TDAM Low Volatility Investing:

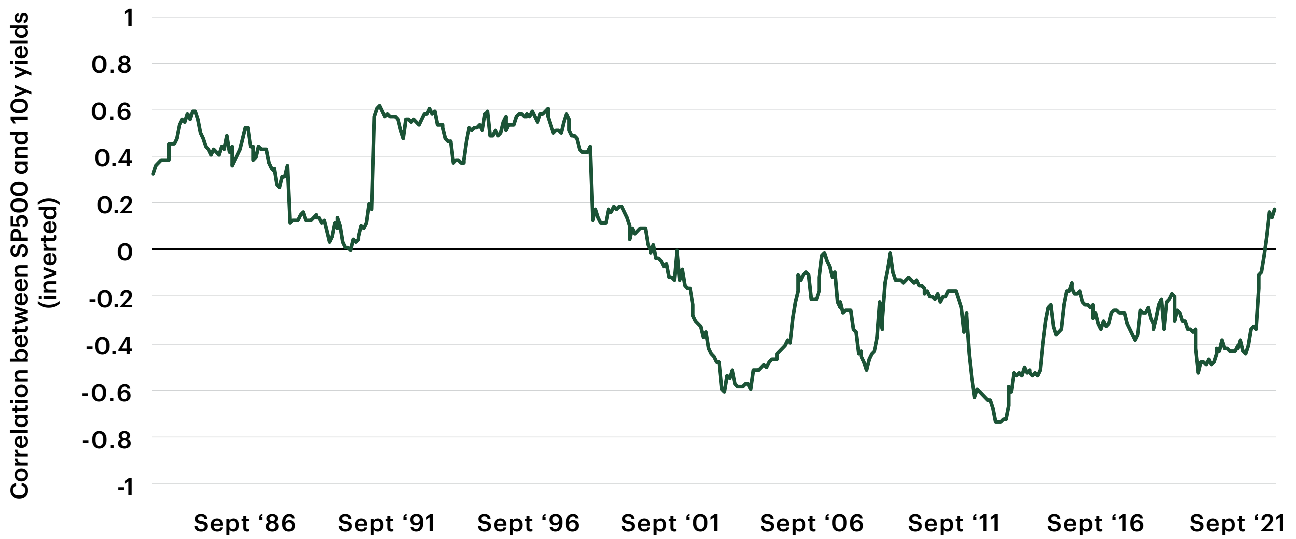
Year in Review and Look Ahead

Most would agree that 2022 was an underwhelming year for many investors. Those who depend on cross-asset diversification to obtain some degree of safety in their portfolios were especially disappointed. Investors typically rely heavily on fixed income assets to provide safety in times of trouble, given the more or less constant negative correlation between bonds and equities observed over the past 25 years. That relationship, however, broke down in 2022.

What made 2022 unique? Prior crises were usually the result of growth deceleration or recession caused by some type of exogeneous shock, such as the tech bubble bust, housing crisis or energy shock. Past growth deceleration was also accompanied by disinflation or outright deflation, allowing central banks to aggressively ease interest rates or provide monetary support, increasing the prices of government bonds.

However, the 2022 bear market was due to excessive economic growth accompanied by surging inflation. The supply side of the global economy beleaguered by the COVID-19 pandemic, excessive monetary and fiscal stimulus, as well as food and energy price shocks due to Russia's invasion of Ukraine, created fertile ground for a spike in consumer prices. With inflation comes a repricing of every asset, and assets that have longer duration and higher prospects for growth usually take a disproportionate share of the hit.

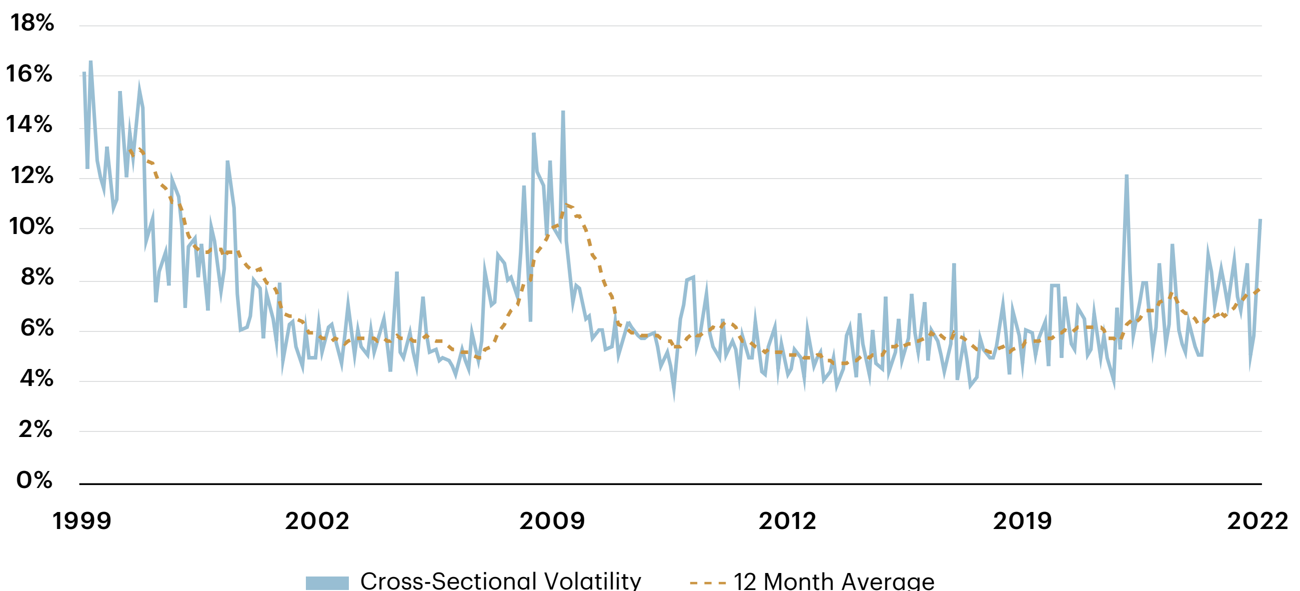
Figure 1: Correlation between S&P 500 and yields (inverted)



Source: Bloomberg, TDAM. As of November 30, 2022.

