

Optimized Portfolio Analysis

for Domestic Large Cap Portfolio

Code: aRzh3J

Average Annual Performance Summary

Timeframe	Compound Annual Growth Rate (Return)	Standard Deviation (Risk)
Inception	16.69%	16.51%
15-Year	19.52%	15.45%
10-Year	17.85%	16.85%
5-Year	20.11%	20.12%
3-Year	15.89%	19.02%
1-Year	26.31%	N/A

The Optimizer is a tool for use by investment professionals to assist in determining portfolio asset allocations and risk (as measured by standard deviation) based upon inputs by the investment professional.

Past performance does not guarantee future results and the performance of the portfolio may be lower or higher than the stated hypothetical performance including the probability of loss. Historical hypothetical portfolio returns were higher than the returns of the S&P 500 Index in certain years which were the result of market factors and events which may not be replicated in the future.

Performance is hypothetical and not representative of prior portfolios since none existed during all of the periods shown. Returns assume dividend reinvestment. Standard Deviation is a measure of price variability (risk).

You should consider the portfolio's investment objectives, risks, and expenses carefully before investing.

An investment in any investment portfolio should be made with an understanding of the risks involved with owning stocks, such as an economic recession and the possible deterioration of either the financial condition of the issuers of the equity securities or the general condition of the stock market.

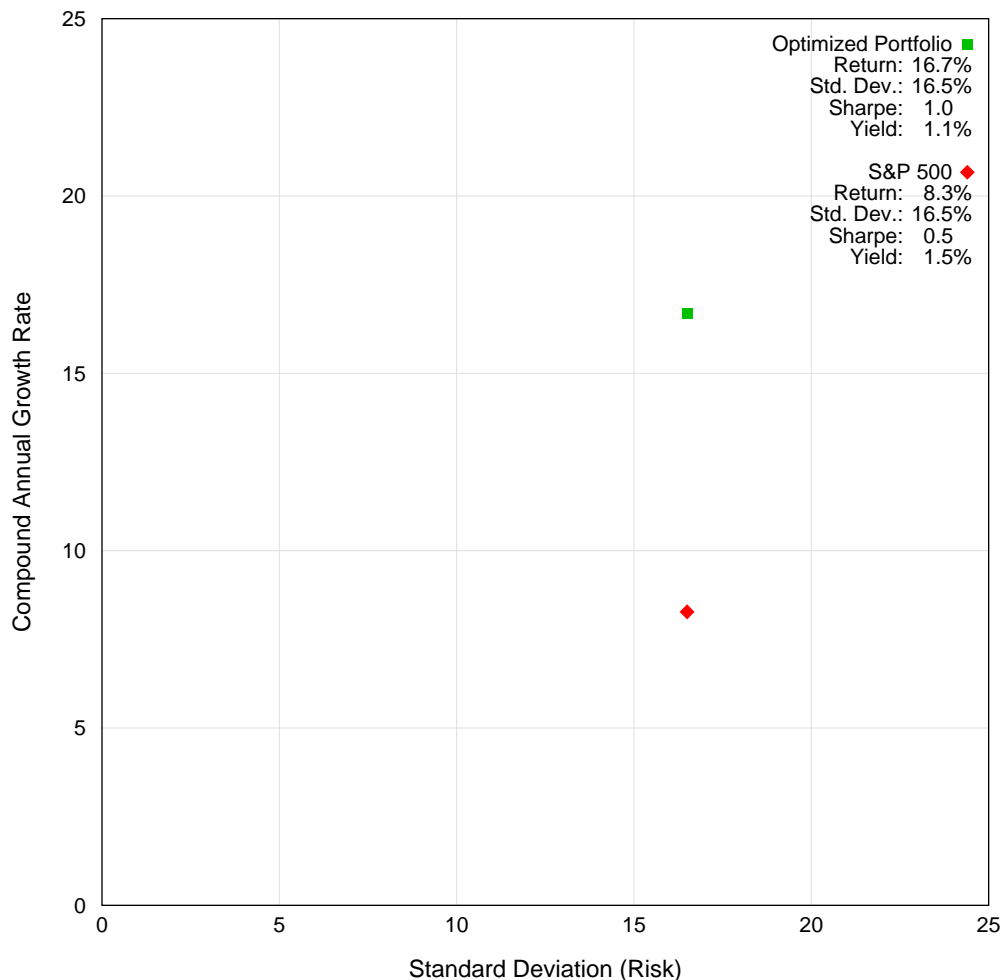
Please see the last page of this report for a summary of the inherent risks of other asset classes represented in this analysis.

