	-0.12	0.03	9.68	9.64	4.97	4.15	3.80	-33.03
S&P U.S. Preferred Stock	7.09	-0.88	-5.78	-5.41	-6.03	-0.57	1.74	4.23	-71.77
Strategic Blend		**1 Week**	**QTD**	**YTD**	**1 YR**	**3 YR**	**5 YR**	**10 YR**	**Max DD**
60/40 S&P 500/AGG		-1.31	-5.95	4.08	8.82	4.62	6.88	8.11	-32.19
60/40 MSCI ACWI/AGG		-0.94	-6.03	2.51	7.88	2.88	5.00	5.98	-35.34

Sources: Bloomberg, S&P, Redwood. Data is as of 10/27/2023, excluding 1 YR, 3 YR, 5 YR, 10 YR, MAX DD, which is as of 9/30/23.

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Indices are shown for informational purposes only; it is important to note that Redwood's strategies differ from the indices displayed and should not be used as a benchmark for comparison to account performance. While the indices chosen to represent broad market performance of each asset class, there are report limitations as to available indices and blends, which index can be selected, and how they are presented.

Definitions

Federal Reserve (Fed) is the central bank of the United States that raises or lowers interest rates. **Inflation** is a decrease in the purchasing power of money, reflected in a general increase in the prices of goods and services in an economy. **Drawdown** is a measure of peak to trough loss in a given period; a maximum drawdown is a measure of the maximum peak to trough percentage loss in a given period. **Mega-cap** companies are those with market values well above the rest of the market, with valuations of over $200 billion. **Magnificent 7** refers to large mega cap companies consisting of Apple, Tesla, Nvidia, Microsoft, Alphabet, Meta, and Amazon. **The Consumer Price Index (CPI)** is used to measure the change in prices that consumers pay for goods and services over time. This data is aggregated by the U.S. Bureau of Labor Statistics. **Personal Consumption Expenditures (PCE)** includes a measure of consumer spending on goods and services among households in the U.S. The PCE is used as a mechanism to gauge how much earned income of households is being spent on current consumption for various goods and services. **10-Year Real Yield** is the difference between the U.S. 10-Year Treasury yield and the U.S. 10-Year breakeven rate, which is used as an estimate of the true yield of a bond after adjusting for inflation. **Investment-Grade Bond** is a bond with a credit rating of BBB- or higher by Standard & Poor's or Baa3 or higher by Moody's. It is judged by the rating agency as likely enough to meet payment obligations that banks are allowed to invest in it. **The Morningstar Intermediate-Term Core Bond (Core Bond)** funds invest primarily in investment-grade U.S. fixed-income issues including government, corporate, and securitized debt, and hold less than 5% in below-investment-grade exposures. Their durations (a measure of interest-rate sensitivity) typically range between 75% and 125% of the three-year average of the effective duration of the Morningstar Core Bond Index. **Morningstar Core Bond Index** measures the performance of fixed-rate, investment-grade USD-denominated securities with maturities greater than one year. It is market-capitalization weighted.

Indices

The Cliffwater Direct Lending Index seeks to measure the unlevered, gross of fee performance of US middle market corporate loans, as represented by the asset-weighted performance of the underlying assets of Business Development Companies that satisfy certain eligibility criteria. The CDLI Total Return Index includes three components: Income Return, Realized Gain/Loss, and Unrealized Gain/Loss. **Private debt** refers to loans that are usually provided by non-bank investors to borrowers. Private debt is an alternative form of financing that companies can use to raise capital for various purposes such as funding growth, expanding working capital, or financing real estate development. **Tactical Risk-Off** is allocation to cash or cash equivalents. **Long IG Fixed-Income** refers to risk position on investment graded fixed-income bonds. **Long HY Fixed-Income** refers to risk position on high-yield fixed-income bonds. **Long Equity refers** to risk position on equities. **Equities: S&P 500** refers to the S&P 500 Index which is a stock market index based on the market capitalization of 500 leading companies publicly traded in the U.S. stock market, as determined by Standard & Poor's. **Dow Jones Industrial Avg. (Average)** is an index by Standard & Poor's that tracks 30 widely-traded blue chip stocks with large market capitalization. Nasdaq Composite (Index) is a broad-based capitalization-weighted index of stocks in all three Nasdaq tiers: Global Select, Global Market and Capital Market. **Russell 2000 Index** is an index that measures the performance of the small-cap segment of the U.S. equity universe, including approximately 2000 of the smallest securities based on a combination of their market cap and current index membership. **MSCI EAFE** refers to the Morgan Stanley Capital International Index that is designed to measure the equity market performance of developed markets outside of the U.S. & Canada and includes Europe, Australia, and the Far East. **MSCI ACWI** ex USA refers to the Morgan Stanley Capital International All Country World Index, which is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets; the MSCI ACWI ex USA Index does not include the U.S. **MSCI ACWI** refers to the Morgan Stanley Capital International All Country World Index, which is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets. **MSCI Emerging Market Index** is an equity index that captures large and mid cap representation across Emerging Market (EM) countries. **S&P 500 Growth Index** is an index that tracks stocks with growth characteristics in the S&P 500 Index; growth stocks are typically company stock that tends to increase in capital value rather than yield high income. **S&P 500 Value Index** is an index that tracks stocks with value characteristics in the S&P 500 Index; value stocks are typically company stock that tends to have fundamentals that are priced below those of its peers, based on analysis of price/earnings ratio, yield, and other factors. **S&P High Dividend** refers to the S&P High Yield Dividend Aristocrats Index and is designed to measure the performance of the S&P 500 Index constituents that have followed a policy of consistently increasing dividends every year for at least 25 years. **S&P 500 Buy Backs** refers to the S&P 500 Buyback Index, which is designed to measure the performance of the top 100 stocks with the highest buyback ratios in the S&P 500.