As traditional bond-equity diversification largely failed investors in 2022, intra-equity volatility increased meaningfully alongside market volatility. Those who couldn't obtain safety in bonds could, ironically, have found it within sub-sectors of the equity market. This is somewhat counter-intuitive, as one would expect defensive equities – often referred to as bond proxies – to behave, more or less, as a mixture of both equities and bonds. However, these stocks were largely excluded from the 2020 rally that left markets overly expensive and concentrated, and therefore held up very well in 2022.

Figure 2: Cross-sectional volatility (relative to S&P 500)

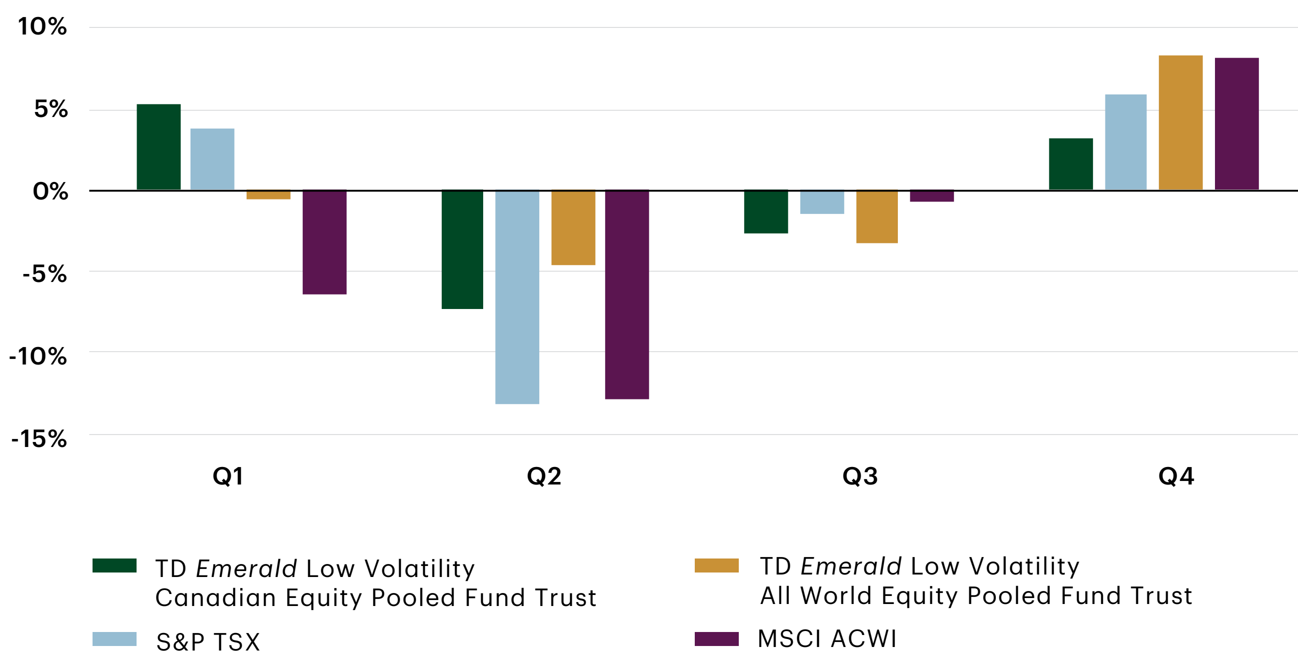


Source: S&P 500, TDAM. As of October 31, 2022.

Unfortunately, with low volatility strategies having failed to provide reasonable upside participation during the post-May 2020 rally at the beginning of COVID-19 pandemic, many investors reacted too swiftly and liquidated their exposure to low volatility equities, which left them over-reliant on bonds for downside protection in market downturns. Similarly, the difficulty faced by value investors during the growth boom of the pandemic led many to flee value stocks and dive headfirst into richly priced growth stocks with little more rationale than the belief that the market could never be that wrong.

While there were clear signs of a bubble, many investors were too fearful of missing out on a market rally to be concerned with the increased risks that an over-priced, over-concentrated market could pose to their portfolios, creating a unique investment environment. While 2022 was a difficult year for many, it was much less so for low volatility investors. Those who stayed the course and kept in mind the long-term strategic benefits of low volatility investing were able to protect their assets with above-average downside protection, most specifically in comparison to other liquid asset classes that failed to protect against the downside. Last year reminded us, once again, why patience nearly always pays off.

Figure 3: Quarterly performance of TDAM *Emerald* Low Volatility Canadian Equity Pooled Fund Trust and TDAM *Emerald* Low Volatility All World Equity Pooled Fund Trust vs. Benchmarks



Source: TDAM, MSCI, S&P 500. As of December 31, 2022.