Optimized Portfolio

- 25% iQ Large Cap Growth
- 25% iQ Large Cap Sh. Buyback
- 25% iQ Nasdaq 10
- 25% iQ ESG 10



Risk versus Reward



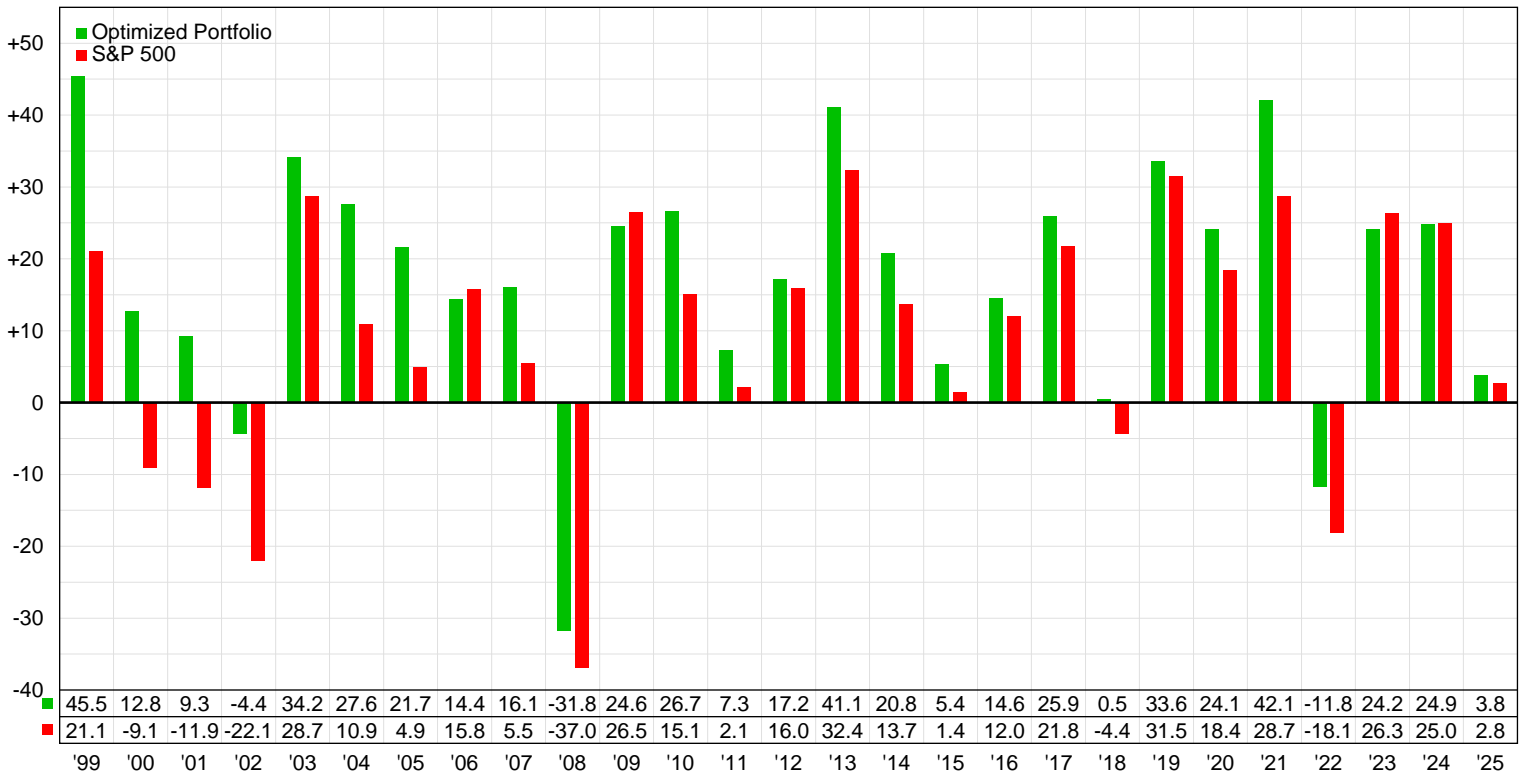
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In certain scenarios, the S&P 500 Index has been included for comparative purposes only. The S&P 500 Index is an unmanaged index of 500 stocks used to measure large-cap U.S. stock market performance. The index cannot be purchased directly by investors.

