

DESCRIPTION OF THE MECHANISM OF OPERATION OF STOCK EXCHANGES IN FOREIGN COUNTRIES AND STOCK MARKET INDICES

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Abstract

This article analyzes the operational mechanisms of foreign stock exchanges and the characteristics of major stock market indices. It explores how developed stock markets such as the NYSE, NASDAQ, London Stock Exchange, and Tokyo Stock Exchange function within a highly integrated global financial system. The study also examines the role of stock indices, including the S&P 500, Dow Jones Industrial Average, FTSE 100, DAX, and Nikkei 225, as key indicators of economic performance and investor sentiment. Statistical insights are used to demonstrate the importance of liquidity, market capitalization, and technological development in shaping modern financial markets. The research highlights the increasing role of electronic trading systems, institutional investors, and index-based investment instruments such as ETFs in global capital markets.

Keywords

stock exchange, financial markets, stock indices, market capitalization, liquidity, S&P 500, NASDAQ, investment, globalization, ETFs

Аннотация

В данной статье анализируются механизмы функционирования зарубежных фондовых бирж и характеристики основных биржевых индексов. Рассматривается деятельность таких развитых рынков, как NYSE, NASDAQ, Лондонская фондовая биржа и Токийская фондовая биржа в условиях глобализированной финансовой системы. Особое внимание уделяется фондовым индексам, таким как S&P 500, Dow Jones Industrial Average, FTSE 100, DAX и Nikkei 225, которые выступают важными индикаторами экономического развития и настроений инвесторов. На основе статистических данных показана роль ликвидности, рыночной капитализации и технологического развития в формировании современных финансовых рынков. Подчеркивается значение электронных торговых систем, институциональных инвесторов и индексных инвестиционных инструментов (ETF).

Ключевые слова

фондовая биржа, финансовые рынки, биржевые индексы, рыночная капитализация, ликвидность, инвестиции, глобализация, S&P 500, NASDAQ, ETF

Annotatsiya

Ushbu maqolada xorijiy fond birjalarining faoliyat mexanizmi hamda asosiy birja indekslarining xususiyatlari tahlil qilingan. NYSE, NASDAQ, London fond birjasi va Tokio fond birjasi kabi rivojlangan moliya bozorlari global moliyaviy tizim doirasida o'rganilgan. Shuningdek, S&P 500, Dow Jones Industrial Average, FTSE 100, DAX va Nikkei 225 kabi indekslarning iqtisodiy ko'rsatkich va investorlar kayfiyatini ifodalashdagi roli statistik ma'lumotlar asosida yoritilgan. Tadqiqotda likvidlik, bozor kapitallashuvi va texnologik

rivojlanishning zamonaviy moliya bozorlariga ta'siri tahlil qilingan. Elektron savdo tizimlari, institutsional investorlar va ETF kabi indeksga asoslangan investitsion instrumentlarning ahamiyati alohida ta'kidlangan.

Kalit so'zlar

fond birjasi, moliya bozori, birja indeksleri, bozor kapitallashuvi, likvidlik, investitsiya, globallashuv, S&P 500, NASDAQ, ETF

INTRODUCTION

In the contemporary stage of global economic development, financial markets—particularly stock exchanges—have become one of the most significant and complex institutions within the modern economic system. With the acceleration of globalization, the liberalization of capital flows, and the increasing diversification of financial instruments, stock exchanges have evolved into key mechanisms ensuring not only national economic stability but also the smooth functioning of the global financial architecture. Efficient capital allocation, optimal distribution of investment resources between the real and financial sectors, and the mobilization of long-term financing for corporations are largely facilitated through the operations of stock exchanges.

Empirical evidence from developed economies demonstrates that stock exchanges act as critical drivers of economic growth. They provide firms with access to long-term capital through equity and debt instruments, while simultaneously offering investors opportunities for wealth accumulation and risk diversification. In addition, stock exchanges ensure the formation of transparent market prices based on supply and demand dynamics, thereby contributing to improved market efficiency and economic equilibrium. These characteristics make stock exchanges an indispensable institutional component of modern market economies.

In developed countries such as the United States, the United Kingdom, Germany, and Japan, stock exchanges operate as highly sophisticated financial infrastructures supported by advanced electronic trading systems. Major financial centers such as the New York Stock Exchange (NYSE), NASDAQ, the London Stock Exchange (LSE), and the Tokyo Stock Exchange (TSE) play a central role in global capital allocation. The scale of transactions conducted on these exchanges reaches trillions of dollars annually, reflecting their critical importance in maintaining global financial stability and investor confidence.

The efficiency of stock exchange operations is closely linked to their institutional structure, technological advancement, and regulatory framework. Modern stock exchanges rely heavily on automated trading platforms, real-time data processing systems, and complex clearing and settlement mechanisms. These innovations significantly enhance market liquidity, reduce transaction costs, and enable investors to make faster and more informed decisions. As a result, stock exchanges have become highly efficient platforms for capital mobilization and financial intermediation.