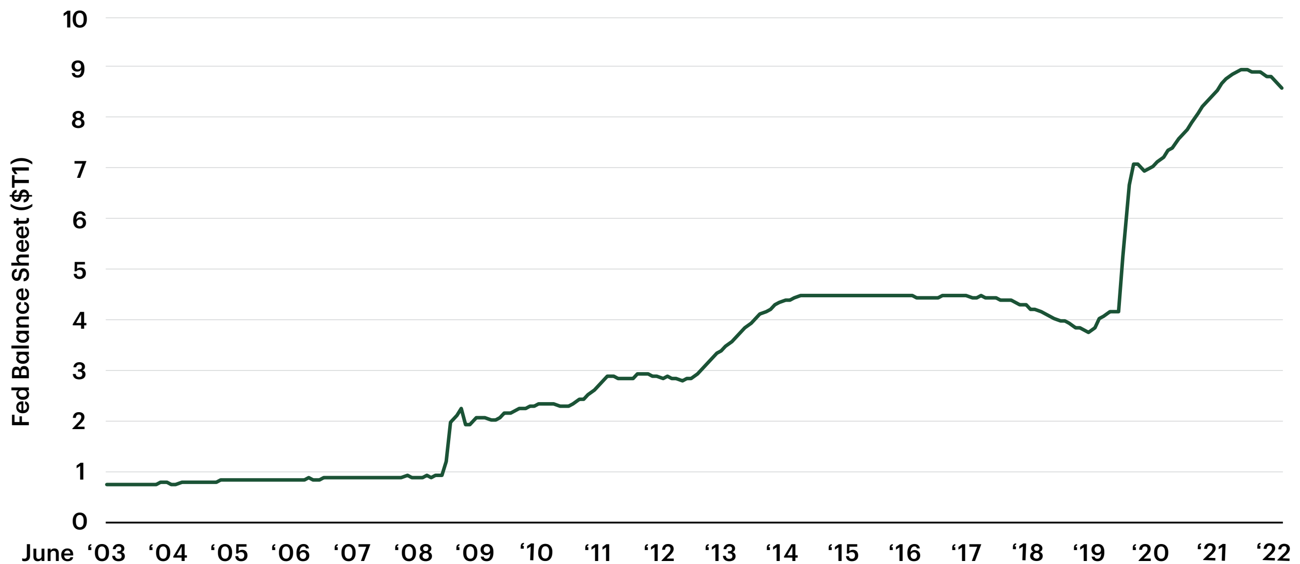
Performance

Paying back for 2020

Both bond and equity markets were hit by double-digit losses in 2022 that can be traced back to the monetary and fiscal excesses of 2020.

The pandemic presented governments around the world with an extremely difficult socio-economic dilemma – choosing between the loss of human lives or the deep economic costs of lockdowns. Most countries opted for the latter. With the introduction of lockdowns, curfews, social distancing rules and work-from-home policies during the COVID-19 pandemic, a global economic calamity was averted, as authorities around the world implemented aggressive counter-cyclical fiscal and monetary policies. However, these policies merely rolled the cost of the pandemic into future years. Comforted by the sharp rebound in consumption and employment, many investors failed to give sufficient thought to the long-term implications of this government borrowing – even as central banks bought up to 20% of their countries' GDP to keep their economies afloat. However, as history has shown time and again, a debt must always be repaid, be it through taxation of future growth or inflation out of debt.

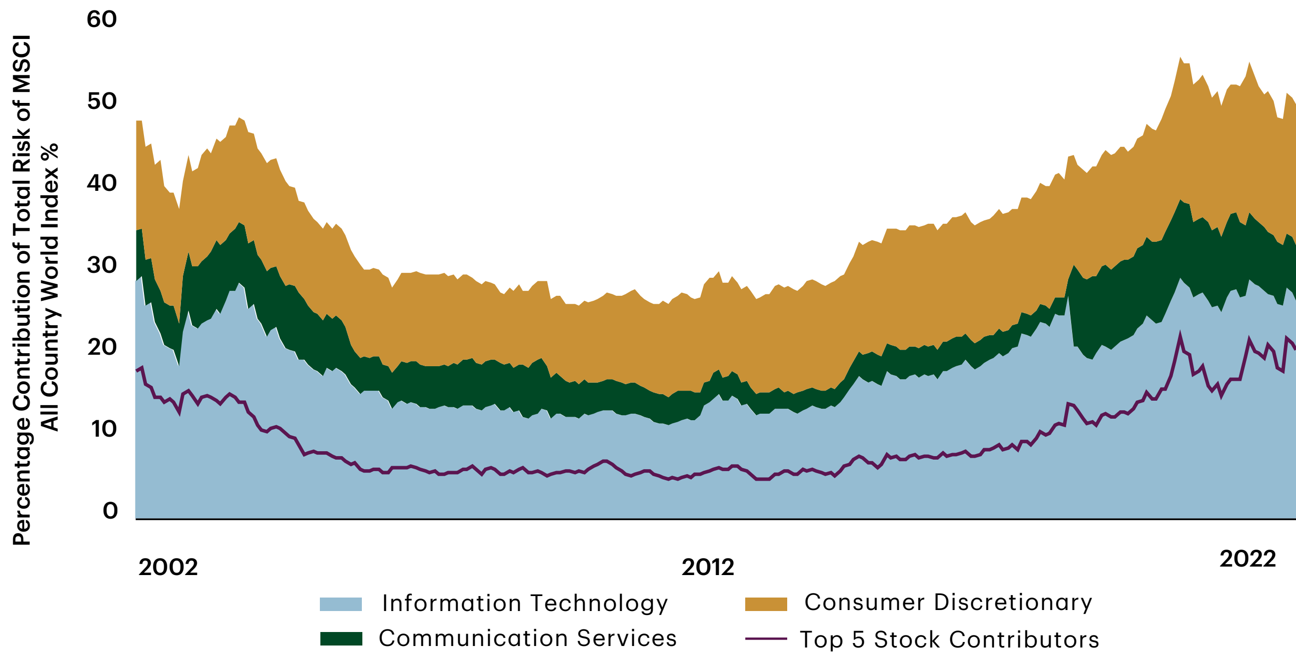
Figure 4: Fed balance sheet (USD trillions)



Source: Bloomberg. As of November 30, 2022.