Standard Deviation is a measure of price variability (risk). Sharpe ratio is the average return earned in excess of the risk-free rate per unit of volatility or total risk

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Hypothetical Annual Returns



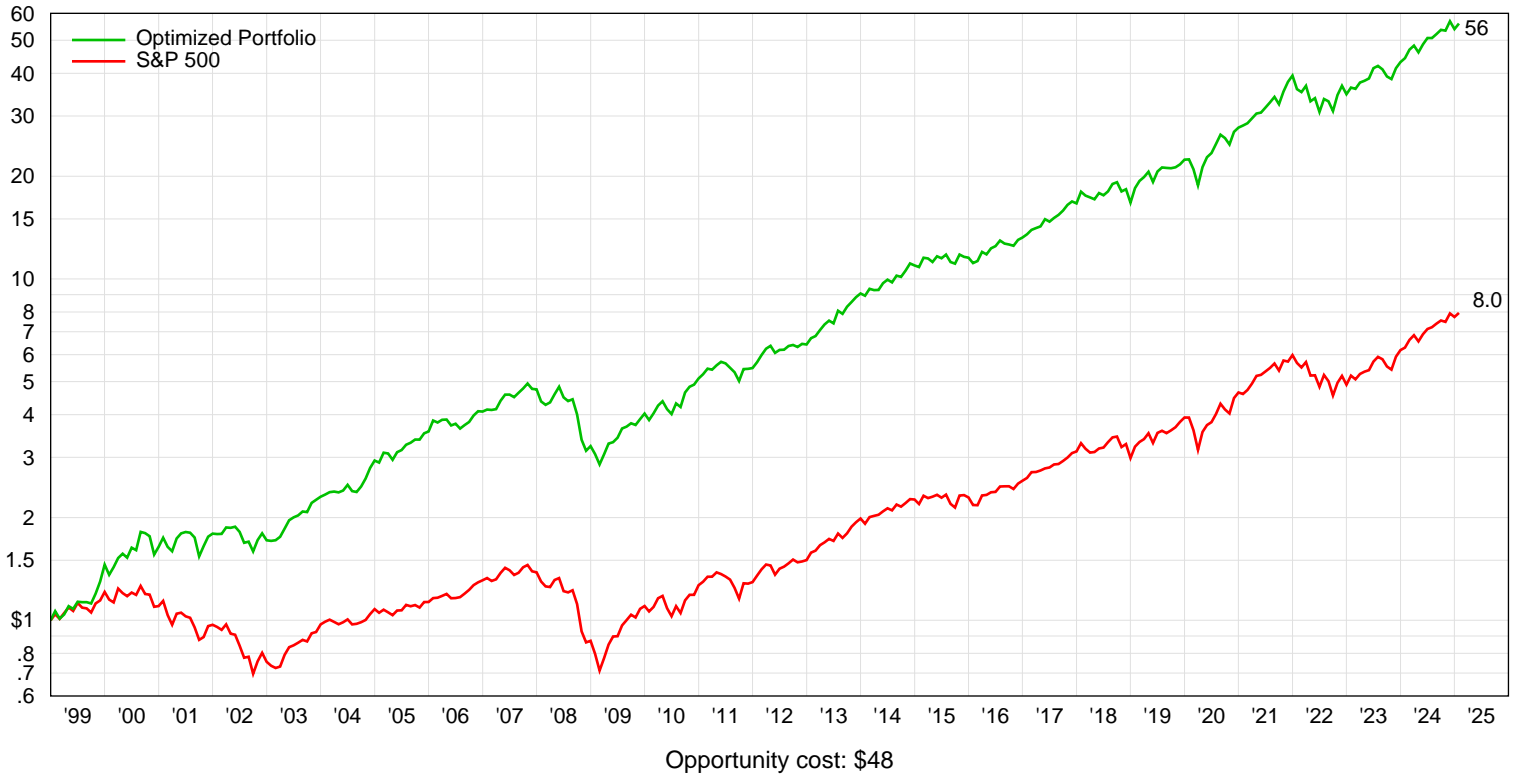
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Hypothetical Compounded Growth



