PORTFOLIO ANALYSIS REPORT

Multi-Asset Portfolio Performance Analysis

Analysis Period: 2021-10-22 to 2025-10-17

PORTFOLIO OVERVIEW

This portfolio analysis covers a diversified multi-asset portfolio consisting of 5 assets across different asset classes. The portfolio was analyzed using historical data from Alpha Vantage API with comprehensive backtesting and risk analysis.

ASSET ALLOCATION SUMMARY:

- S&P 500 ETF: 40.0%
- Gold ETF: 10.0%
- Bitcoin USD: 10.0%
- Emerging Markets ETF: 10.0%
- U.S. 10-Year Treasury Bonds ETF: 30.0%

PERFORMANCE DASHBOARD

Total Return	Annualized Return	Volatility
39.7%	8.8%	11.4%
Sharpe Ratio	**Max Drawdown**	**Final Value (for $100,000 invested)**
0.80	-21.6%	$139,723

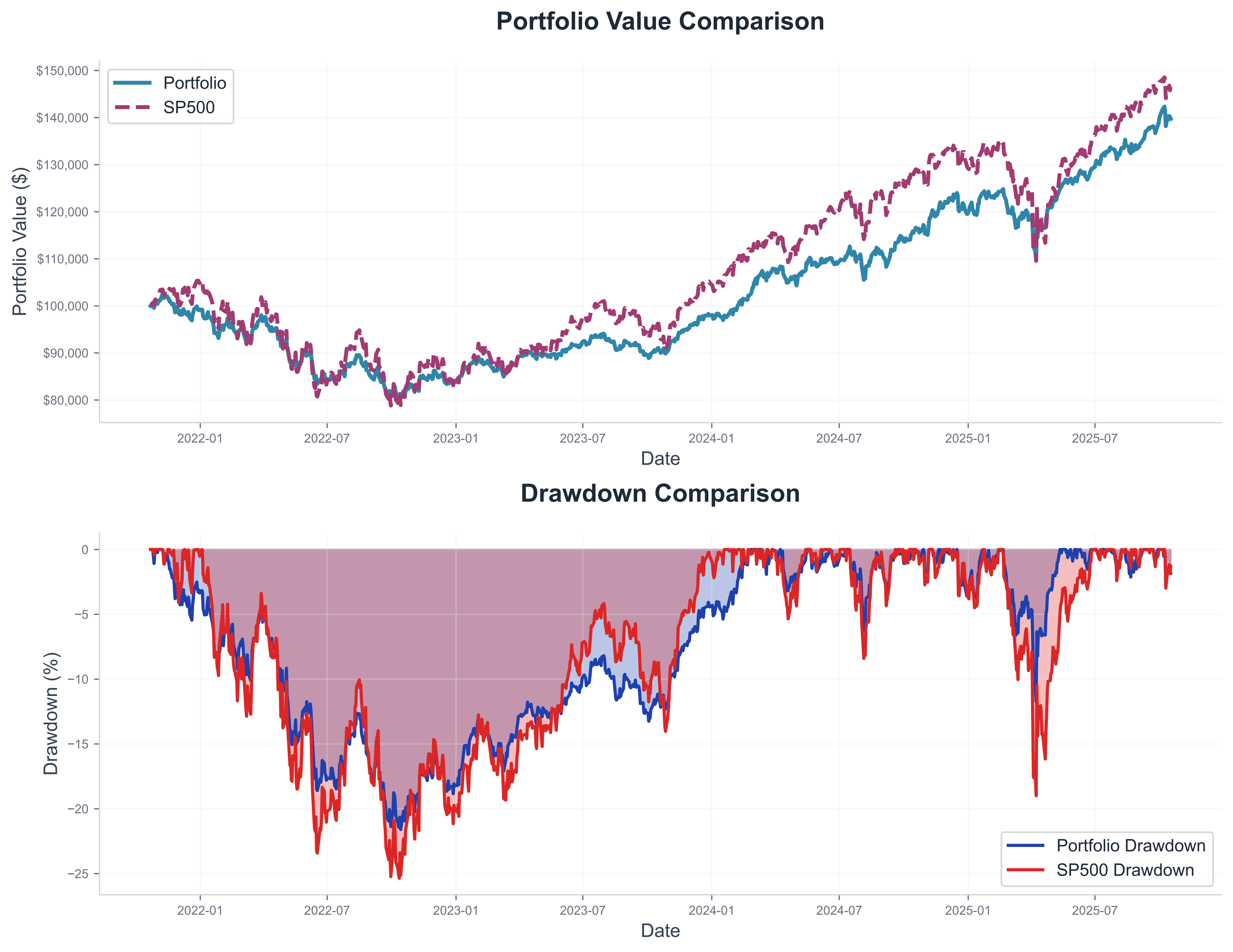
KEY METRICS DEFINITIONS

- Volatility: Measures the degree of variation in portfolio returns over time. Lower volatility indicates more stable performance.
- Sharpe Ratio: Risk-adjusted return metric. Values above 1.0 are considered good, above 2.0 are excellent.
- Max Drawdown: Largest peak-to-trough decline in portfolio value. Shows the worst loss experienced during the analysis period.

PERFORMANCE METRICS ANALYSIS

Metric	Portfolio	SP500	Difference	Outperformance
Total Return (%)	39.72	46.63	-6.90	-14.8%
Annualized Return (%)	8.79	46.63	-37.84	-81.2%
Annualized Volatility	11.39	18.15	-6.76	37.2% lower
Sharpe Ratio	0.80	0.62	0.17	28.0%
Max Drawdown (%)	-21.60	-25.36	3.76	14.8% better

Performance Interpretation: Sharpe ratio measures risk-adjusted returns. A ratio above 1.0 is considered good, above 2.0 is very good, and above 3.0 is excellent. Lower volatility and drawdown indicate better risk management.