The generous stimulus programs enacted by governments kept unemployment rates low and household incomes from collapsing. But the limited spending opportunities due to restrictions and travel bans caused a surge in consumer savings to flood into the financial markets. With long-term government bonds yielding near zero, much of the excess savings were deployed into the equity markets either in large-cap technology darlings or passive investments that, by design, were already heavily exposed to these large-cap growth names. As a result, these highly levered, expensive, long-duration companies came to command a share of widely followed benchmarks not seen even at the height of the Nasdaq bubble in the late 1990s or the housing crisis in the late 2000s. Low volatility portfolios had a fraction of the exposure that capitalization-weighted benchmarks had to those names, making them much less at risk of a reversal of this concentration phenomenon.

Figure 5: MSCI All Country world index risk contributions



Source: TDAM, Bloomberg. As of September 30, 2022

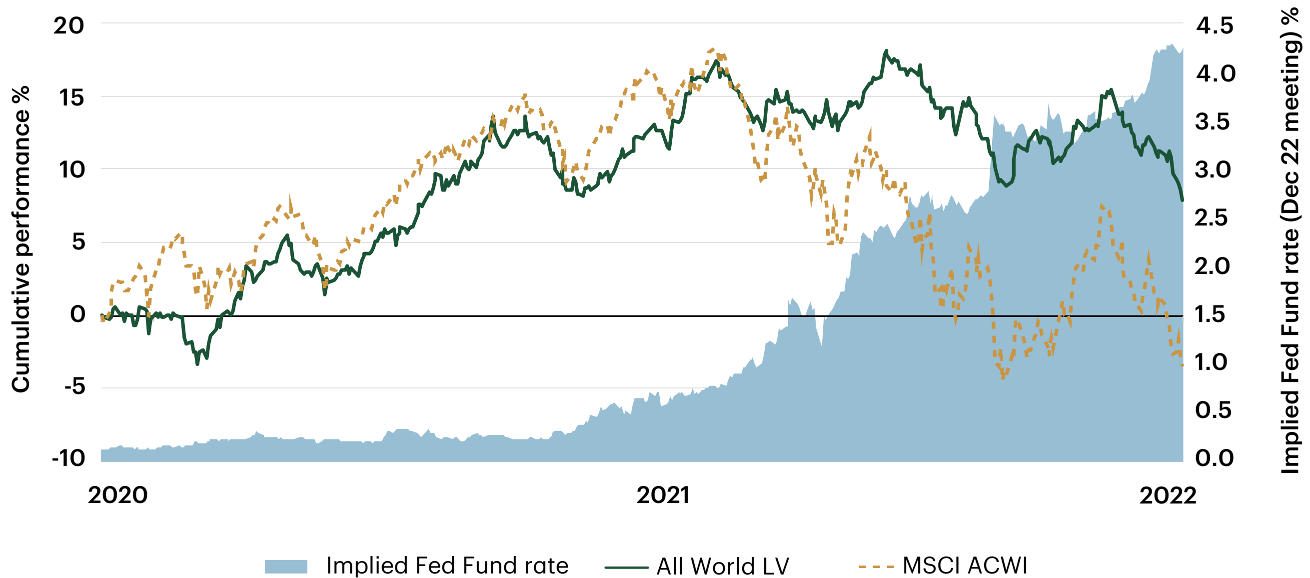
When the music stopped

As many should have expected, these trends quickly reversed when widespread vaccination began to ease the health crisis. As restrictions on various activities were lifted, demand for tech products abated. And as economic growth recovered, inflation flared and the interest rate picture shifted rapidly. After two years of unprecedented monetary policy stimulus, central banks found themselves behind the curve in the spring of 2022, with robust demand, supply chain pressures, semiconductor shortages, and the war in Ukraine driving up food and energy prices.

Due to the risk of high inflation becoming entrenched – rather than just a transitory phenomenon – central banks abruptly turned hawkish, front-loading interest rate increases at a pace not seen since the 1970s. By October 2022, the U.S. 10-year Treasury yield had climbed to 4.2%, its highest level in more than a decade, and up more than 375 basis points from its 2020 low. The fallout was swift for major equity markets, with the S&P 500 and Nasdaq diving deep into bear market territory and prompting the start of the benchmark deconcentration process. Since the Fed changed its stance towards inflation in November 2021, the most volatile equities have underperformed the least volatile ones by roughly 25% in global developed markets, and MSCI growth has underperformed MSCI value by roughly the same amount.

Contributions

Figure 6: Low vol vs. MSCI ACWI



Source: Bloomberg, TDAM. As of September 30, 2022.

> In addition to the monetary and fiscal excesses of 2020, other geopolitical factors amplified the headaches that markets faced in 2022, helping low volatility strategies in relative terms. China's COVID-Zero policy and Russia's invasion of Ukraine are probably the most notable ones.