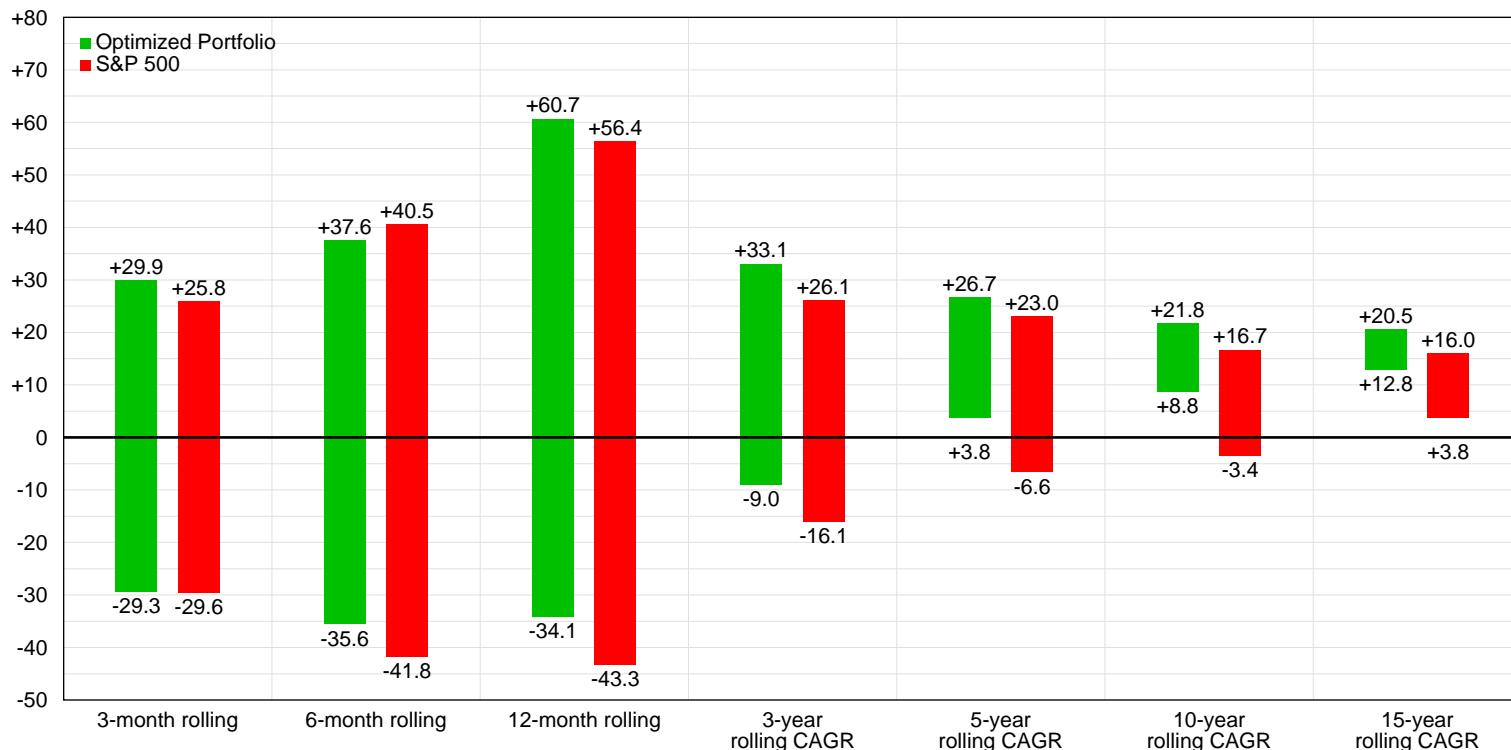
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Range of Hypothetical Returns



Disclaimer: Best and worst return periods for this model may not align with those of the mega cap-weighted S&P 500 Index.

