

Impacts of Macroeconomic Variables on U.S. Stock Market

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Abstract:

The stock market plays a crucial role in the modern economic and financial system. America is an ideal case study for exploring the relationship between macroeconomic variables and asset pricing. This paper analyses three major macroeconomic variables—GDP, inflation and Interest rate (monetary policy) and analyzes their influence on the performance of the U.S. stock market. This article first reviews the historical evolution of the U.S. stock market, illustrating how technology revolution, regulatory framework and macroeconomy interact with each other to shape the market evolution. Furthermore, this article interprets the impact mechanisms of each macroeconomic factor based on the DCF model. The core finding is that the relationship between macroeconomic factors and the stock market is a nuanced one. Strong GDP growth or high inflation might not necessarily benefit the stock market, as their impact ultimately depends on how they shape the market expectations regarding monetary policy. In the end, this paper provides strategic insights for investors making asset allocations, risk management and strategic positioning decisions under macroeconomic uncertainty.

Keywords: Macroeconomic; stock market; GDP; inflation; interest rate.

1. Introduction

Stock market is a place where stocks are issued and trades occur, which function through open markets to achieve a movement of funds from personal holders to corporations. In contemporary society, stock market has been well recognized as a core hub of modern economic system. It is significant for asset allocation and diversifying and managing risk, also functions as a signal to making economic decisions based on forming fair asset prices during market trades. In the

real economy, it acts as an accelerator for growth of companies and an optimizer for economic structures. Additionally, it is the mainstream of the internationalization of the currency, and a hub of cross-nation assets, in the aspect of international financial system. However, in the global financial markets, the American stock market's remarkable position made it particularly worth studying. Its performance is often reflected by three major indices: the Dow Jones Industrial Average, the S&P 500, and the NASDAQ Composite. Much of its strength could be tied to the

U.S. economy's track record in technological innovation. NASDAQ, in particular, has been a stage for several waves of progress, from early computer firms to today's artificial intelligence leaders. It now includes many of the world's most valuable companies. The U.S. market may also benefit from strong regulation, the role of New York as a financial hub, and the U.S. dollar's continued position as the leading reserve currency. These conditions draw in large amounts of international capital. Overall, considering all relevant factors, American stock market not only leads the world in terms of width and depth, but also holds the power of setting prices globally and potentially increasing the global market. Therefore, an analysis that examines the correlation between macroeconomic variables and asset pricing in the US stock markets holds a crucial significance.

According to the theory of financial economics, especially the DCF model, one intrinsic value of the asset is based on its future value. The above process of evaluation is impacted by three major channels: risk-free interest rate, risk premium, and future earnings expectations which are in the field of macroeconomics. Economic cycles and inflation create the risk preference and future profitability of the company. Thus, analyzing the rationale under its valuation is essentially exploring the impact of macroeconomic on the American stocks market. This paper mainly focuses on three macroeconomic factors: GDP, inflation, and interest rates & monetary policy. It analyzes how the US stock market responded to the changes in the three factors and the reasoning behind it. To be more specific, GDP affects the stock market through corporate profits, market valuation, and risk preference. Inflation impacts the stock market in two competing ways-discount rate and corporate cash flow. In terms of interest rates and monetary policy, the stock market is affected by the DCF model, corporate profitability, consumer behavior and currency exchange rate. This paper illustrates a non-linear trend between the macroeconomic variables and the market and provides a multifaceted concept framework to explain market dynamics. It is essential for investors to make more critical asset allocation decisions based on determining the impact of macroeconomic factors on the different industries and recognizing potential risks. This paper will enhance the reader's ability to interpret information and make changes accordingly.

2. Historical Evolution

The development of US stock market is exceptional-one that progressed from a loosely-knit regional trade to extremely complex, globalized financial system with mature regulations. This process is driven by technological innovation, regulatory response to crises, and integration with the macroeconomy.

In 1792, the Buttonwood Agreement was signed, and the New York Stock Exchange Board (predecessor of NYSE) was established, which is regarded as the prototype of modern exchanges. During that period, the Industrial Revolution was precipitated by financing of national fundamental facilities such as the construction of railroads, canals, and heavy industries. However, the market lacked monitoring and there was a huge opaqueness of information during that stage, where opportunism and manipulation thrived.

The Federal Reserve was established in 1913, which ultimately provides a safeguard for liquidity in the financial markets. Unfortunately, there was a huge market crash in 1929, and a recession followed. This collapsing market radically revealed the deficiency under the market that is without monitoring. In the response, the Franklin Roosevelt administration implemented the New Deal, passed the Securities Act of 1933 (emphasizing information disclosure) and the Securities Exchange Act of 1934, and established the U.S. Securities and Exchange Commission (SEC). The above actions constructed the modern framework of finance monitoring in the US and established the principle of „supremacy of information disclosure“. This has restored public confidence about the market and made a solid foundation for long-term growth in the future.