Within this context, stock market indices play a particularly important role as key analytical tools. A stock index is a statistical measure that reflects the overall performance of a selected group of stocks, representing the general direction of the market. Indices such as the S&P 500, Dow Jones Industrial Average (DJIA), NASDAQ Composite, FTSE 100, DAX, and Nikkei 225 are widely used as benchmarks for assessing market performance and macroeconomic trends. These indices not only reflect the dynamics of financial markets but also serve as indicators of broader economic conditions, investor sentiment, and expectations regarding future economic growth.

The economic significance of stock indices lies in their ability to provide a comprehensive view of market performance, facilitate investment decision-making, and serve as benchmarks for portfolio management. They are widely used by institutional investors, hedge funds, and asset

managers to evaluate returns and construct diversified investment portfolios. Moreover, indices play a crucial role in the development of passive investment strategies, such as index funds and exchange-traded funds (ETFs), which replicate the performance of underlying market indices. Given the increasing integration of global financial markets and the growing importance of capital mobility, the study of stock exchanges and market indices has become highly relevant in modern economic research. Understanding their operational mechanisms, institutional structures, and methodological approaches to index construction provides valuable insights into financial market behavior and macroeconomic stability.

Therefore, this paper aims to analyze the operational mechanisms of foreign stock exchanges, their institutional and technological frameworks, as well as the characteristics and economic significance of major stock market indices. The study also seeks to examine how these indices reflect market dynamics and contribute to investment decision-making in an increasingly interconnected global financial system.

MAIN PART

Foreign stock exchanges represent highly organized financial markets where securities such as shares, bonds, exchange-traded funds, and derivatives are traded under regulated conditions. Their functioning is based on the interaction of demand and supply, supported by advanced trading infrastructure, strict regulatory frameworks, and transparent information disclosure systems. In developed economies, stock exchanges are not merely trading platforms but complex financial ecosystems that integrate investors, issuers, intermediaries, and regulators into a unified system of capital allocation.

One of the most prominent features of modern stock exchanges is their scale and liquidity. As of recent global financial reports, the total market capitalization of global equity markets exceeds 110 trillion USD, with the United States alone accounting for nearly 45–50% of this value. The New York Stock Exchange (NYSE) and NASDAQ together represent more than 50 trillion USD in combined market capitalization, making the U.S. equity market the largest in the world. In comparison, European markets such as the London Stock Exchange and Euronext collectively account for approximately 15–20 trillion USD, while Asian markets, including Japan's Tokyo Stock Exchange and China's Shanghai Stock Exchange, represent a rapidly growing share exceeding 20 trillion USD.

These figures highlight the dominant role of developed financial centers in global capital formation. The high concentration of market capitalization in a few major exchanges demonstrates the asymmetry of global financial power and the central role of advanced economies in investment flows. At the same time, emerging markets are gradually increasing their participation, driven by economic liberalization, foreign direct investment inflows, and financial reforms.

The operational mechanism of stock exchanges is based on continuous trading systems where buyers and sellers interact through electronic platforms. Modern exchanges utilize order-driven market structures, where prices are determined by matching buy and sell orders in real time. High-frequency trading (HFT) and algorithmic trading now account for a significant proportion of daily trading volume. For instance, in the United States, algorithmic trading is estimated to represent over 60% of total equity trading volume, reflecting the increasing role of technology in financial markets.

Liquidity is a critical factor determining the efficiency of stock exchanges. The average daily trading volume of global equity markets exceeds 500–700 billion USD, with the NYSE and NASDAQ alone contributing hundreds of billions of dollars in daily turnover during active trading periods. High liquidity ensures minimal bid-ask spreads, reduces transaction costs, and improves price discovery efficiency. Another essential aspect of stock exchange functionality is regulation and oversight. In the United States, the Securities and Exchange Commission (SEC)

plays a central role in ensuring market transparency and protecting investors. In the United Kingdom, this function is performed by the Financial Conduct Authority (FCA). These regulatory bodies enforce disclosure requirements, monitor insider trading, and maintain fair market conditions. Strong regulatory frameworks are a key reason why developed stock markets attract global capital inflows.

Stock market indices are one of the most important analytical tools used to evaluate the overall performance of financial markets. They represent aggregated values of selected stocks and serve as benchmarks for investors and policymakers. The most widely recognized global indices include the S&P 500, Dow Jones Industrial Average (DJIA), NASDAQ Composite, FTSE 100, DAX 40, CAC 40, and Nikkei 225. The S&P 500 index, which includes 500 large-cap U.S. companies, represents approximately 80% of the total U.S. stock market capitalization. Historically, this index has delivered an average annual return of around 8–10% over the long term, making it one of the most reliable indicators of U.S. economic performance. The Dow Jones Industrial Average, although comprising only 30 companies, remains a widely followed price-weighted index reflecting industrial and blue-chip corporate performance.