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S&P 500 Low Volatility refers to the S&P 500 Low Volatility Index, which is designed to measure the performance of the 100 least volatile stocks in the S&P 500 Index. **Equities Characteristics:** Calculations and data for characteristics for indices are supplied by Bloomberg. Div. Yld refers to Dividend Yield and is the annual dividends per share divided by the price per share, expressed as a percentage. **FCF Yld** refers to Free Cash Flow Yield and is an overall return evaluation ratio of a stock, which standardizes the free cash flow per share a company is expected to earn against its market price per share; this ratio is calculated by taking the free cash flow per share divided by the share price. **P/E** refers to the Price-Earnings Ratio, which is a valuation ratio of a company's current share price compared to its per-share earnings. **P/B** refers to the Price/Book, which is a ratio of a stock's price divided by the book value per share; for indices, the price-to book value ratio is the average of the index member's capitalization divided by their book value. **Fixed Income:** Performance of these indices reflect total-return, which includes both price and dividends and reinvestments of dividends. **"Yield"** shown may represent different yield types and calculations and varies from index (or asset class) to index determined by availability of data. **Barclays U.S. Aggregate** refers to the Barclays U.S. Capital Aggregate Bond Index, which is an index that consists of investment grade U.S. Government bonds, investment grade corporate bonds, mortgage pass-through securities, and asset-backed securities. It is often considered representative of the U.S. investment-grade fixed rate bond market. IG ("Investment Grade") U.S. Corporates is represented by the Barclays U.S. Aggregate Credit Total Return Index, which measures performance from corporate bonds within the Barclays U.S. Aggregate Bond Index. Municipals is represented by the S&P Municipal Bond Index, which is a broad, comprehensive, market value-weighted index that tracks bond issues that are exempt from U.S. federal income taxes or subject to the alternative minimum tax. **High Yield Municipals** is represented by the Barclays Municipal High Yield Index, which is an index that seeks to track the performance of non-investment grade municipals. **High Yield Corporates** is represented by the Barclays High Yield Corporate Bond Index, which is an index that consists of U.S. corporate debt that are non-investment grade to reflect the performance of U.S. dollar denominated non-investment grade debt. **The S&P/LSTA Leveraged Loan Index** is designed to reflect the performance of the largest facilities in the leveraged loan market. **S&P U.S. Preferred Stock Index** is an index designed to represent the U.S. preferred stock market. Yield shown for Barclays U.S. Aggregate and IG Corporates, High Yield Municipal, and High Yield Corporates is Yield To Worst as provided by Bloomberg. **Yield shown for Municipals and S&P/LSTA Leveraged Loan** is Yield To Maturity as provided by S&P. Yield shown for S&P U.S. **Preferred Stock** is the Dividend Yield as provided by S&P on a monthly basis – data shown is as of the last day of the previous month this piece is dated. **MSCI All Country World Index** is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets.

An investor cannot invest directly in an index. Unless otherwise noted, index returns reflect the reinvestment of income dividends and capital gains, if any, but do not reflect fees, brokerage commissions or other expenses of investing. Investors cannot make direct investments into any index.

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