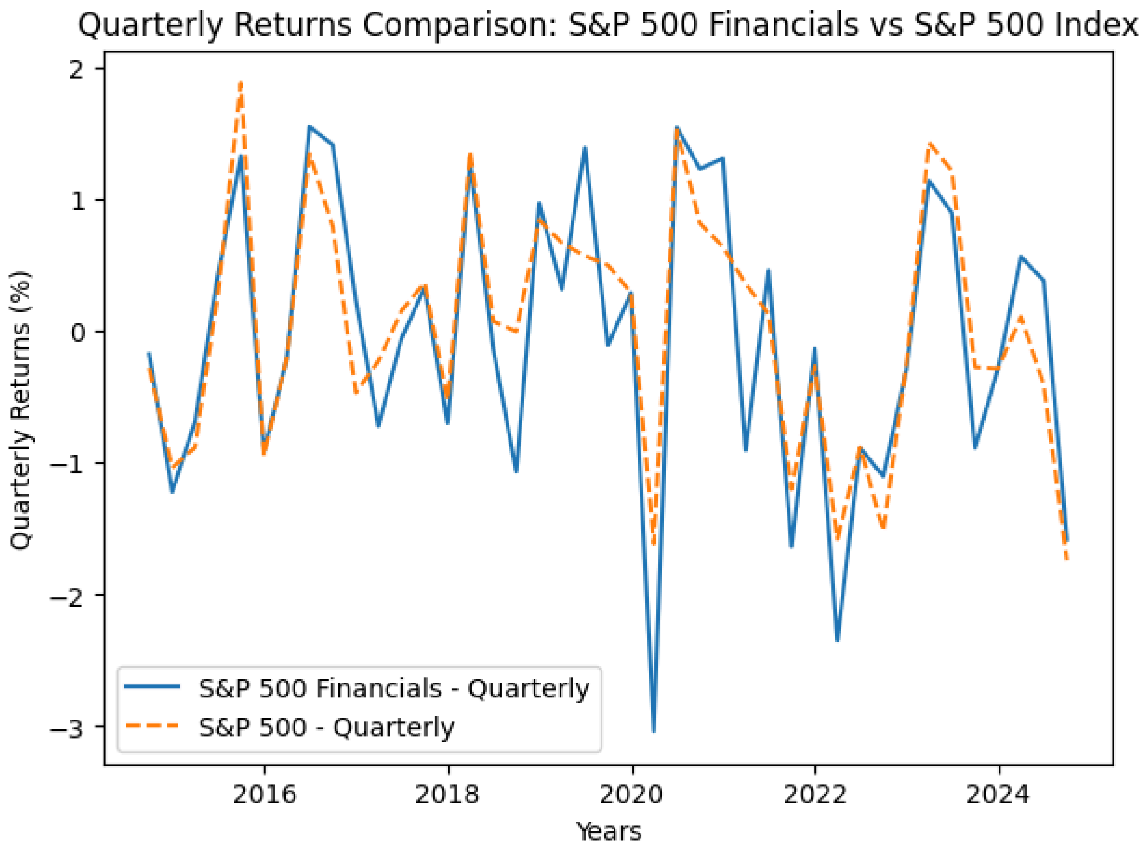
RISK ANALYSIS OF THE S&P 500 FINANCIALS

Volatility, Beta, Sharpe Ratio and Expected Return (CAPM) Analysis



This project involves the calculation of key financial risk metrics for the S&P 500 Financials. The analysis uses the 10-year US Treasury yield as the risk-free rate and the S&P 500 index as the market benchmark.