The thrive of the market starts in the year of 1945 and stepped into a long period of “golden age”, which the middle tier rose and fundraising institutions like pension began to become the dominant force of the market, with a significant growth in the US economy after War. NASDAQ was established as the first stock market that trades electronically in the world in 1971. It is not only considered as a technical revolution where it replaced trading floors, but also an institutional revolution, which provides a platform for those companies that are not qualified as listable according to the standard of NYSE and those tech companies that are high risk with high growth potential. This eventually nurtured the leading tech companies in the future. In 1970s, a time period that clearly reflected the close connections between macroeconomic (high inflation, high unemployment rates and low growth) and stock market (a sideways volatility that lasts for almost ten years), which illustrated that the macroeconomic policies, especially currency policy had a definitive impact on the market.

In the beginning of 1990s, a remarkable induction in opportunism and its failure because of the emergence of internet again proves the double-sided effect of technological advances and market bubbles. The US subprime mortgage crisis induced the market crash in 2008. The US government response (TARP plan) and the Federal Reserve's response (Quantitative Easing - QE) to the dramatic decline in the stock prices, demonstrates how national forces have intervened the market on an unprecedented

scale.

Beginning in 2009, the U.S. experienced its longest bull market in history, likely supported by continued monetary accommodation. Technology giants such as Facebook, Apple, Amazon, Netflix, and Google rose to dominate, reshaping the market in fundamental ways. Even the COVID-19 pandemic in 2020, which caused massive economic disruption, could not stop the market for long, as it rebounded sharply in a V-shaped recovery. These patterns suggest that while the stock market is deeply influenced by macroeconomic and policy factors, it also adapts quickly to technological and societal changes, though not without risk. This was driven by large-scale fiscal stimulus and aggressive monetary easing, again affirming how much macroeconomic policy influences stock market trends.

3. Impacts of Macroeconomic Variables

3.1 GDP

As the most comprehensive measure of national economic activity, Gross Domestic Product (GDP) is an important indicator that shapes investor expectations and actual financial performance [1]. Movements in GDP affect the U.S. stock market mainly through three channels: corporate earnings, market valuation and risk appetite, and the Federal Reserve's policy response.

To begin with, economic growth is closely associated with stronger corporate earnings, because the long-term value of equities is tied to companies' future cash flows [2]. When GDP rises, it's typically driven by increased consumer spending, private investment, and government expenditures, all of which signal rising aggregate demand [3]. As households have more disposable income and businesses expand investment, company revenues and profits tend to grow. As output rises, fixed costs are spread across a larger production base, which improves profit margins. In some cases, profits grow even faster than revenues, which pushes equity prices higher. On the other hand, slower economic activity could be signals for weaker demand. Corporation would end up facing a decrease in earnings, overcapacity, and the pressure of profit margin compression. The decline in expected profitability caused a stock market decline [4].

Besides the direct impact GDP had on company earnings, it has shaped the market valuation and risk appetite, which had a deep indirect impact. Based on the DCF model, the intrinsic value of a stock is the present value of all its future cash flows, where the present value is greatly dependent on the discount rate [2]. Strong GDP growth has influenced the discount rate in two dimensions: first,

it indicates the thriving in the macroeconomy with lower systemic risk, which further results in a lower demand for Equity Risk Premium for investors; Secondly, a healthy economic environment undermines the risk-off sentiment of the market and shifts the funds from safe-haven assets such as bonds back to the stock market for higher returns [5]. In the end, the decrease in the discount rate pushes up the face value of the stock and induces the expansion of the overall market Price-to-Earnings Ratio (P/E). This phenomenon illustrates the "Risk-On" sentiment surrounding—collective optimism among investors toward risk assets based on the confidence in economic prospects, which supplies additional momentum for valuation, ultimately driving the rise of the stock market [6].

That said, the link between GDP growth and equity performance is not given a linear and positive correlation. The Federal Reserve's role is critical. Mandated to ensure price stability and full employment, the Fed's interpretation of GDP data would inevitably shape its response. Its policy decision that reacts to either economic slowdown or overheating could either amplify or entirely negate these market mechanisms. Investors may anticipate tighter or more aggressive monetary policy when growth accelerates quickly, especially with an elevated inflation. The Fed may then raise interest rates or reduce its balance sheet to cool down the economy. Higher interest rates increase the risk-free rate, which raises discount rates in valuation models and lowers stock prices. In addition, borrowing also becomes more costly for firms, while bonds become more attractive to investors, shifting capital away from equities. In this case, strong GDP data can sometimes cause markets to fall, as investors adjust expectations for tighter monetary policy—an effect confirmed by Bernanke and Kuttner in their empirical research [7].

To conclude, GDP can influence the U.S. stock market directly on the earnings of companies. It also indirectly affects valuation dynamics and the investors' expectations towards the Federal Reserve's response to market change. Monetary policy adds complexity to the relationship, making it highly dependent on economic cycle and how investors interpret the bigger picture.

