

Global Asset Performance and Portfolio Optimization (2015–2024)

Optimized Portfolio Summary

Expected Return

11.72%

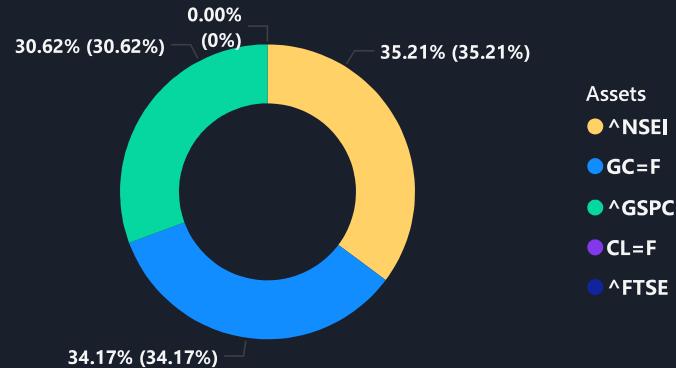
Expected Volatility

10.79%

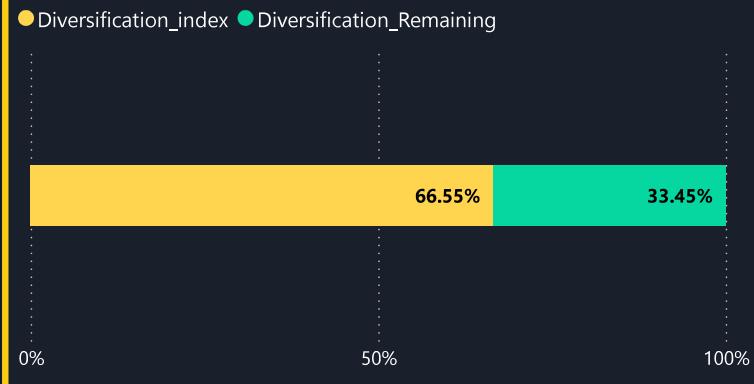
Sharpe Ratio

62.28%

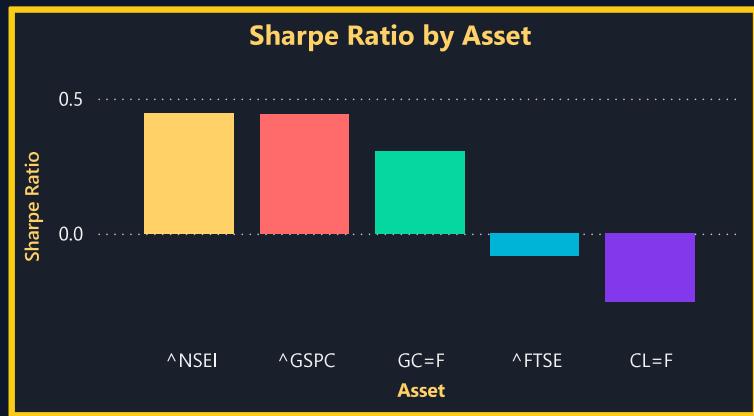
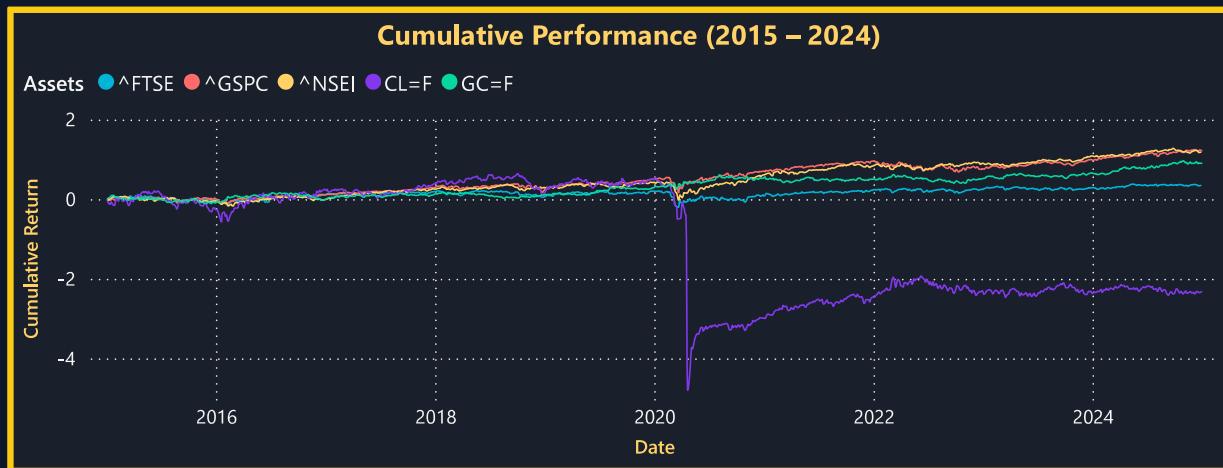
Portfolio Allocation by Asset



Diversification Index (of Total Portfolio)



Asset Performance Analytics





Statistical Insights and Hypothesis Testing

Correlation, Significance, ANOVA & Confidence Intervals

Correlation Matrix					
Assets	^FTSE	^GSPC	^NSEI	CL=F	GC=F
^NSEI	0.46	0.32	1.00	0.06	-0.01
^FTSE	1.00	0.53	0.46	0.12	-0.02
^GSPC	0.53	1.00	0.32	0.14	0.03
CL=F	0.12	0.14	0.06	1.00	0.04
GC=F	-0.02	0.03	-0.01	0.04	1.00

Correlation Significance Results		
Asset 1	Asset 2	Significant (p<0.05)
^FTSE	CL=F	Yes
^FTSE	GC=F	No
^GSPC	^FTSE	Yes
^GSPC	CL=F	Yes
^GSPC	GC=F	No
^NSEI	^FTSE	Yes
^NSEI	^GSPC	Yes
^NSEI	CL=F	Yes
^NSEI	GC=F	No

Pairwise Mean Comparison (T-Test Results)			
Asset1	Asset2	T Statistic	Significance(p<0.05)
FTSE 100	Nifty 50	1.16	No
FTSE 100	S&P 500	1.17	No
Gold	Oil	0.88	No
Gold	S&P 500	-0.44	No

Variation Across Asset Classes (ANOVA)

No significant difference in mean returns among assets

0.54
P-Value

A balanced mix of Nifty 50, S&P 500 and Gold achieves an optimal risk and return balance.
Diversification across equities and safe havens assets strengthens portfolio resilience in the global market.