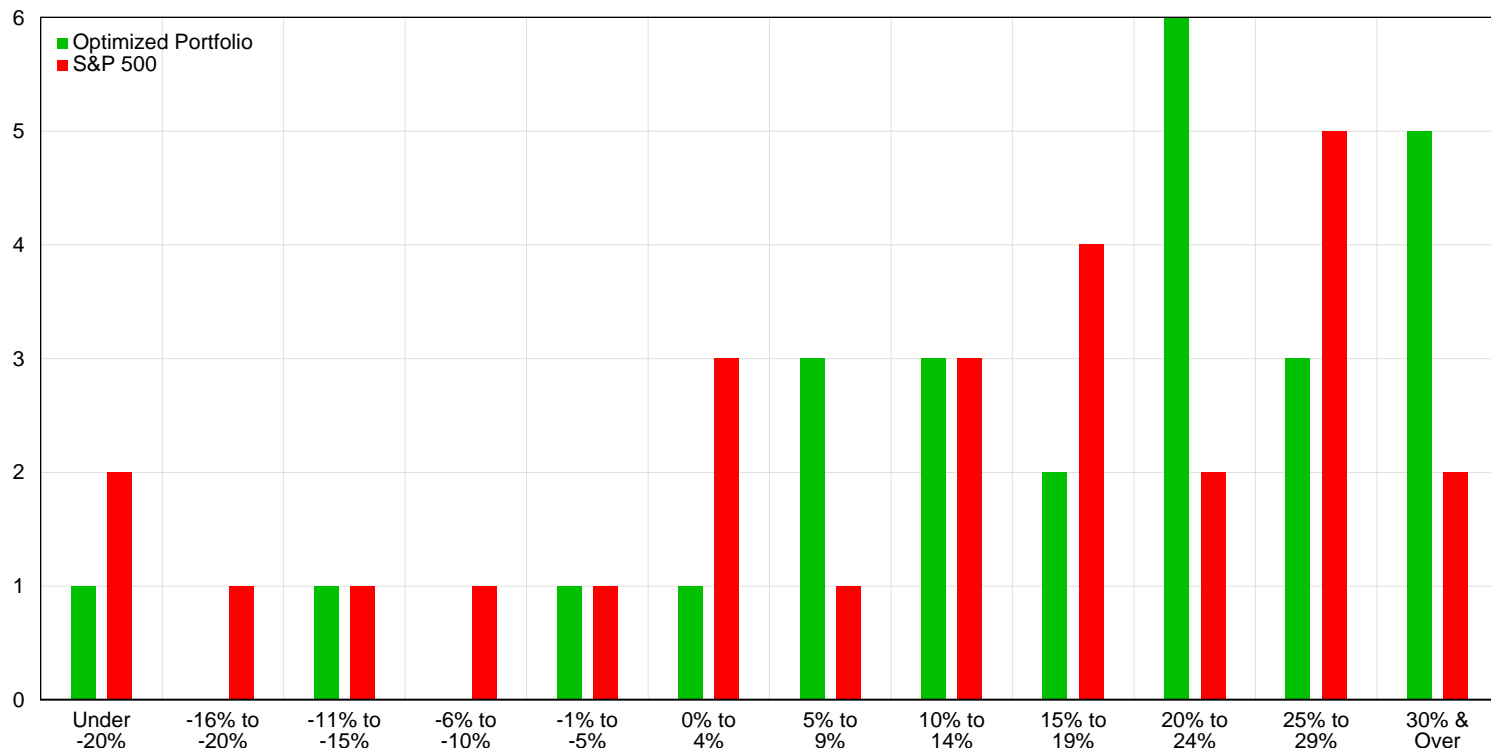
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Distribution of Calendar Year Returns



