Correlation of Asset Classes on the NYSE – Research Methods

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This article outlines the research methods employed in my thesis, "Correlation of Asset Classes in NYSE." The study investigates the relationships among asset classes, including the NYSE's primary index, the S&P 500, commodities, Treasury bonds, the USD, and prominent cryptocurrencies. The objective is to analyse whether price correlations between these asset classes are positive, negative, or neutral. For example, does a bullish trend in one sector correlate with bearish tendencies in another, or do they move in tandem? By exploring these dynamics, the research aims to provide market participants and policymakers with actionable insights to position themselves effectively in the market. Additionally, the study delves into sector rotation patterns, along with the cyclical and seasonal behaviours of sector-based asset classes.

General Methodological Approach

The research addresses two primary questions:

1. What are the correlations among asset class prices in U.S. markets?
2. Are these correlations positive, negative, or neutral?

To achieve these objectives, the study employs a combination of quantitative and qualitative research methods, with an emphasis on quantitative approaches. This focus stems from the need to analyse over a decade of price data and numerical trends across various asset classes.

The research relies on three foundational methodologies: validity, reliability, and triangulation.

Validity ensures that conclusions drawn from the data are meaningful and justifiable, based on thorough analysis.

Reliability involves sourcing raw data from credible instruments, government agencies, and reputable research bodies, ensuring the consistency of results across repeated analyses.

Triangulation strengthens the findings by corroborating evidence from multiple sources, such as interviews, observational data, and quantitative analysis, fostering a comprehensive understanding. Research Design and Structure

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Research Design and Structure

The study focuses on the eleven sectors within the S&P 500:

Energy (XLE), Materials (XLB), Industrials (XLI), Consumer Discretionary (XLY), Consumer Staples (XLP), Health Care (XLV), Financials (XLF), Information Technology (XLK), Communication Services (XLC), Utilities (XLU), and Real Estate (XLRE).

In addition, it examines key commodities (gold, silver, copper, natural gas, and WTI oil), Treasury bonds (ranging from 1- to 30-year durations), the USD, and leading cryptocurrencies like Bitcoin and Ethereum.

From a quantitative perspective, the study uses data from over a dozen reliable and official sources, which will be systematically analysed. Complementing this, video interviews with at least six established experts in the field will provide qualitative insights. The interviews will be recorded and transcribed for efficient thematic analysis. This combined approach ensures robust, well-rounded conclusions to inform market strategies effectively.

This research aims to uncover the intricate correlations between asset classes within the NYSE, commodities, Treasury bonds, the USD, and cryptocurrencies. By employing a mix of quantitative and qualitative methods supported by rigorous frameworks of validity, reliability, and triangulation, the study provides meaningful insights into market dynamics. The exploration of sector rotations, cyclical trends, and price interdependencies equips market participants and policymakers with valuable knowledge to navigate complex financial landscapes. Through comprehensive data analysis and expert interviews, this study aspires to offer actionable strategies for staying aligned with market movements and making informed investment decisions.

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