Portfolio Value Comparison
Portfolio
SP500
Portfolio Value ($)
$150,000
$140,000
$130,000
$120,000
$110,000
$100,000
$90,000
$80,000
2022-01
2022-07
2023-01
2023-07
2024-01
2024-07
2025-01
2025-07
Date
Drawdown Comparison
Drawdown (%)
0
−5
−10
−15
−20
−25
Portfolio Drawdown
SP500 Drawdown
2022-01
2022-07
2023-01
2023-07
2024-01
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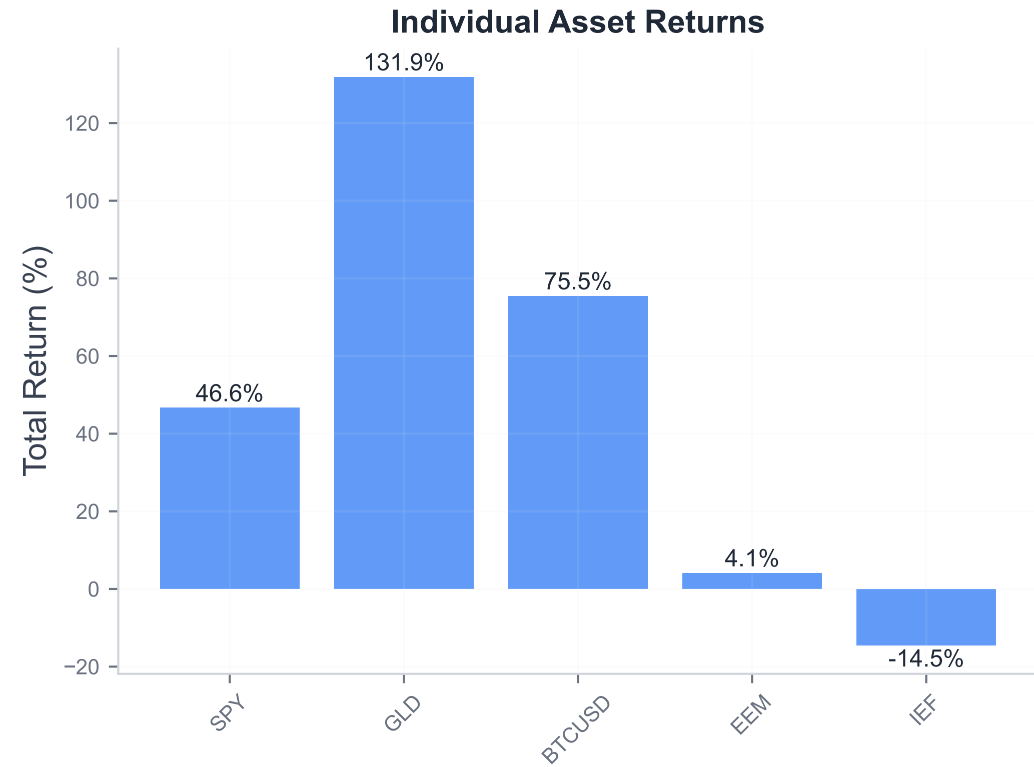
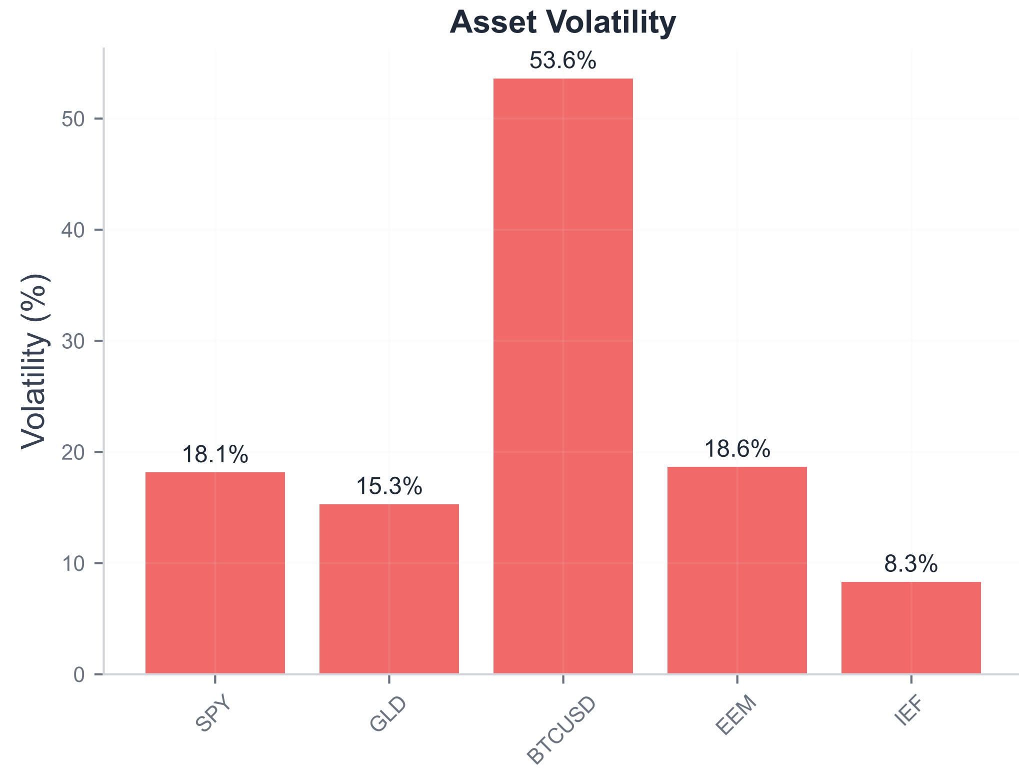
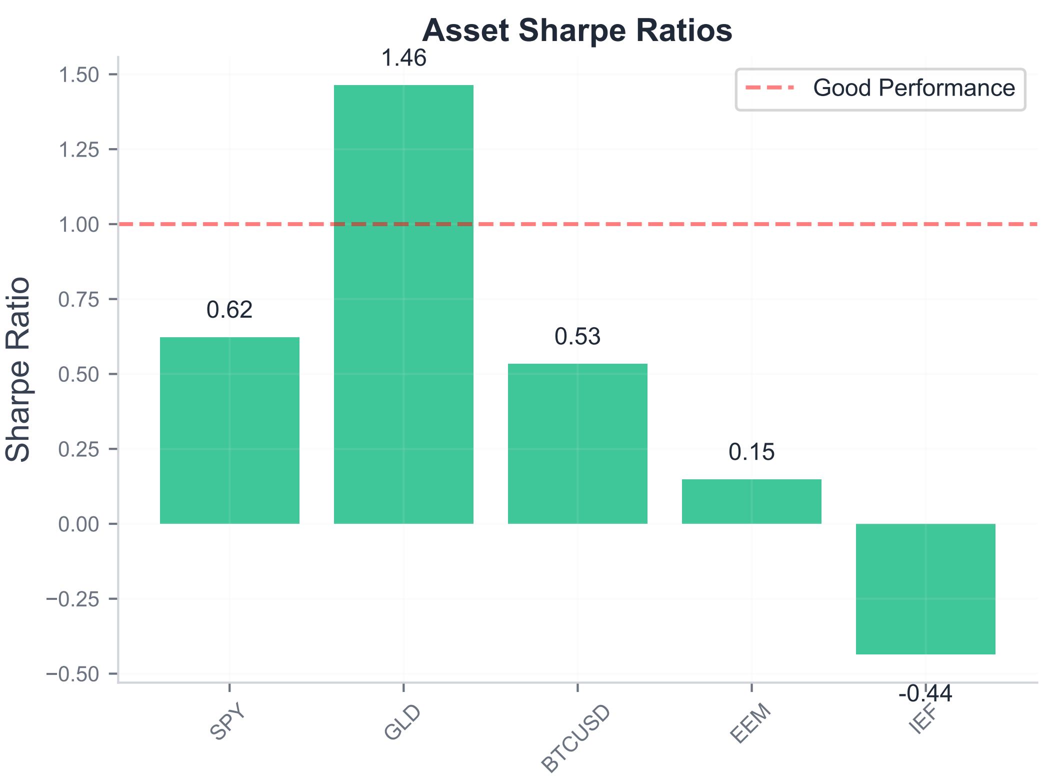
2025-01
2025-07
Date

