The New Rules of Diversification: **Correlation Matters**

In the ever-changing landscape of financial markets, one principle has stood the test of time: Diversification. Often hailed as the cornerstone of Modern Portfolio Theory, diversification has been a guiding principle for investors seeking to navigate the uncertainties of investing. At the heart of this principle lies the work of Harry Markowitz, a name synonymous with the pioneering concept that has shaped the way we approach portfolio construction.

> *"To reduce risk, it is necessary to avoid a portfolio whose securities are all highly correlated with each other. One hundred securities whose returns rise and fall in near unison afford little protection than the uncertain return of a single security."*
>
> *– Harry Markowitz*

Markowitz introduced diversification as a means to reduce portfolio risk. His work laid the foundation for Modern Portfolio Theory ("MPT"), demonstrating how spreading investments across various assets with low or even negative correlations can effectively mitigate risk. At its core, diversification seeks to minimize the impact of losses arising from an overreliance on a single asset, providing investors with a buffer against market turbulence. The key to MPT is to identify and incorporate assets exhibiting either low correlation or, even better, negative correlation (i.e., move in opposite directions) to each other. Doing so helps investors achieve a balanced mix of investments that seeks to cushion the portfolio against significant downturns while still providing opportunities for growth and creating an all-weather portfolio.

Key Takeaways

- The foundation of MPT rests on diversification as a means to mitigate risk. By spreading investments across diverse assets, investors can potentially safeguard portfolios against market uncertainties and minimize losses tied to individual assets.
- Correlation dynamics have shifted over time, impacting the effectiveness of traditional diversification approaches. Rebalancing to include low-correlating assets can help reinforce portfolio diversification, offering resilience when stocks and bonds move in tandem.
- Implementing a low correlating "sleeve" strategy emerges as a dynamic solution. Combining multiple low-correlating strategies that move differently from equities and fixed income—and from each other—can help bolster diversification to create an "all weather portfolio."

Stating the Obvious: The Hazard of Singular Investments

The inherent risk associated with relying solely on one type of investment becomes easily evident when considering the performance of a long-only stock portfolio. It goes without saying that stock prices can be volatile and influenced by various factors. If all investments are concentrated in long-only equities and the stock market experiences a downturn, the portfolio may likely move in lockstep. In other words, the potential for significant losses is magnified when investments lack diversity.

Enter the 60/40 portfolio, a blend of stocks and bonds that seeks to balance growth, driven primarily by stocks, with the perceived safety of bonds. Notably, fixed income commands a sizable allocation in a 60/40 portfolio for a key reason: diversification. This allocation makes sense, given that the historically low correlation between stocks and bonds has positioned bonds as a protective buffer during equity market declines.

However, as Markowitz suggested, even this traditional 60/40 mix can fall short if these assets move in lockstep, negating any diversification benefit. This correlation conundrum emerged most recently in 2022, when all major asset classes, including bonds, moved in tandem, wreaking havoc on investor portfolios.

2022 Max Drawdown: Across Asset Classes

Asset Class	Index	2022 Max Drawdown
U.S. Large Cap	S&P 500	**-23.87%**
U.S. Small Cap	Russell 2000	**-25.10%**
U.S. Value	Russell 3000 Value	**-17.97%**
U.S. Growth	Russell 3000 Growth	**-30.57%**
Foreign Developed	MSCI EAFE NR	**-27.09%**
Emerging Markets	MSCI EM NR	**-29.42%**
Investment Grade Bonds	Bloomberg U.S. Aggregate Bond	**-15.72%**
High Yield Bonds	Bloomberg U.S. Corporate High Yield	**-14.74%**
Real Estate	FTSE Nareit All REITs	**-28.34%**
Commodities	S&P GSCI	**-17.16%**

Source: Morningstar Direct. **Past performance is not indicative of future results.**

Unfortunately, it wasn't just in 2022 that traditional paths to diversification failed. The landscape of correlations and diversification has witnessed dramatic shifts over time and these positive correlation scenarios have disrupted the traditional approach to diversification, challenging the effectiveness of the once-reliable 60/40 portfolio.

