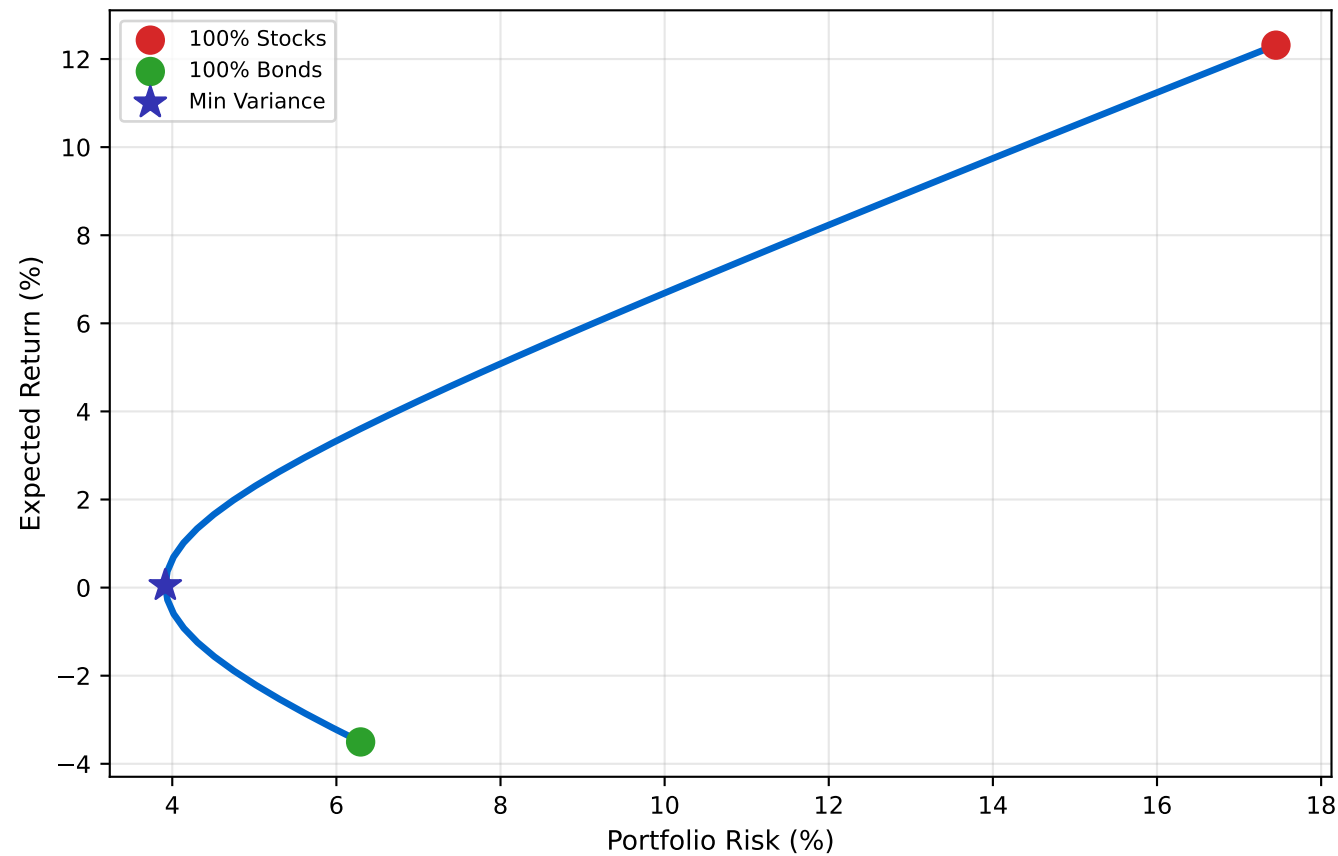
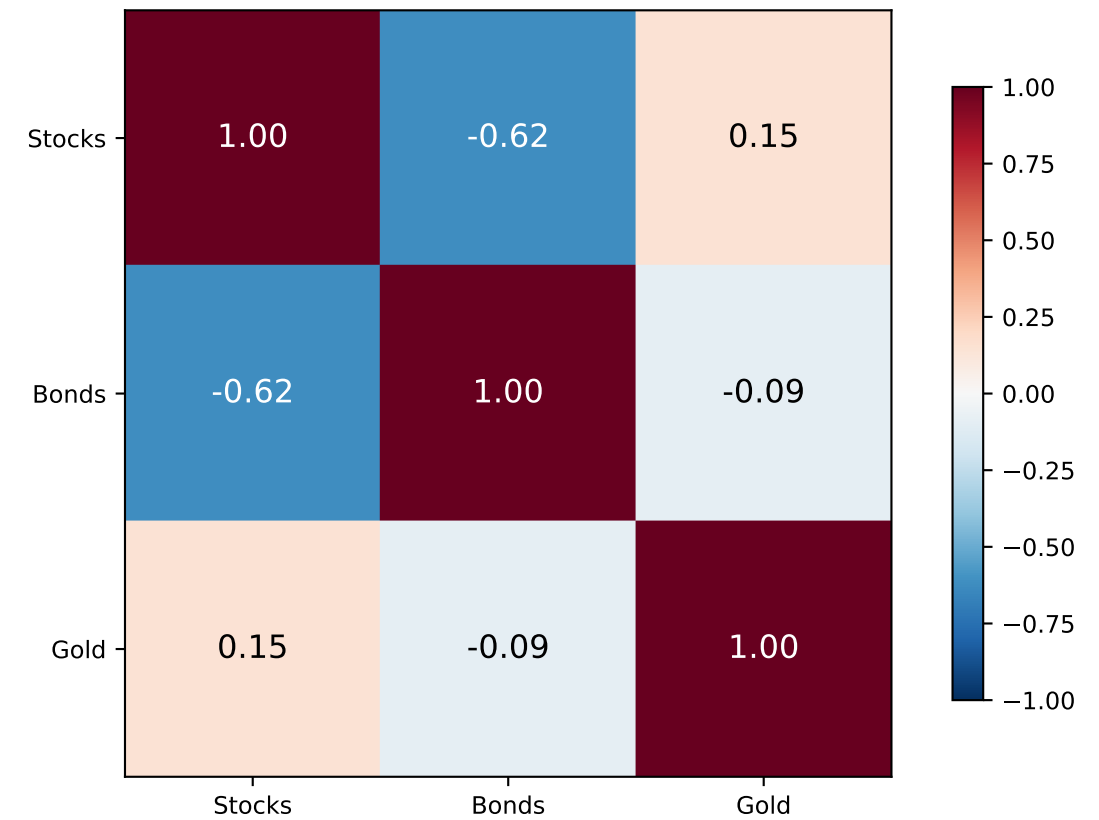