The NASDAQ Composite is heavily weighted toward technology companies, with firms such as Apple, Microsoft, Amazon, and NVIDIA representing a significant portion of its total value. As of recent years, the technology sector accounts for more than 50% of NASDAQ's total market capitalization, highlighting the transformation of the global economy toward digitalization and innovation-driven growth.

In Europe, the FTSE 100 index represents the 100 largest companies listed on the London Stock Exchange. These companies account for approximately 70% of the UK's total market capitalization, although many of them operate globally rather than domestically. The DAX 40 index in Germany reflects the performance of leading industrial and manufacturing firms, including automotive and chemical industries, which are central to Germany's export-oriented economy.

In Asia, the Nikkei 225 index represents Japan's top 225 companies and serves as a key indicator of Japan's economic performance. Over the past decades, the index has reflected both periods of rapid growth and long-term stagnation, particularly after the asset bubble collapse in the early 1990s. More recently, Japan's stock market has shown renewed growth driven by corporate governance reforms and monetary policy interventions by the Bank of Japan.

Statistical analysis of global indices shows that stock markets tend to move in cycles influenced by macroeconomic variables such as GDP growth, inflation rates, interest rates, and geopolitical stability. For instance, during global financial crises, such as the 2008 financial crisis and the 2020 COVID-19 pandemic, major indices experienced sharp declines followed by strong recovery phases. In 2008, the S&P 500 lost approximately 38% of its value, while in 2020, it declined by about 34% before rebounding to record highs within a year due to monetary stimulus and fiscal support measures.

Volatility is another key characteristic of stock indices. The VIX index, often referred to as the "fear index," measures expected market volatility in the S&P 500. During periods of financial uncertainty, the VIX has historically exceeded 30–40 points, compared to its long-term average of around 15–20 points. This demonstrates the sensitivity of financial markets to external shocks and investor sentiment. Exchange-Traded Funds (ETFs) and index funds have significantly increased the importance of stock indices in modern investment strategies. As of recent estimates, global ETF assets under management exceed 10 trillion USD, with a large proportion tracking major indices such as the S&P 500 and MSCI World Index. This trend reflects a shift from active to passive investment strategies, driven by lower costs and consistent long-term performance.

In addition, foreign institutional investors play a major role in global stock exchanges. Pension funds, sovereign wealth funds, mutual funds, and hedge funds collectively manage tens of trillions of dollars in assets. For example, Norway's Government Pension Fund Global, one of the largest sovereign wealth funds, holds investments in over 9,000 companies worldwide, demonstrating the globalized nature of capital markets. Overall, the analysis of foreign stock exchanges and stock market indices reveals that modern financial markets are highly interconnected, technology-driven, and sensitive to macroeconomic conditions. The integration of electronic trading systems, globalization of capital flows, and expansion of institutional investment have fundamentally transformed the structure and dynamics of global equity markets.

CONCLUSION

The analysis of foreign stock exchanges and stock market indices demonstrates that modern financial markets have become highly complex, interconnected, and technologically advanced systems that play a decisive role in the global economy. Stock exchanges such as the NYSE, NASDAQ, London Stock Exchange, and Tokyo Stock Exchange function not only as trading platforms for securities but also as essential institutions for capital formation, resource allocation, and economic development. Their efficient operation ensures the continuous flow of investment capital between sectors and countries, contributing to global financial integration. One of the key findings of this study is that stock exchanges in developed economies are characterized by high liquidity, advanced electronic trading systems, and strong regulatory frameworks. These factors collectively enhance market transparency, reduce transaction costs, and improve price discovery mechanisms. The dominance of algorithmic and high-frequency trading further illustrates the increasing role of technology in shaping modern financial markets.

Stock market indices, as analyzed in this study, serve as critical indicators of economic performance and investor sentiment. Indices such as the S&P 500, NASDAQ Composite, FTSE 100, DAX, and Nikkei 225 provide a comprehensive reflection of market trends and macroeconomic conditions. Statistical evidence shows that these indices respond strongly to global economic cycles, monetary policy changes, and geopolitical events, making them essential tools for both investors and policymakers. The research also highlights that global equity markets are highly concentrated, with a significant share of total market capitalization being dominated by a few major financial centers, particularly in the United States. However, emerging markets are gradually increasing their influence due to financial liberalization, technological development, and growing foreign investment inflows.

Furthermore, the increasing popularity of index-based investment instruments such as ETFs and index funds indicates a structural shift in global investment behavior from active to passive strategies. This shift has enhanced the importance of stock indices as benchmarks for portfolio performance and long-term investment decision-making. In conclusion, foreign stock exchanges and stock market indices are fundamental components of the global financial system. They not only facilitate efficient capital allocation but also provide essential signals about economic stability and growth prospects. Understanding their mechanisms and behavior is crucial for analyzing global financial dynamics, managing investment risks, and developing effective economic policies in an increasingly interconnected world economy.

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