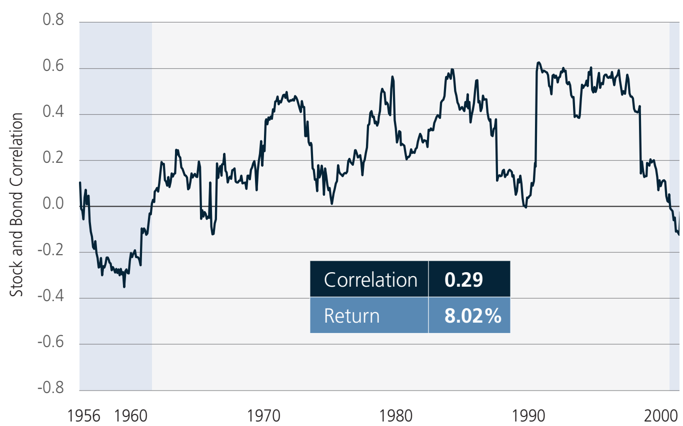
RULE #1

The reliance on fixed income as a diversifier has broken down as the once-negative correlation to equities has eroded.

The Balance of Perception and Reality

A closer look at these historical market patterns reveals an interesting interplay between investor perception and reality. Despite bonds and stocks moving in tandem from 1961 to 2000, investors failed to notice any portfolio vulnerabilities, likely due to positive net returns. The "reliable" 60/40 blend proved fruitful but hardly diversified.

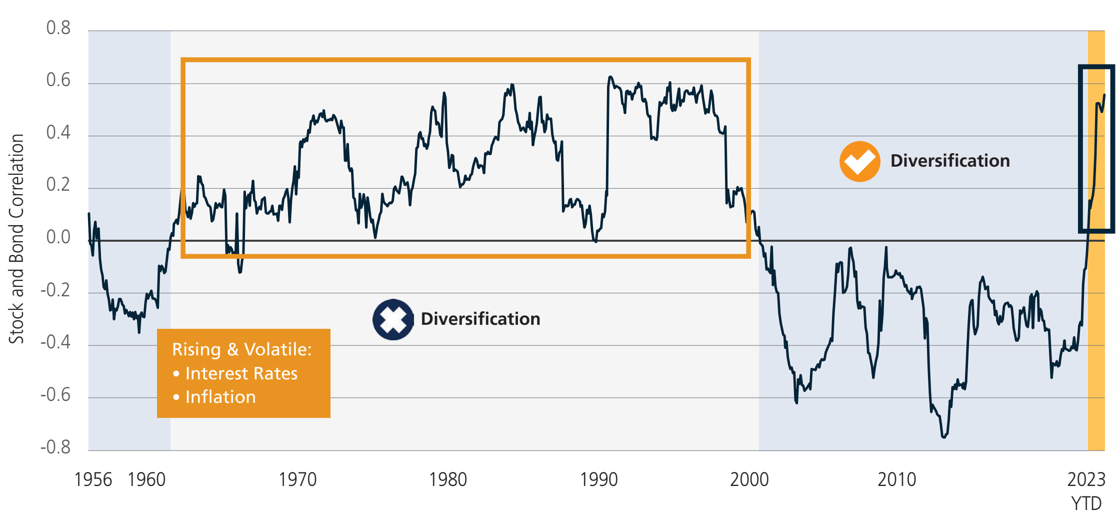
Positive Returns for the 60/40 May Have Shrouded the Lack of Diversification



Source: LoCorr Fund Management and Morningstar Direct. Monthly data as of September 30, 2023. Returns from a hypothetical 60/40 portfolio of S&P 500 Index and 10-year Treasury Constant Maturity Bond Index, rebalanced monthly. Average 3-yr rolling correlation between S&P 500 PR Index and 10-Year Treasury Constant Maturity Bond Index. Returns shown are annualized. **Past performance is not indicative of future results.**

As the chart below illustrates, the 2000s brought a reversal, with the positive correlation between stocks and bonds turning negative—thus satisfying investor expectations for returns and diversification. It wasn't until 2022, amid inflation and rising interest rates (much like the period from 1961-2000), that positive correlation between the two returned—negating any diversification benefits and leaving investors with what was, at times, essentially a long-only portfolio. This time, returns were down across the board, and investors took notice.

Correlation Regimes Have Fluctuated Over the Years, Leaving Portfolios Vulnerable



Source: LoCorr Fund Management and Morningstar Direct. Time period 4/30/56-9/30/23. Average 3-yr rolling correlation between S&P 500 PR Index and 10-Year Treasury Constant Maturity Bond Index. **Past performance is not indicative of future results.**

“Since 1956, stock and bond correlation has been positive **59%** of the time.”

Source: Morningstar Direct. April 1956-September 2023, a period of 810 months: 476 positive/334 negative.

A Historical Connection Between Inflation and Correlation

As markets continue to evolve, predicting positive correlation regimes remains challenging. Inflation, a key driver of market dynamics, has historically induced a positive correlation between stocks and bonds. In fact, in the past, when inflation has been above 4%, the correlation was positive 100% of the time. Even when inflation tempered to between 2-4%, historical correlation remained positive 65% of the time—suggesting positive correlation may persist despite cooling inflation.