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Risk Analysis Metrics
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Volatility (Annualized):        0.2233 (22.33%)
Beta (Formula):                 1.0673
Beta (OLS):                     1.0673
Sharpe Ratio:                   0.3577
Expected Return (CAPM):         0.1041 (10.41%)
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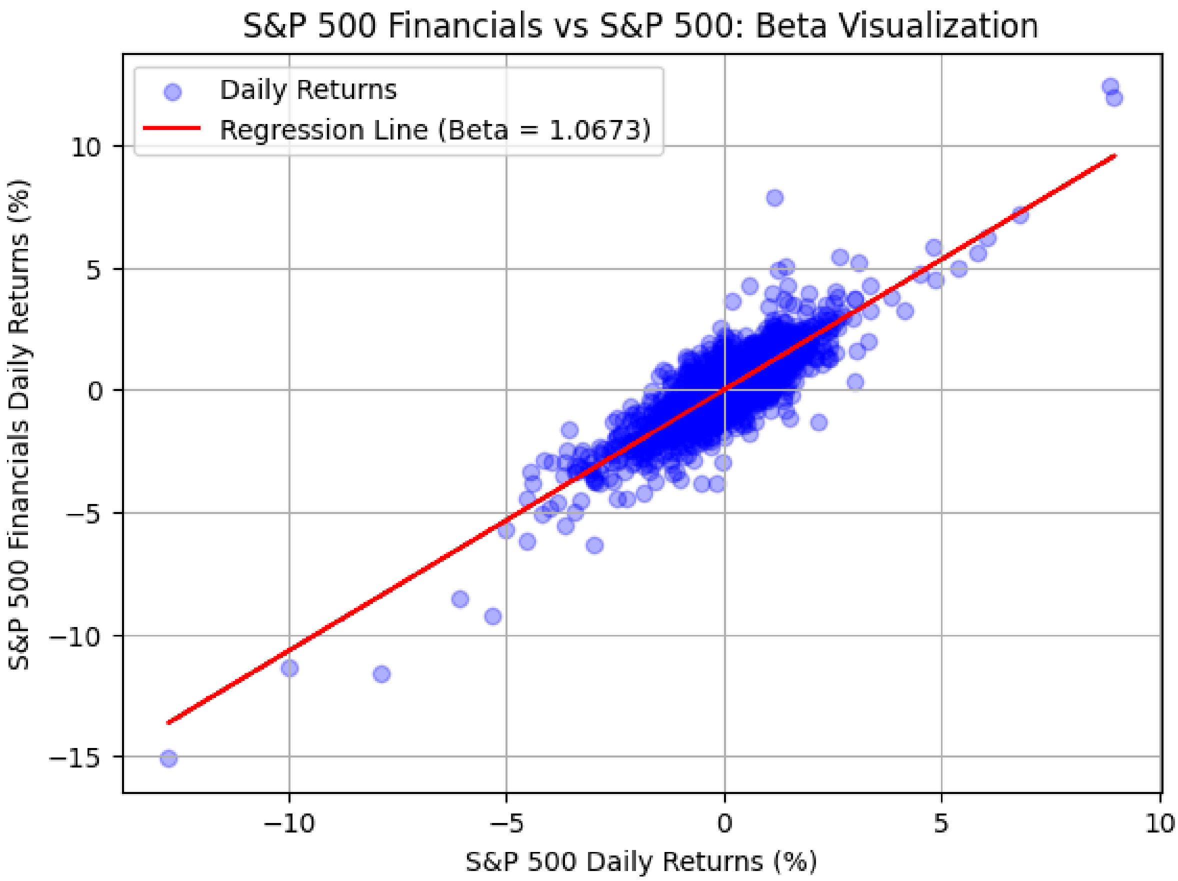
Volatility = 22.33%

- **Interpretation**: The volatility 22.33% indicates that the returns of the S&P 500 Financials are expected to fluctuate by approximately 22.33% over a year.

- **Implications**: A higher volatility suggests greater risk, meaning investors can expect more significant fluctuations in the returns of this sector.

Beta = 1.0673



- **Interpretation**: Both the formula-based and OLS regression methods yield a beta of 1.0673. Beta measures the sensitivity of the S&P 500 Financials sector returns relative to the S&P 500 Index returns. A beta of 1.0673 indicates that the sector is slightly more volatile than the overall market. For every 1% change in the market return, the sector's return is expected to change by approximately 1.0673%.

- **Implications**: A beta greater than 1 signifies that the S&P 500 Financials sector is expected to experience larger movements than the broader market.

Expected Return (CAPM) = 10.41%

- **Interpretation**: The expected return, based on the Capital Asset Pricing Model (CAPM), is 10.41%. This value represents the anticipated return of the S&P 500 Financials sector, given the risk-free rate, the sector's beta, and the expected market return.

- **Implications**: This expected return can be used by investors to evaluate whether the sector offers an adequate return relative to its risk. Investors may use this metric to compare it against other investment opportunities or to set return expectations for their investment in the S&P 500 Financials sector.

Sharpe Ratio = 0.3577

- **Interpretation**: The Sharpe Ratio of 0.3577 measures the risk-adjusted performance of the S&P 500 Financials sector. It indicates that for each unit of risk, the sector provides an excess return of 0.3577 over the risk-free rate.

- **Implications:** A Sharpe Ratio above 1 is generally considered good, indicating that the returns are sufficient to compensate for the risk taken. A Sharpe Ratio of 0.3577 suggests that while the sector is providing a positive return relative to its risk, there may be more attractive risk-adjusted returns available elsewhere. This ratio helps investors assess whether the potential returns justify the risk.

Summary

The risk analysis of the S&P 500 Financials sector reveals that the sector has a moderate level of volatility and a beta slightly above 1, indicating a slightly higher risk compared to the overall market. The CAPM-based expected return suggests a decent return for the sector, while the Sharpe Ratio indicates that the risk-adjusted performance is relatively modest.