***Tesla and Unilever***

**Introduction**

This document analyses Tesla and Unilever, examining their stock prices, returns, and key statistics to provide an informed recommendation. Visualisations will illustrate trends and major events affecting each stock. Data is sourced from WRDS's CRSP Daily Stock database, covering the period from the January 2013 to the December 2023. These stocks were chosen for their contrasting industries and risk-return profiles.

Tesla, founded in 2003, is a leading American electric vehicle and clean energy company, ranking among the world's highest in market capitalization. Unilever, established in 1929, is a British consumer goods giant known for its diverse product portfolio, including its status as the world’s largest soap producer.

**Historical Price and Return Trends for Tesla and Unilever (2013–2023)**



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**Analysis of Tesla**

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Tesla’s returns exhibit fat tails, aligning with a Student’s t-distribution. Summary statistics show near-zero skewness, high kurtosis (7.75), and a Jarque-Bera test rejecting normality.

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Tesla’s returns show no significant autocorrelation for returns (p = 0.75), but the Ljung-Box test for squared returns (p = 0.000) is significant, indicating evidence for predictive volatility.

**Analysis of Unilever**

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Unilever’s returns exhibit fat tails, aligning with a Student’s t-distribution. Summary statistics show high kurtosis (22.34), and a Jarque-Bera test rejecting normality.

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Unilever’s returns and squared returns show significant autocorrelation (p = 0), indicating evidence for predictability in mean and volatility.

**Conclusion**  
Tesla’s prices exhibit high variability and sensitivity to market events, suitable for high risk, opportunistic strategies. Unilever, by contrast, shows consistent price stability and resilience to shocks, positioning it as a dependable choice for risk-averse, long-term investments. Statistical tests reveals that both stocks display fat tails and volatility clustering; however, while Tesla’s returns exhibit no autocorrelation, Unilever’s predictable patterns enhance its suitability for sustained investment approaches.

**Recommendation**:

* High growth, high risk: Tesla suits speculative, short-term strategies aiming for significant gains
* Stability, consistency: Unilever is well-suited for conservative, long-term portfolios seeking reliability and lower risk.