Improving Diversification: The Role of Low-Correlating Strategies

In the face of positive correlation regimes, the importance of strategies and assets that are directionally agnostic becomes evident. By integrating low-correlating assets into portfolios exhibiting low or negative correlation with stocks and bonds, investors can significantly enhance diversification and risk management during both positive and negative regimes.

RULE #2

Advisors should strategically incorporate assets with a low correlation to equities and fixed income to ensure portfolio diversification across various market environments.

There’s No Single Solution: Effective Diversification through “Sleeve” Strategies

Reflecting on Markowitz’s principles, just as you wouldn’t confine your equity allocation to a single stock, similarly, a low-correlation allocation shouldn’t rely solely on a single low-correlating asset. Instead, we believe combining two or more of these low-correlating strategies within a portfolio, referred to as a “sleeve,” is a more effective method for achieving diversification.

A sleeve strategy involves the creation of a separate allocation within the portfolio dedicated specifically to low-correlating assets. This approach can potentially mitigate the risks associated with traditional asset classes and periods of positive correlation, ultimately reinforcing diversification. Additionally, blending low-correlating strategies within the sleeve structure empowers advisors to target a spectrum of outcomes. This adaptability enables advisors to tailor investor portfolios precisely to distinct risk appetites and investment objectives, whether seeking a hedge against inflation or harnessing additional sources of returns, for example.

This strategic (versus tactical) approach helps balance the risk and reward dynamics, potentially providing a more stable foundation for long-term investment success.

RULE #3

There is no silver bullet; advisors should create a “sleeve” of low-correlating strategies that move differently from stocks and bonds and move differently from each other.

Conclusion: The Path Forward

As the financial landscape constantly shifts, one principle remains steadfast: diversification. Harry Markowitz's pioneering work has ingrained this concept into Modern Portfolio Theory, offering a beacon for investors hoping to mitigate portfolio risk. Yet, beneath the surface, the impact of correlation on "diversified" portfolios remains a hidden challenge.

The cornerstone of diversification is the strategic allocation of investments to counterbalance losses and dampen volatility. However, the devil lies in the correlation details—how assets move together. 2022 starkly revealed this as *perceived* diverse assets (i.e., stocks and bonds) moved in lockstep—downward—questioning the essence of traditional portfolio construction.

Because predicting positive correlation regimes is no easy feat, low-correlating strategies have emerged as diversification heroes. These directionally agnostic approaches add value regardless of market direction, potentially offering a buffer against correlated movements of traditional investments.

As we move through investment uncertainty, understanding the subtleties of correlation is paramount. Perception often deviates from reality, meaning advisors must remain vigilant and ever-cautious about how assets interplay. Embracing the correlation challenge, while daunting, has ushered in innovation and a new set of rules by incorporating low-correlating assets. Diversification's true power shines only when correlation intricacies are recognized and fully accounted for in the portfolio construction process.

To learn more about how LoCorr can help you reach your investment goals, contact us at **888-628-2887** or visit us at **www.LoCorrFunds.com**.

LoCorr Funds is a leading provider of low-correlating investment strategies founded on the belief that non-traditional investment strategies with low correlation to stocks and bonds can reduce risk and help increase portfolio returns. LoCorr offers investment solutions that provide the potential for positive returns in rising or falling markets and help to achieve diversification in investment portfolios.

S&P 500 Index is a capitalization weighted unmanaged benchmark index that includes the stocks of 500 large capitalization companies in major industries. This total return index includes net dividends and is calculated by adding an indexed dividend return to the index price change for a given period. **Russell 2000 Index** measures the performance of approximately 2000 small-cap companies in the Russell 3000 Index, which is made up of 3000 of the biggest U.S. stocks. The Russell 2000 serves as a benchmark for small-cap stocks in the United States. **Russell 3000 Value Index** is a market-capitalization weighted equity index maintained by the Russell Investment Group and based on the Russell 3000 Index, which measures how U.S. stocks in the equity value segment perform by including only value stocks. Included in the Russell 3000 Value Index are stocks from the Russell 3000 Index with lower price-to-book ratios and lower expected growth rates. This value index can be contrasted with the Russell 3000 Growth Index. **The Russell 3000 Growth Index** is a market capitalization-weighted index based on the Russell 3000 index. The Russell 3000 Growth Index includes companies that display signs of above-average growth. The index is used to provide a gauge of the performance of growth stocks in the United States. **MSCI EAFE Index** was designed to measure the equity market performance of developed markets outside of the U.S. & Canada. **MSCI Emerging Markets Index** is designed to measure equity market performance in global emerging markets. **Bloomberg U.S. Aggregate Bond Index** is a broad-based bond index comprised of government, corporate, mortgage and asset-back issues rated investment grade or higher. **Bloomberg US Corporate High Yield Bond Index** measures the USD-denominated, high yield, fixed-rate corporate bond market. Securities are classified as high yield if the middle rating of Moody's, Fitch and S&P is Ba1/BB+/BB+ or below. **FTSE NAREIT All Equity REITs Index** is a free-float adjusted, market capitalization-weighted index of all U.S. Equity REITs (Real Estate Investment Trusts). **S&P GSCI Commodity Index** is a composite index of commodity sector returns which represents a broadly diversified, unleveraged, long-only position in commodity futures.