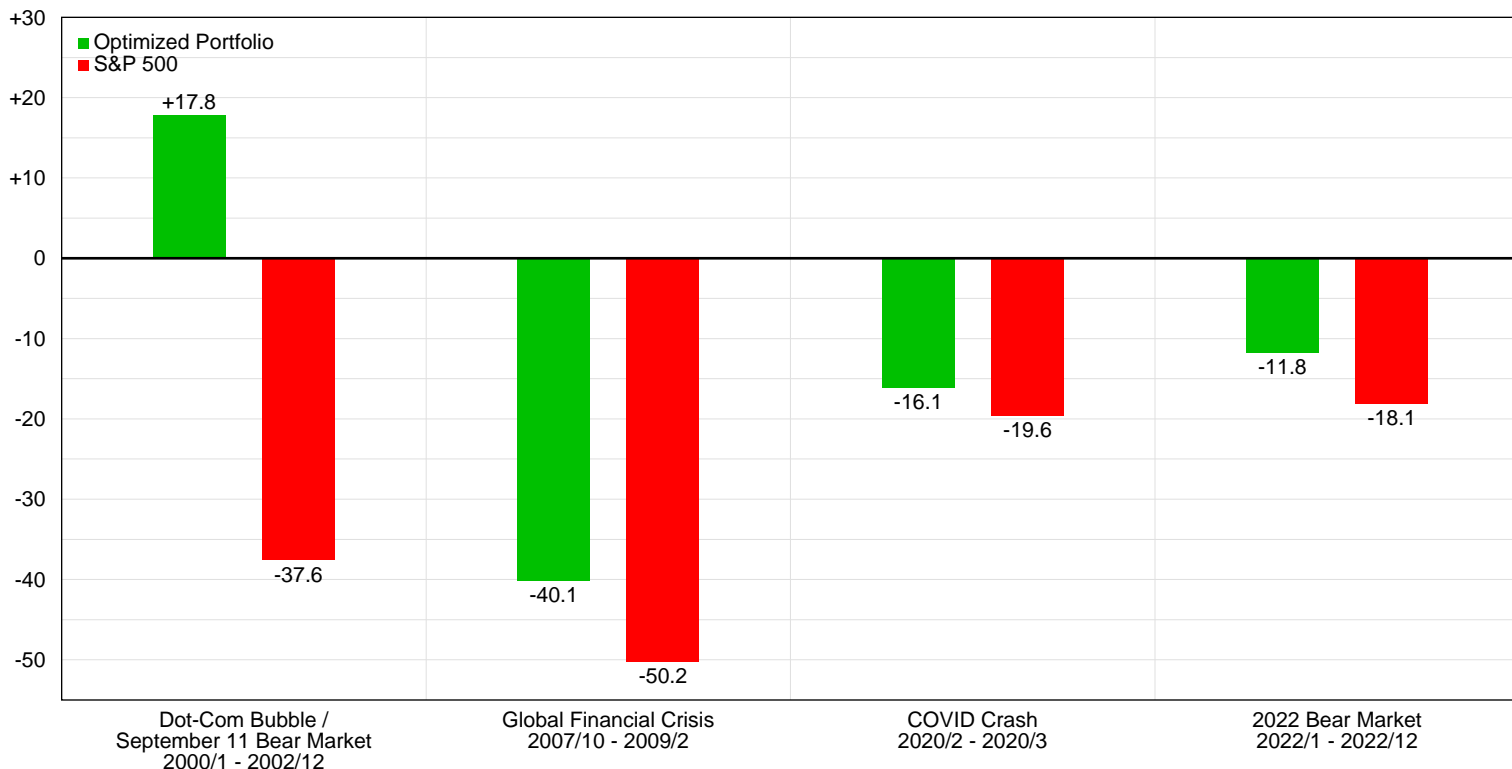
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Stress Test Period Returns (Cumulative)



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Salient Statistics

	Optimized Portfolio	S&P 500 Index
Up Years	23	20
Down Years	3	6
Up Year %	88%	77%
Best Year	+45.54%	+32.39%
Worst Year	-31.81%	-37.00%
Maximum Drawdown	-42.06%	-50.95%
Risk Measurements		
Alpha	8.56%	-
Beta	0.91	-
Up-Market Capture	1.12	-
Down-Market Capture	0.73	-
Correlation	0.90	-
R-Squared	0.82	-
Sharpe Ratio	1.01	0.50
Skew	-0.65	-0.67
Kurtosis	1.10	1.12

What is Asset Allocation?

