

Correlation of Asset Classes in NYSE

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The focus of this research is to explore the interconnections among various asset classes within the NYSE main index, the S&P 500, to commodities, Treasury bonds, the USD, and leading cryptocurrencies. This study seeks to uncover whether the price correlations between these asset classes exhibit positive, negative, or neutral characteristics. In other words, it aims to determine if, when one sector shows a bullish trend, other sectors demonstrate bearish tendencies or if they tend to move in the same direction. By analysing these relationships, the goal is to equip market participants with insights to remain on the “right side of the chart.” The research will examine sector rotation along with the cyclical and seasonal behaviour inherent in sector-based asset classes.

The S&P 500 index, represented by the ETF SPY, is segmented into eleven primary sectors, each represented by specific exchange-traded funds (ETFs):

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

In addition to these equity sectors, the study will analyse key commodities, Treasury bonds, and cryptocurrencies to provide a comprehensive view of market dynamics. The commodities included are gold, silver, copper, WTI crude oil, and natural gas. The Treasury bonds to be examined cover a spectrum from 1-year to 30-year bonds. Furthermore, Bitcoin and Ethereum, two of the most prominent cryptocurrencies, will also be analysed to assess their correlations with traditional asset classes.

The Research Problem

Financial markets and asset prices often undergo phases of expansion and contraction, following non-random, dynamic, and cyclical trends. Recognising the correlations and interactions between different asset classes is essential for informed decision-making by institutional investors, funds, retail investors, and policymakers. This research is centred on understanding these relationships to aid in effective capital allocation, helping market participants stay aligned with prevailing market trends and, as a result, remaining on the “right side of the chart.”

The Research Questions

The core questions guiding this research are:

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

The Research Objectives

The main objective of this study is to conduct a quantitative analysis to determine the correlations among asset class prices within the U.S. markets. The findings are intended to serve as an actionable strategic tool for market participants, helping them make informed investment decisions. Additionally, the research aims to identify cyclical patterns in asset class price actions and correlations by examining historical data. By understanding these patterns, the study hopes to provide a reliable framework for predicting future market behaviour based on past trends.

The Research Methodology

This research will employ a mixed-methods approach, combining both quantitative and qualitative analysis. Historical price data for the selected asset classes will be collected and analysed, supported by macroeconomic and microeconomic insights, technical analysis, and chart analysis. The study will draw data from reputable sources, including the U.S. Federal Reserve banks and other relevant bureaus, ensuring accuracy and reliability. By examining historical price correlations, the study will identify trends and patterns, while technical analysis will shed light on specific cyclical movements within each asset class.

The analysis will also involve evaluating sector rotation patterns, which can be critical for understanding how capital flows between sectors during different phases of the economic cycle. Additionally, the study will consider the influence of global economic factors, such as inflation rates, interest rate adjustments, and geopolitical events, as they play a significant role in shaping asset prices.

The Significance of the Study

The potential impact of this research is considerable, with practical applications for predicting asset prices and understanding the cycles and correlations within financial markets. By analysing the relationships between the S&P 500 sectors, commodities, Treasury bonds, and cryptocurrencies, the study aims to provide insights that will be valuable to investors and policymakers alike. Market participants can use these findings to inform their strategies, while policymakers can gain a better understanding of how different asset classes respond to economic shifts. Overall, the study seeks to contribute to a more sophisticated understanding of market dynamics, thereby enhancing decision-making processes across various market participants.

The Research Limitations

While this study seeks to provide valuable insights into the correlations between asset classes, it will also acknowledge certain limitations. One of the primary challenges is accounting for the influence of investor psychology, as market sentiment can often drive prices in unpredictable ways. Additionally, contingent events—such as geopolitical crises, natural disasters, and economic shocks—may have short-term impacts on asset prices that do not align with historical patterns. Furthermore, systematic risks, including sudden regulatory changes or technological disruptions, can alter the behaviour of specific asset classes, creating deviations from expected correlations. The study will account for these factors to the extent possible, recognising that they may introduce variability into the analysis.

This research will explore the correlations between various asset classes within the U.S. markets, focusing on the S&P 500 sectors, commodities, Treasury bonds, and cryptocurrencies. Through quantitative and qualitative analysis, it aims to provide actionable insights for investors, enabling them to navigate sector rotations and cyclical movements. By understanding the complex interrelations within the financial markets, the study hopes to support more informed decision-making, helping market participants stay aligned with prevailing trends. The findings are expected to benefit a wide range of stakeholders, including institutional investors, retail investors, and policymakers, fostering a more efficient and predictable investment environment.

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