Sharpe Ratio measures the amount by which a set of values differs from the arithmetical mean, equal to the square root of the mean of the differences' squares. **Standard Deviation** is the statistical measurement of dispersion about an average, which depicts how widely a portfolio's returns varied over a certain period of time. When a portfolio has a high standard deviation, the predicted range of performance is wide, implying greater volatility.

Past Performance does not guarantee future results. Index performance is not indicative of fund performance. For current standardized fund performance, please call 1.855.LCFunds or visit www.LoCorrFunds.com. The performance of various indices is shown for comparison purposes only. The performance of those indices was obtained from published sources believed to be reliable, but which are not warranted as to accuracy or completeness. Unless noted otherwise, index returns do not reflect fees or transaction costs and reflect reinvestment of net dividends. One cannot invest directly in an index. **Correlation** measures how much the returns of two investments move together over time. **Diversification does not assure a profit nor protect against loss in a declining market.**

The Fund's investment objectives, risks, charges, and expenses must be considered carefully before investing. The prospectus contains this and other important information about the investment company, and it may be obtained by calling 1.855.LCFUNDS, or visiting www.LoCorrFunds.com. Read it carefully before investing.

Mutual fund investing involves risk. Principal loss is possible. The Funds are non-diversified, meaning it may concentrate its assets in fewer individual holdings than a diversified fund. Therefore, the Funds are more exposed to individual stock volatility than a diversified fund. The Funds invest in foreign investments and foreign currencies which involve greater volatility and political, economic and currency risks and differences in accounting methods. These risks are greater for emerging markets. The Funds may make short sales of securities, which involves the risk that losses may exceed the original amount invested. Investing in commodities may subject the Funds to greater risks and volatility as commodity prices may be influenced by a variety of factors including unfavorable weather, environmental factors, and changes in government regulations. Investing in derivative securities derive their performance from the performance of an underlying asset, index, interest rate or currency exchange rate. Derivatives can be volatile and involve various types and degrees of risks, and, depending upon the characteristics of a particular derivative, suddenly can become illiquid. Derivative contracts ordinarily have leverage inherent in their terms which can magnify the Fund's potential for gains or losses through increased long and short position exposure. The Fund may access derivatives via a swap agreement. A risk of a swap agreement is the risk that the counterparty to the agreement will default on its obligation to pay the Fund. Investments in debt securities typically decrease in value when interest rates rise. This risk is usually greater for longer-term debt securities. Investments in Asset Backed, Mortgage Backed, and Collateralized Mortgage-Backed Securities include additional risks that investors should be aware of such as credit risk, prepayment risk, possible illiquidity and default, as well as increased susceptibility to adverse economic developments. ETF investments are subject to investment advisory and other expenses, which will be indirectly paid by the Fund. As a result, the cost of investing in the Fund will be higher than the cost of investing directly in ETFs and may be higher than other mutual funds that invest directly in stocks and bonds. ETFs are subject to specific risks, depending on the nature of the ETF. The Spectrum Income Fund's portfolio will be significantly impacted by the performance of the real estate market generally, and the Fund may be exposed to greater risk and experience higher volatility than would a more economically diversified portfolio. Property values may fall due to increasing vacancies or declining rents resulting from economic, legal, cultural, or technological developments. Investments in Limited Partnerships (including master limited partnerships) involve risks different from those of investing in common stock including risks related to limited control and limited rights to vote on matters affecting the Limited Partnership, risks related to potential conflicts of interest between the Limited Partnership and the Limited Partnership's general partner, cash flow risks, dilution risks and risks related to the general partner's limited call right. Underlying Funds are subject to management and other expenses, which will be indirectly paid by the Fund.

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