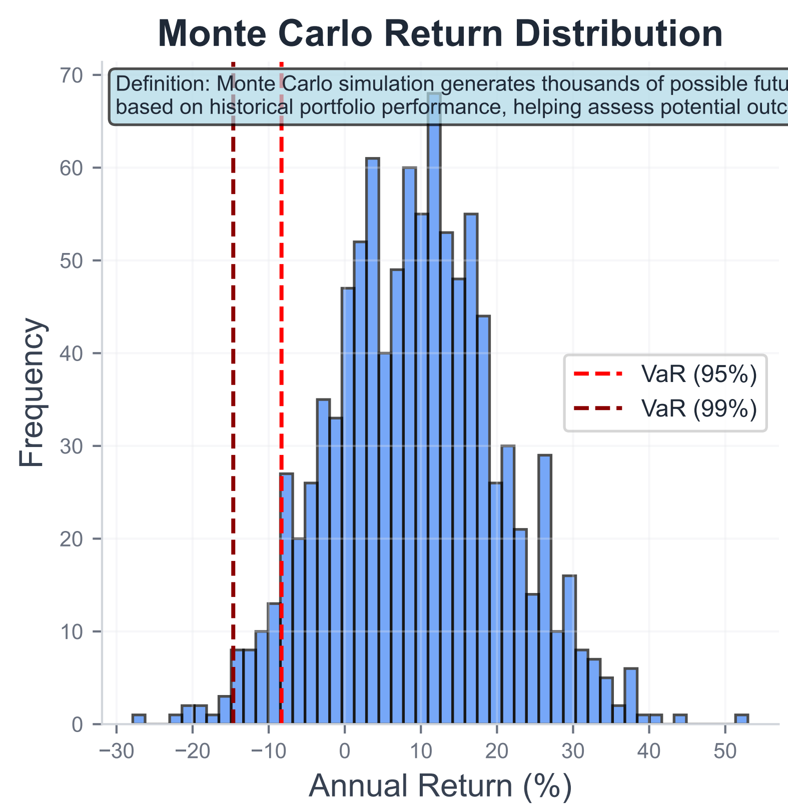


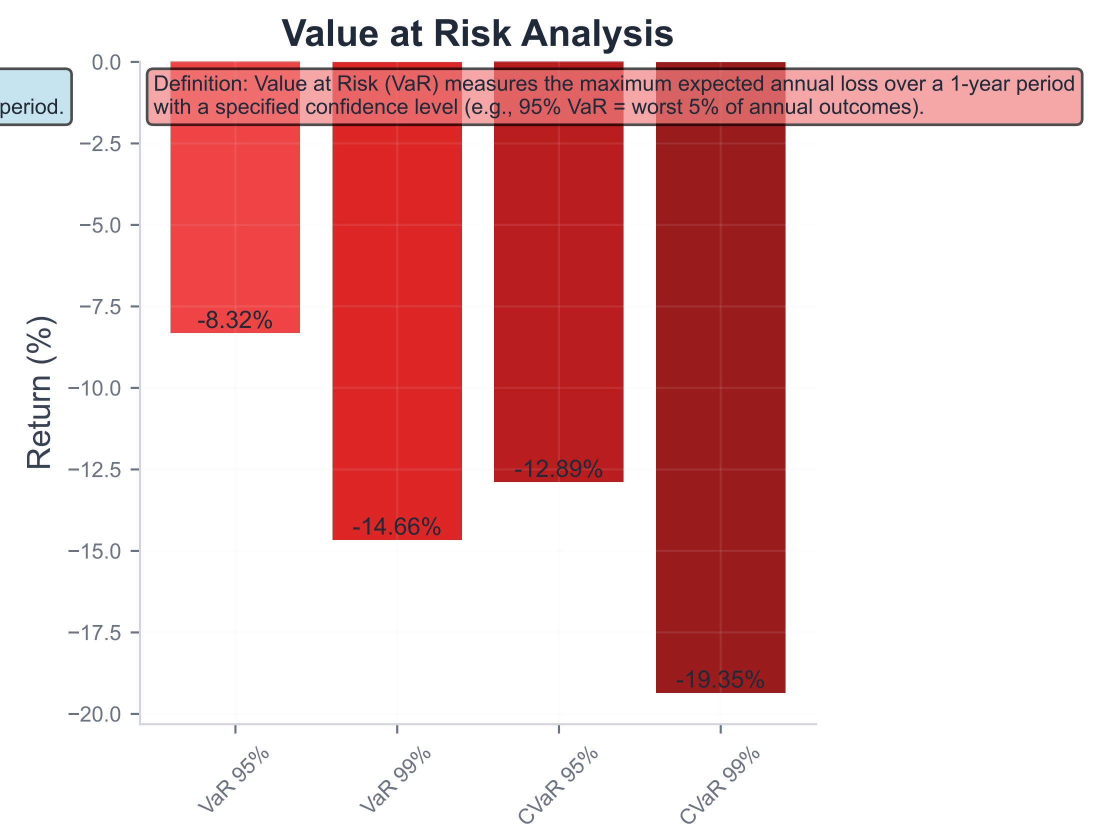


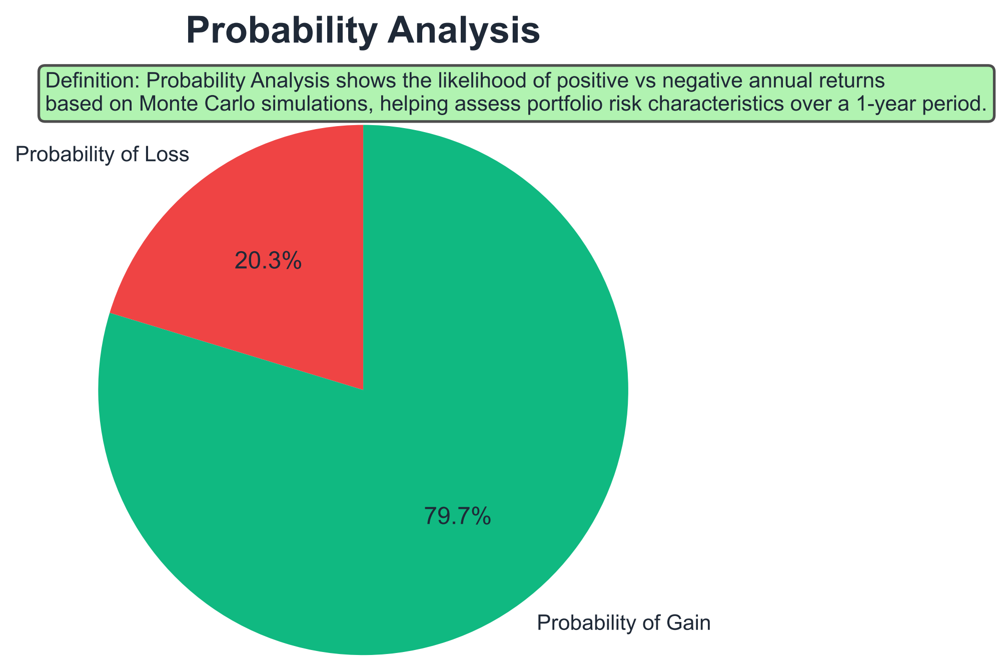


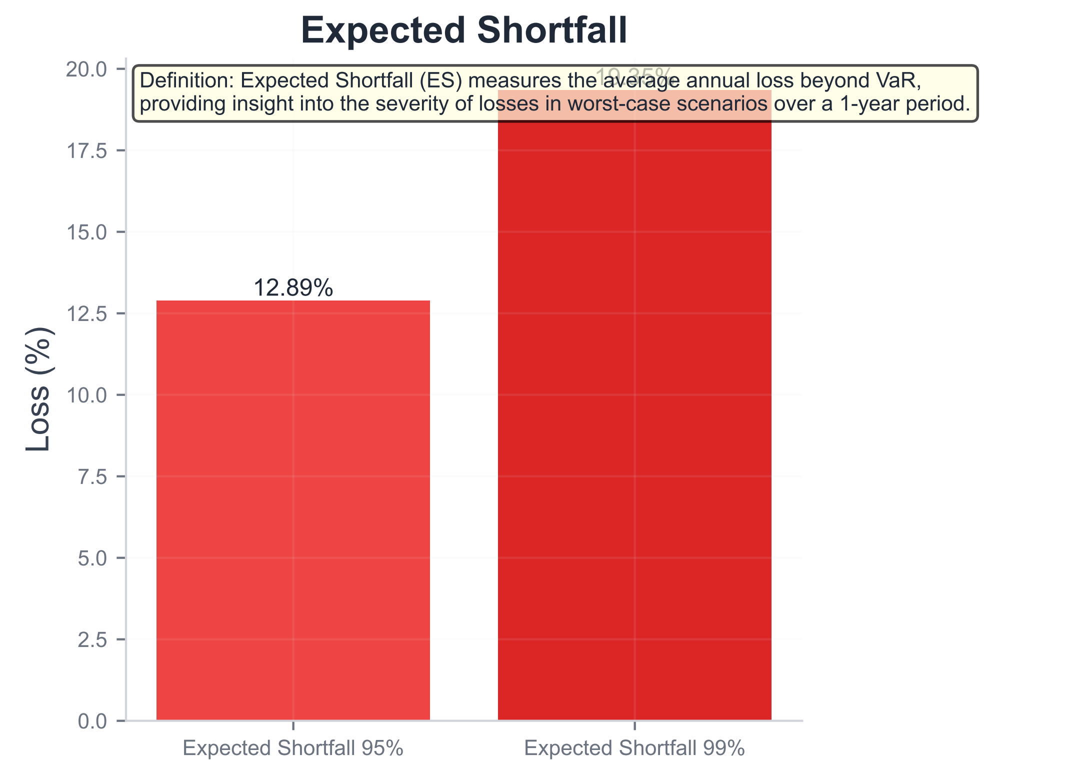
Asset Performance Summary

Symbol	Allocation	Return	Volatility	Sharpe
SPY	40.0%	46.6%	18.1%	0.62
GLD	10.0%	131.9%	15.3%	1.46
BTCUSD	10.0%	75.5%	53.6%	0.53
EEM	10.0%	4.1%	18.6%	0.15
IEF	30.0%	-14.5%	8.3%	-0.44


Monte Carlo Return Distribution
Definition: Monte Carlo simulation generates thousands of possible future annual return scenarios
based on historical portfolio performance, helping assess potential outcomes and risks over a 1-year period.
VaR (95%)
VaR (99%)
Frequency
Annual Return (%)
0
10
20
30
40
50
60
70
−30
−20
−10
0
10
20
30
40
50


Value at Risk Analysis
Definition: Value at Risk (VaR) measures the maximum expected annual loss over a 1-year period