Portfolio Correlation and Diversification

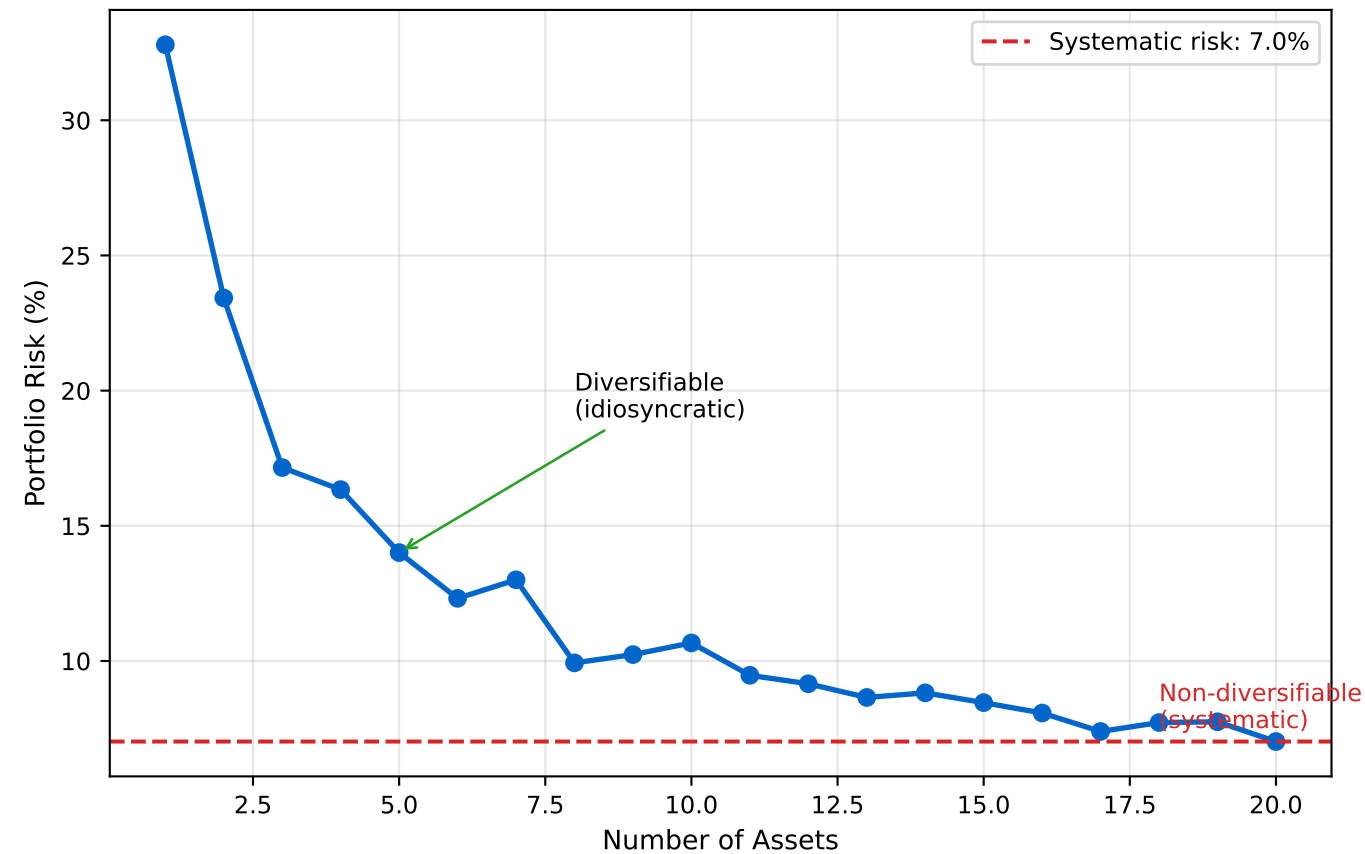
Efficient Frontier (Stocks + Bonds)



Asset Correlation Matrix



Diversification: Risk vs Number of Assets



Diversification Insights

Lower Correlation = Better Diversification

Negative correlation is ideal but rare

Diminishing Returns

~15-20 stocks capture most diversification

Systematic Risk Remains

Cannot diversify away market risk

Correlations Rise in Crises

Diversification fails when needed most

$$\text{Portfolio_Var} = \sum(w_i * w_j * \text{cov_ij})$$