China's COVID-19 intolerance

At the beginning of the COVID-19 pandemic in 2020, with the goal of eradicating COVID within its borders, China instituted a zero-COVID policy that included strict lockdowns, mass COVID testing, and extreme quarantine measures for international travelers. Major trade hubs such as Shanghai and Beijing enforced protocols requiring workers to have negative COVID tests to enter public spaces, and companies such as Tesla and Foxconn, the iPhone manufacturer, implemented close-looped systems where factory workers lived on-site. More than two years later, China continues to maintain one of the toughest anti-COVID regimes in the world, and the ongoing controls are weighing on its economy and impacting global supply chains. While the government is now moving to ease certain COVID policies, partly in response to growing unrest, much of the economic damage has already been done. In addition, given the country's low vaccination rate, another COVID wave could lead to renewed restrictions, resulting in a fresh wave of supply chain pressures.

While a significant proportion of the 2022 surge in global inflation can be attributed to aggregate demand factors, supply chain constraints resulting from China's COVID stance certainly contributed to this phenomenon. The inflationary impact of those policies only resulted in further upward pressure on bond yields, accelerating the deconcentration process observed in equity markets and helping low volatility equities along the way.

Adding Russian oil to the fire

Equity markets also experienced a spike in volatility in response to Russia's invasion of Ukraine in February 2022 and the war contributed to continued bouts of market volatility throughout the year. While the world was impacted by investor sentiment and higher commodity prices, Europe was particularly affected by higher energy prices, given its reliance on Russian supply. As a result, inflation in the region soared and remains persistent as energy prices continue to rise, a situation aggravated by the deceasing supply and the colder winter months.

Like its global peers, the European Central Bank (ECB) moved its policy rate into positive territory in the third quarter of 2022 with its first rate hike in more than a decade. It continued its hiking cycle in the fourth quarter. The ECB remains committed to taming inflation, which it described as "much too high," even as the region has seen a substantial slowdown in economic growth and has likely tipped into recession.

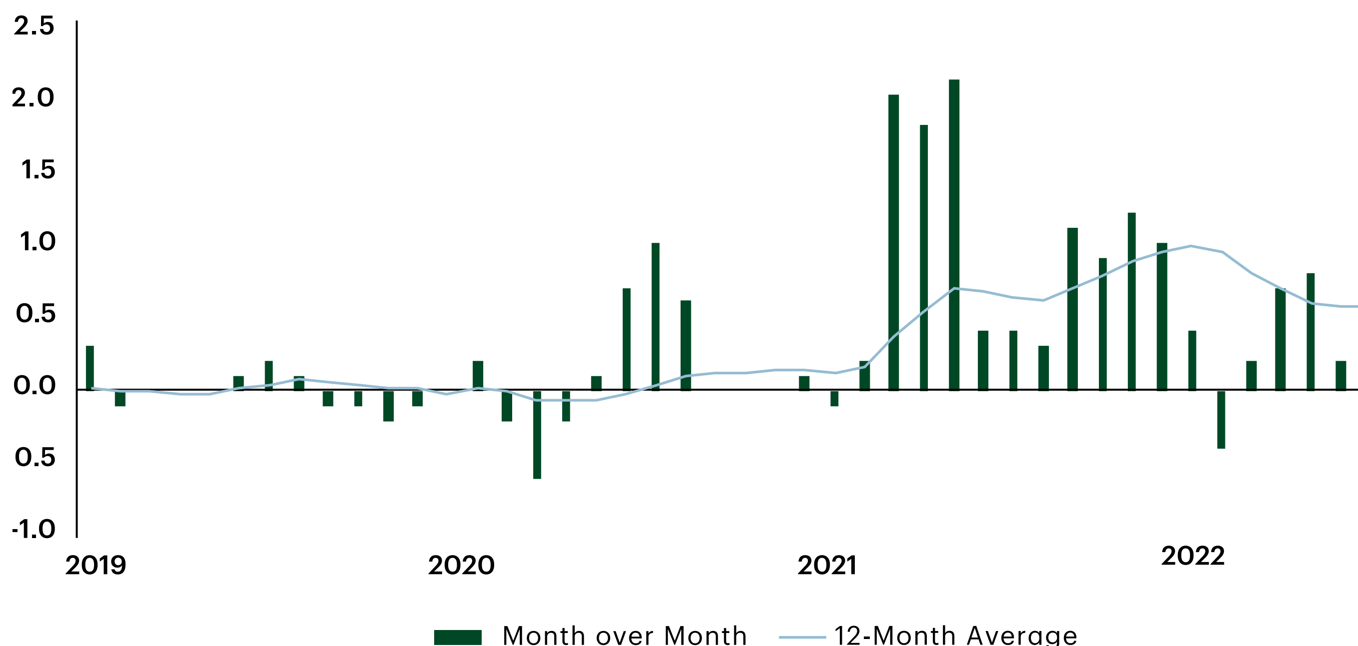
With the ongoing war continuing to exact a devastating human toll and the long shadow it has cast on market performance and economic growth, risks remain high and the conflict continues to escalate as Putin has indicated the intention to use all means available to defend the territories recently annexed by Russia. While inflation in Europe is not the primary driver of the Fed's monetary policy, the long-term impact of a continuing war on the supply of agricultural commodities had global repercussions that were felt well outside of Europe. Between the war aggravating supply constraints which impact global food inflation, and Europe being squeezed between surging energy prices and unavoidable economic contraction, we had yet more headwinds for the markets, particularly in Europe, which certainly benefited global low volatility strategies in relative terms in 2022 and will probably do so as long as the war persists.