Numerous independent studies have determined that more than 90% of a portfolio's relative performance can be attributed to Asset Allocation.

Asset Allocation is based on "Modern Portfolio Theory." In 1952, Nobel Laureate Harry Markowitz, regarded as the "father of modern portfolio theory," developed the first mathematical model that illustrated how risk can be reduced through diversification of investments that have different patterns of return (correlations).

Asset Allocation is analogous to baking a cake. The individual ingredients are not something you would consider sitting down and having as a meal: flour, raw eggs, baking soda, etc. But, when combined, the results can be incredible.

We caution against evaluating performance results on an individual basis rather than the portfolio as a whole. Like the cake analogy, if you leave those raw eggs out, your cake will be spoiled. You can't eliminate one investment because it hasn't performed or is out of favor. If you do, you have become a [Market Timer](#) – which can diminish long-term performance.

PORTFOLIO OPTIMIZATION

Portfolio Optimization is a sophisticated approach to Asset Allocation that is designed to balance the risks, returns and correlations of an investment portfolio over long holding periods. To continue our analogy, Portfolio Optimization tells us (based on history) how much of each ingredient makes the best tasting cake for the allowable cost.

Portfolio Optimization seeks to identify the historically optimum blend of investments that, based on their historical performance, would have produced a desired result in terms of performance, risk, and/or yield.

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Beta is a measure of the volatility (all markets, up markets, down markets) of a portfolio in comparison to the market (S&P 500 Index) as a whole. **Alpha** is a measure of performance on a risk-adjusted basis. Alpha takes the volatility (price risk) of a portfolio and compares its risk-adjusted performance to a benchmark index. The excess return of the portfolio relative to the return of the benchmark index is the alpha. The S&P 500 Index is the assumed benchmark. **Correlation** is a measure that determines the degree to which two variable's movements are associated. **R-squared** values range from 0 to 100. An R-squared of 100 means that all movements of a security are completely explained by movements in the index. A high R-squared (between 85 and 100) indicates the portfolio's performance patterns have been in line with the index. A portfolio with a low R-squared (70 or less) doesn't act much like the index. For this illustration, R-squared is calculated against the S&P 500 Index. **Sharpe Ratio** is a ratio developed by Nobel laureate William F. Sharpe to measure risk-adjusted performance. The Sharpe ratio is calculated by subtracting the risk-free rate - such as that of the 10-year U.S. Treasury bond - from the rate of return for a portfolio and dividing the result by the standard deviation of the portfolio returns. **Maximum Drawdown** measures the largest single drop from peak to bottom in the value of a portfolio before a new peak is achieved.

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PAST PERFORMANCE DOES NOT GUARANTEE FUTURE RETURNS.

Portfolios are optimized by published Dow Jones Relative Risk Models (Aggressive, Moderately Aggressive, Moderate, Moderately Conservative, Conservative) that seek to achieve the highest historical returns assuming the standard deviation of the corresponding Dow Jones Relative Risk Index.

The Dow Jones Relative Risk Indexes allow the evaluation of investor's portfolio returns based on the level of risk taken. The appropriate index is the one with risk characteristics that most closely match those of the portfolio. The Dow Jones Relative Risk Indexes are designed to benchmark total-portfolio investments at various specified levels of risk. Each Dow Jones Relative Risk Index measures three major asset classes: stocks, bonds and cash.

Portfolio optimization is a mathematical technique for finding the portfolios that lie along the efficient frontier. These ideas earned a Nobel Prize for Economics in 1990. These are theories collectively known as Modern Portfolio Theory (MPT).

Standard deviation is a statistical measurement of risk that sheds light on historical volatility. The Sharpe ratio tells us whether a portfolio's returns are due to smart investment decisions or a result of excess risk and is defined as return divided by risk (standard deviation). The greater a portfolio's Sharpe ratio, the better its risk-adjusted performance.