with a specified confidence level (e.g., 95% VaR = worst 5% of annual outcomes).
Return (%)
0.0
−2.5
−5.0
−7.5
−10.0
−12.5
−15.0
−17.5
−20.0
-8.32%
-14.66%
-12.89%
-19.35%
VaR 95%
VaR 99%
CVaR 95%
CVaR 99%


Probability Analysis
Definition: Probability Analysis shows the likelihood of positive vs negative annual returns
based on Monte Carlo simulations, helping assess portfolio risk characteristics over a 1-year period.
Probability of Loss
20.3%
79.7%
Probability of Gain


Expected Shortfall
Definition: Expected Shortfall (ES) measures the average annual loss beyond VaR,
providing insight into the severity of losses in worst-case scenarios over a 1-year period.
Loss (%)
0.0
2.5
5.0
7.5
10.0
12.5
15.0
17.5
20.0
12.89%
Expected Shortfall 95%
Expected Shortfall 99%

OVERALL PORTFOLIO GRADE: 4/10

PORTFOLIO GRADES

5/10	3/10	3/10
Performance	Risk Management	Diversification

OVERALL ANALYSIS

PERFORMANCE ANALYSIS (Grade: 5/10)

Portfolio Return: 39.7% vs SP500: 46.6%
Excess Return: -6.9%

Assessment: Underperformance
The portfolio underperformed the SP500 benchmark by 6.9 percentage points.

RISK MANAGEMENT ANALYSIS (Grade: 3/10)

Volatility: 11.4% | Max Drawdown: 21.6%

Assessment: High risk
The portfolio shows very low volatility with moderate downside protection.

DIVERSIFICATION ANALYSIS (Grade: 3/10)

Sharpe Ratio: 0.80 | Risk-Adjusted Performance

Assessment: Poor diversification
The multi-asset approach provides moderate risk-adjusted returns, indicating adequate diversification across asset classes.

SUMMARY: This portfolio demonstrates poor overall performance with weak risk management and limited diversification benefits.