A gentle inflation reminder

The first half of the third quarter was dominated by a strong risk on rally after increasing evidence that inflation was peaking. However, markets swiftly cooled, as Fed chair Jerome Powell, determined not to repeat the mistakes made by his predecessors during the 1970s, asserted the Fed's commitment to bring inflation back in line with its target.

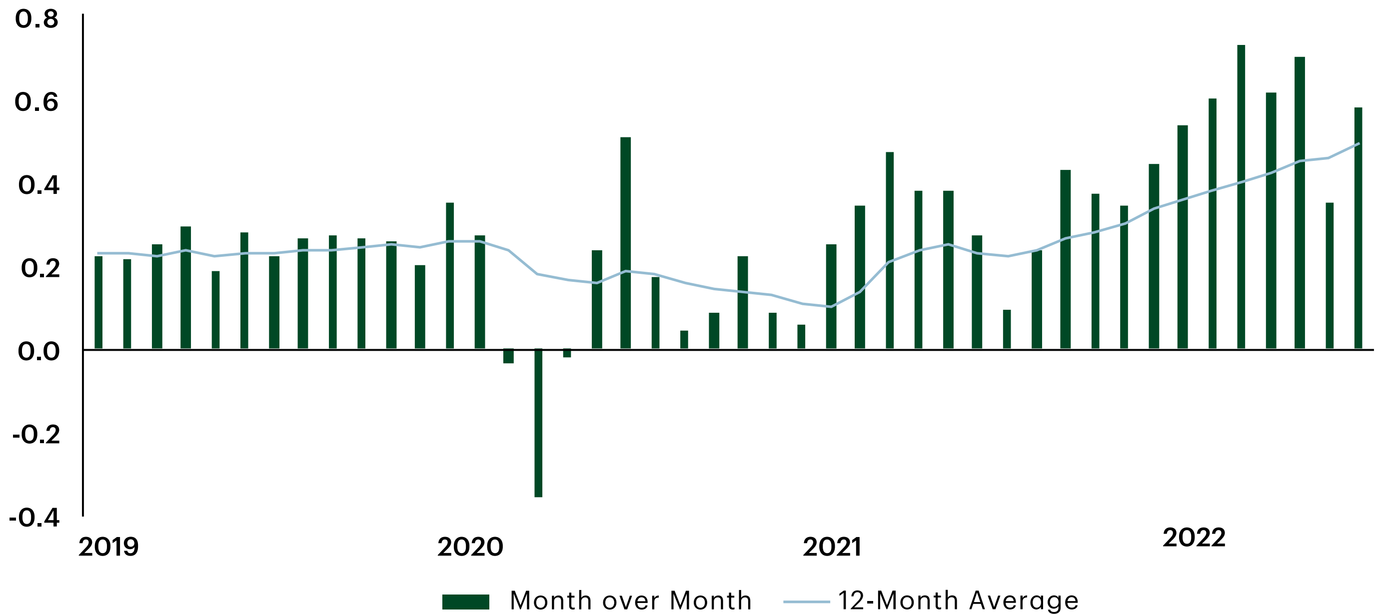
Still, while headline inflation numbers appear to have peaked in June in Canada and the U.S., the easing since has been driven by lower gas and housing prices. Meanwhile, core inflation continues to accelerate. In particular, inflation in the services sector and wage growth seem to be getting more entrenched, increasing the risk of an inflationary spiral.

Figure 7.1: U.S. Consumer Price Index Core Services



Source: Bloomberg, TDAM. As of November 30, 2022

Figure 7.2: U.S. CPI Core Goods



Source: Bloomberg, TDAM. As of November 30, 2022

> This could put central banks that are signaling a potential policy pivot in early 2023 in a tough spot if inflation doesn't slow down as much as currently expected, forcing them to maintain their tightening trajectory. In addition, the expansion of central bank balance sheets that occurred in 2020 has yet to be reversed, and this process, once it starts, will contribute to further effective policy tightening. In short, money is unlikely to get cheaper and markets less volatile anytime soon, potentially helping low volatility strategies for the foreseeable future.