The portfolio optimizer utilizes the following proxies to represent each asset type – each asset types are subject to risk, including the loss of principal and have a starting date of January of 1999:

- Large Cap Core: The S&P 500 Index
- Large Cap Growth: S&P 500 stocks not in the Large Cap Value category
- Large Cap Value: Top 50% stocks of the S&P 500 in terms of Asset to Price, Book to Price, Cash to Price, Cash Flow to Price, Earnings to Price, and Pre-Tax Earnings to Price ratios
- Mid Cap Core: The S&P 400 Index
- Mid Cap Growth: S&P 400 stocks not in the Mid Cap Value category
- Mid Cap Value: Top 50% stocks of the S&P 400 in terms of Asset to Price, Book to Price, Cash to Price, Cash Flow to Price, Earnings to Price, and Pre-Tax Earnings to Price ratios
- Small Cap Core: The S&P 600 Index
- Small Cap Growth: S&P 600 stocks not in the Small Cap Value category
- Small Cap Value: Top 50% stocks of the S&P 600 in terms of Asset to Price, Book to Price, Cash to Price, Cash Flow to Price, Earnings to Price, and Pre-Tax Earnings to Price ratios
- International stocks: MSCI World Index ex USA
- Emerging Markets: MSCI Emerging Markets Index
- Defensive Stocks: Utilities, Staples and Healthcare stocks of the S&P 500 Index
- Share Buyback Stocks: Top 10 share buyback ratio stocks of the S&P 500 Index
- High-Yield Stocks: Top 10% dividend yielding stocks of the S&P 500 Index
- Seasonal Strategy: S&P 500 Index from November through April, Barclays Capital Credit Bond Index from May through October
- Equity Long/Short: Barclay Equity Long/Short Index
- Domestic Bonds: Barclays Capital Credit Bond Index
- International Bonds: S&P/Citigroup International Treasury Bond Ex-U.S. Index
- High-Yield Bonds: Barclays Capital U.S. Corporate High Yield Index
- Commodities: S&P GSCI Total Return Index
- Gold: Gold London PM
- REITs (Real Estate Investment Trusts): Dow Jones US Total Return Real Estate Index

The S&P 500 is an American stock market index based on the market capitalizations of 500 large companies having common stock listed on the NYSE or NASDAQ. The S&P 400 Index measures the performance of mid-sized companies, reflecting the distinctive risk and return characteristics of this market segment. The S&P SmallCap 600 Index measures the small-cap segment of the U.S. equity market. The MSCI World Index ex USA is a free

one year. The S&P/Citigroup International Treasury Bond Ex-U.S. Index is designed to reflect the performance of bonds issues by non-U.S. developed market countries. The Barclays U.S Corporate High Yield Bond Index is composed of fixed-rate, publicly issued, non-investment grade debt. The S&P GSCI® is a composite index of commodity sector returns representing an unleveraged, long-only investment in commodity futures that is broadly diversified across the spectrum of commodities in an attempt to provide investors with a representative picture of realizable returns attainable in the commodities markets. Gold London PM is an index based on the price at the end of each month close for London Gold. The Dow Jones US Total Return Real Estate Index is a capitalization weighted, real time index that provides a broad measure of the US real estate securities market. The Barclays Equity Long/Short Index measures equity-oriented investing on both the long and short sides of the market

Asset to price is a value measurement that divides total assets per share by price per share. Book to price is a value measurement that divides book value per share by price per share. Cash to Price is a valuation ratio that divides cash per share by price per share. Earnings to price is a valuation measurement that divides Earnings per share by price per share. Pre-tax Earnings to price is a value measurement that divides Earnings per share by price per share. Dividend Yield divides the dividend per share by the price per share. Buyback Ratio the amount of cash paid by a company for buying back its common shares over the past year, to its market capitalization at the beginning of the buyback period

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Hypothetical returns were the result of certain market factors and events which may not be replicated in the future. You can obtain performance information which is current through the most recent month-end by visiting www.iquant.pro. Investment return and principal value of the portfolio will fluctuate causing the portfolio, when redeemed, to be worth more or less than its original cost.

There are inherent limitations in the model performance results including: (1) such results do not represent actual trading; and (2) results may not reflect the impact of material economic and market factors might have had on the investment professional's decision making if the advisor were actually managing clients' money.

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