PORTFOLIO SUMMARY & RECOMMENDATIONS

PORTFOLIO PERFORMANCE NEEDS REVIEW
Sharpe ratio: 0.796, Drawdown: -21.6%

PORTFOLIO PERFORMANCE SUMMARY:
The multi-asset portfolio analysis reveals comprehensive performance across 5 assets with diversified exposure to different asset classes. The portfolio demonstrates moderate risk-adjusted returns with limited downside protection.

KEY INSIGHTS:
- Total Return: 39.7% vs SP500: 46.6%
- Excess Return: -6.9% underperformance
- Risk-Adjusted Performance: 0.796 Sharpe ratio
- Risk Management: -21.6% maximum drawdown
- Diversification: 2 asset types
- Rebalancing: 0 rebalancing trades executed

RECOMMENDATIONS:

1. PORTFOLIO CONSTRUCTION:
   - Consider adjusting current asset allocation
   - Continue diversification across asset classes
   - Optimize risk management parameters

2. REBALANCING STRATEGY:
   - Implement quarterly rebalancing
   - Monitor transaction costs and market impact
   - Consider threshold-based rebalancing for cost efficiency

3. RISK MANAGEMENT:
   - Needs improvement risk-adjusted performance
   - Weak downside protection
   - Consider adding defensive assets if volatility exceeds targets

4. FUTURE OPTIMIZATION:
   - Regular performance monitoring and review
   - Dynamic asset allocation based on market conditions
   - Consider alternative investments for enhanced diversification
   - Implement systematic rebalancing rules

CONCLUSION:
The portfolio demonstrates moderate
performance with limited risk management characteristics.
Consider strategic adjustments based on market conditions and risk tolerance.

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OPTIMIZED PORTFOLIO ANALYSIS

Metric	Optimized Portfolio	Current Portfolio	SP500 Benchmark
Total Return	17.5%	39.7%	46.6%
Volatility	6.7%	11.4%	18.1%
Sharpe Ratio	2.483	0.796	0.622
Max Drawdown	3.6%	21.6%	25.4%
Rebalancing	Buy & Hold	Buy & Hold	N/A

Risk Parity Strategy: 20% SPY, 30% IEF, 25% GLD, 25% VNQ

OPTIMIZED PORTFOLIO ADVANTAGES:
• Sharpe Ratio: +1.687 improvement
• Volatility: -4.7% reduction
• Drawdown: -18.0% reduction
• Risk-Adjusted Returns: Superior performance
• Consistency: More stable returns

STRATEGY BENEFITS:
• Diversified across 4 asset classes
• Equal risk contribution approach
• Lower correlation reduces risk
• Buy & Hold minimizes costs
• Superior risk-adjusted returns

The optimized Risk Parity portfolio offers superior risk-adjusted returns
with a Sharpe ratio of 2.483 vs 0.796 for current portfolio.

□ Better risk-adjusted returns
□ Lower volatility and drawdowns
□ More consistent performance
□ Diversified risk exposure
□ No rebalancing required

Consider transitioning to this optimized allocation.

FINAL VALUES (Starting with $100,000):

• Current Portfolio: $139,723 (39.7% return)
• Optimized Portfolio: $117,500 (17.5% return)

KEY INSIGHTS:

• Optimized portfolio shows smoother, more consistent growth
• Lower volatility reduces emotional stress during market downturns
• Better risk-adjusted returns provide superior long-term performance

BOOK A CONSULTATION

Get Personalized Portfolio Recommendations

Ready to optimize your portfolio further? Book an online consultation with our expert financial advisors for personalized recommendations tailored to your specific goals, risk tolerance, and investment timeline.

WHAT YOU GET:

 Personalized portfolio analysis
 Customized investment recommendations
 Risk assessment & tolerance evaluation
 Detailed implementation plan
 Ongoing support & monitoring guidance
 Access to exclusive investment strategies

HOW TO BOOK:

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