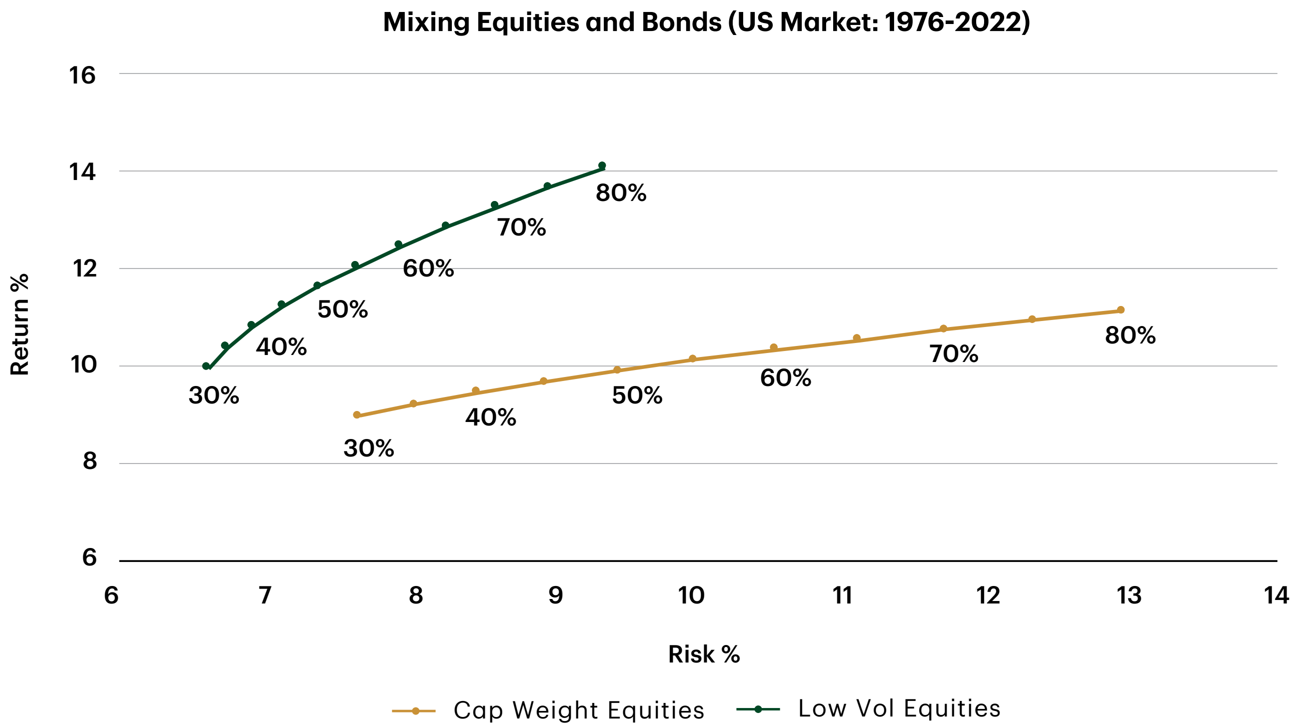
The big picture

The year 2022 was marked by upheaval, with a host of economic and geopolitical events causing market disruption. It was a year that reinforced the importance of portfolio diversification, but also one in which traditional diversification techniques – chiefly, an expectation that bond and equity returns would be negatively correlated – did not hold true. It serves as a reminder that managing risk through proper allocation across asset classes is necessary but not sufficient. Investors who ignore intra-asset class risk management are unlikely to earn the best possible long-term returns for the risk that they incur.

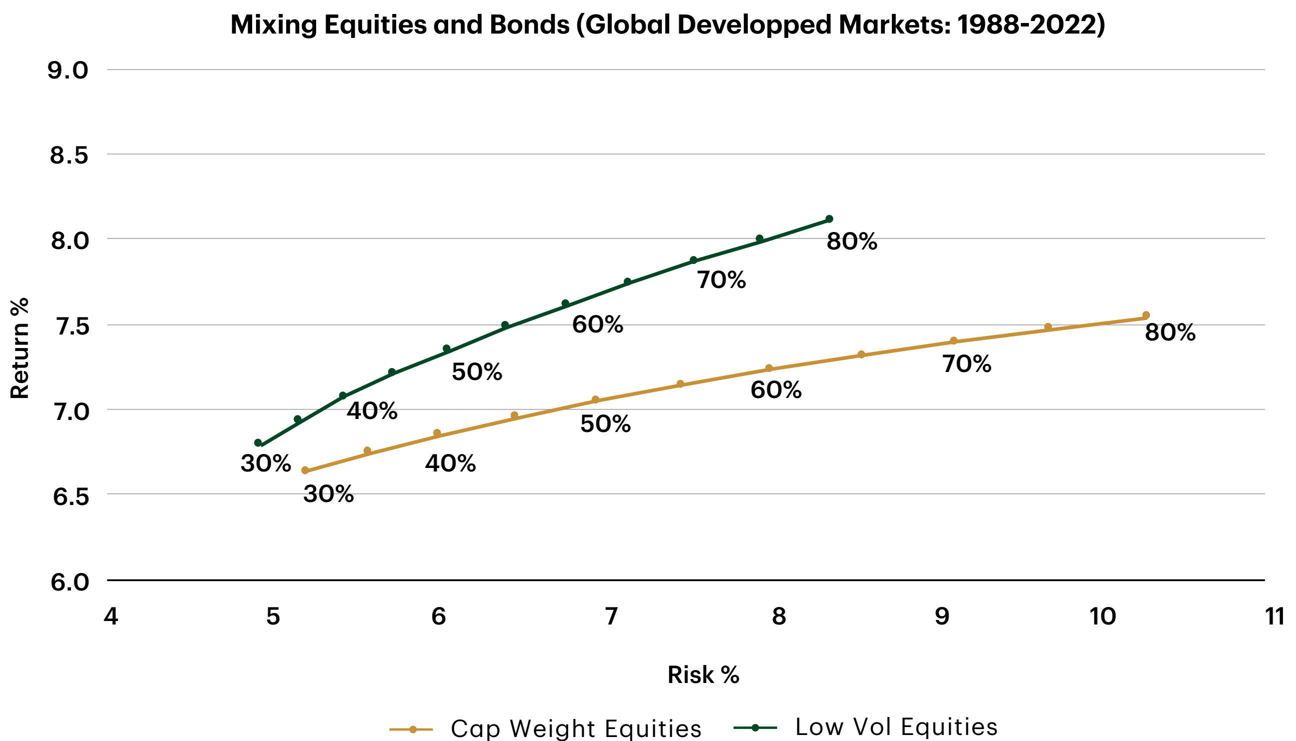
Over long periods, low volatility equities have proved a better option than traditional cap-weighted equities – giving investors exposure to the equity risk premium, without subjecting them to the full volatility of equity markets. Many observers have tried to rationalize this anomaly by pointing to the higher correlation between low volatility equities and bonds, suggesting that investors forgo some of the diversification benefits that cap-weighted equities offer when held in a portfolio that also includes bonds.

In fact, if we compare the risk-adjusted performance of two balanced portfolios of equities and bonds, one holding cap-weighted equities and the other low volatility equities, this argument doesn't hold. The assumed loss of diversification is more than offset by the much lower level of risk delivered by low volatility equities at an equal equity allocation. The charts below show that, over the long run, low volatility equities systematically dominate traditional cap-weighted equities, achieving a higher return for a given level of risk within one's asset mix. This highlights the importance of managing equity risk when bond-equity diversification fails to deliver proper protection.

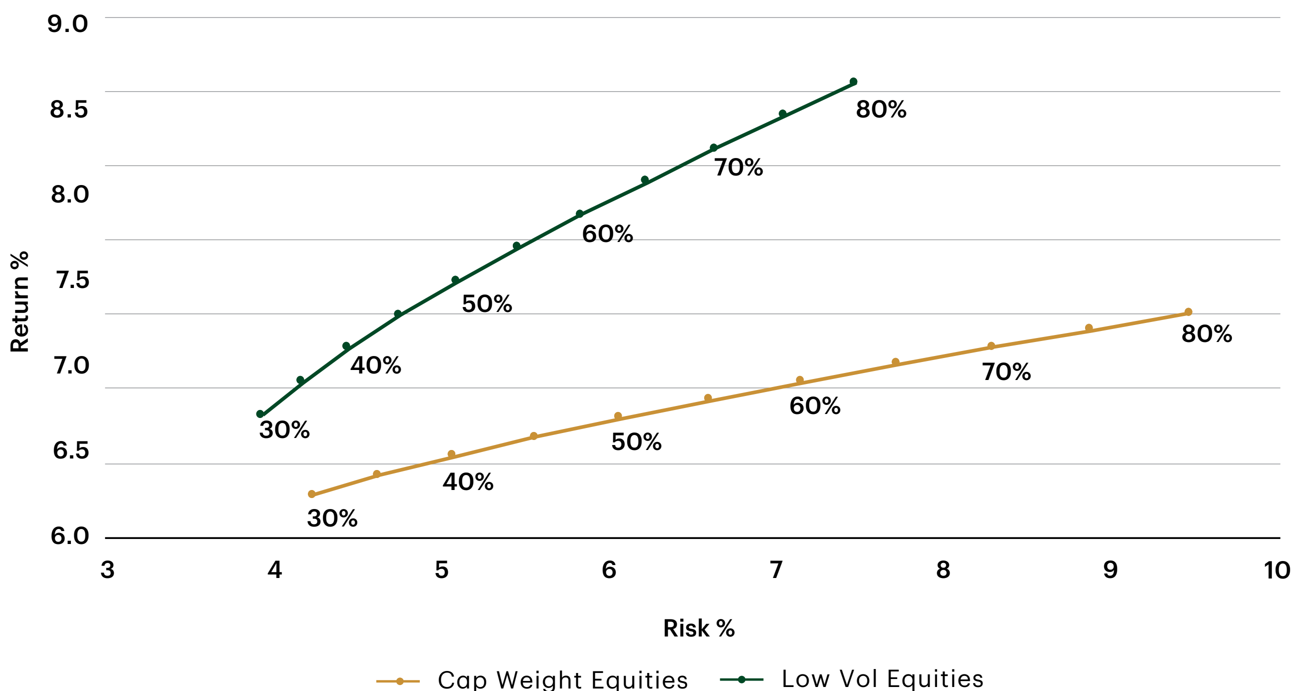
Figure 8: The impact of low volatility strategies within the asset mix



Source: Kenneth R. French Data Library, Federal Reserve Bank of St. Louis. As of July 31, 2022.



Source: MSCI Inc., FTSE Global Debt Capital Markets Inc. As of June 30, 2022.



Source: TDAM, Standard and Poor's, FTSE Russell. As of September 30, 2022.

Looking forward

While we believe the strategic benefits of holding low volatility equities for the long run are clear, the fact remains that for the foreseeable future, equity markets will face an abundance of risks that investors will have to manage carefully. Supply constraints, although easing as supply chains slowly readjust themselves while economies fully reopen, are still being disrupted by the ongoing war in Ukraine. Now that the rate of inflation change appears to be slowing, the market has taken this as a reason to put on more risk, move more into the equity market, and hence cause a rally. But how we'll get back in line with long-term inflation targets without creating some slack in the labor market is still unclear.

While central banks are not done tightening, the impact of higher interest rates on consumption, housing markets, business spending and risk taking within equity markets is also, to some extent, uncertain. As economies recover from the pandemic, many have forgotten the huge amount of public debt incurred to avert the bulk of the catastrophic economic contraction that would have awaited us if gigantic stimulus packages had not been implemented. How we will all pay back this debt is also unknown. Most likely a mix of anemic growth and above-target – but tolerable – inflation for many years to come is the price we will pay for a pandemic whose economic costs have yet to be fully felt.

And as central banks already clearly indicated, policy rates are unlikely to be reduced anytime soon, regardless of their impact on economic growth, as long as inflation is not back in line with target. This means that the deconcentration process that we saw in equity markets last year, which is far from having brought us back to the risk concentration levels seen in the early 2010s, has probably only just begun. If this is the case, then low volatility investors may certainly expect tailwinds to play in their favor for the next decade to come, as excess risk taking is slowly being purged out of the markets.

Investing

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