3.2 Inflation

Nowadays, inflation has become a global phenomenon. However, it has a nuanced and even contradictory effect on the US stock market. The following paragraphs will demonstrate the mechanism of its impact through two major channels of discount rate and cash flow based on the DCF Model [6].

To begin with, the channel of discount rate usually dominates the short-term consequences of inflation on the stock market. When inflation continues to rise, The Federal Reserve will initiate interest rate hike cycles to suppress inflation, which pushes risk-free rates to go up. This rise

in interest rates directly led to the increase in the discount rate that was used for future cash flow for investors, which compresses the present value of the stock. This effect is pronounced for the stocks that rely on long-term cash flow such as growth stocks and tech stocks, since this discounting puts significant pressure on their valuations [8]. Therefore, this channel has mainly negative impact on the stock market.

However, the channel through which inflation affects stock vis cash flow is more complex and controversial. Its influence is greatly dependent on the corporation's pricing power. Companies with strong brand loyalty, market dominance, or those operating in the consumer staples or energy sectors may be able to pass rising input costs—such as raw materials and wages—on to consumers, thereby maintaining or even increasing nominal earnings [9]. In some cases, these firms may even experience profit growth during inflationary periods, effectively using their market power to preserve margins. However, for firms lacking such pricing flexibility, inflation compresses profit margins and undermines earnings.

Furthermore, inflation can erode consumer purchasing power, dampen aggregate demand, and reduce corporate revenues, especially in discretionary spending sectors [10]. In a prolonged high-inflation environment, firms may delay capital expenditures due to increased uncertainty, which could adversely affect long-term growth prospects. This uncertainty may also increase firms' cost of capital, as lenders and investors demand higher returns to compensate for elevated inflation risk [11]. These dynamics illustrate that the cash flow effects of inflation are sector-specific and context-dependent.

Taken together, these two channels help explain the so-called “inflation paradox”—the theoretical notion that equities, as real assets, should hedge against inflation, versus the empirical observation of a negative short-term correlation between inflation and stock market returns. This paradox is well-documented in financial literature, where the adverse effects of rising discount rates typically outweigh the potential inflation-related increase in nominal earnings. In addition, inflation increases overall market uncertainty, often reflected in elevated volatility indices such as the VIX and a rising equity risk premium, as investors demand higher expected returns [10, 12]. These dynamics can lead to valuation multiple contraction, particularly in rate-sensitive sectors.

In extreme cases, when inflation is coupled with economic stagnation—a phenomenon known as stagflation—the equity market may suffer both declining earnings and falling valuations, resulting in broad-based negative impacts.

In conclusion, while inflation's effects on the stock market vary significantly across industries, the aggregate market response tends to be negative during periods of elevated inflation. For instance, companies in the energy sector

might benefit from the increase in prices with higher inflation, while high-tech companies might be negatively affected due to their sensitivity to interest rates. Although historical evidence has shown that equities have a partial hedge against inflation, this relationship is non-linear and contingent on several different factors [13]. Therefore, moderate inflation is a corollary with a healthy and robust economy that benefits the stock market, but high inflation brings challenges to the market through different channels.

3.3 Interest Rates and Monetary Policy

Monetary policy, especially the ones with adjustment of interest rate issued by the Federal Reserve, plays a significant role in the global financial market. It is essential for investors to understand the impact of interest rate and monetary policies on the U.S. stock market to make informed decisions during market fluctuations [14]. Rate-hiking cycle usually occurs when the overheated economy starts to cool down and the high inflation becomes constrained [15]. The market could potentially anticipate a decline in its growth rate and the dramatic decrease in the profitability of the companies. Thus, investors would sell the stocks in advance [7]. On the other hand, rate-cutting cycles are commonly recognized as a solution to economic depression or pressure of deflation. The market would then buy in because it forecasts an improvement in the profitability of the companies and a revival in the economy.

One of the most significant sectors is how interest rate and monetary policies affect the valuation of stocks. An increase in the federal funds rate raises the risk-free rate and, therefore, the discount rate used to calculate the present value of future earnings. This leads to lower intrinsic values for stocks. When rates fall, the opposite occurs: the discount rate declines, increasing the present value of future cash flows and elevating stock valuations [16]. This reflects the opportunity cost of capital: when Treasury yields rise, investors demand greater returns from riskier assets like equities, which in turn puts downward pressure on stock prices [17].

In addition to valuation models, monetary policy affects corporate profitability. Rising interest rates increase the cost of borrowing, which can significantly impact firms with high debt levels—particularly in capital-intensive sectors such as real estate and technology. Increased interest expenses reduce net income and can lead to a retraction in investment, hiring, and expansion plans [18]. Furthermore, when financing becomes more expensive, firms often postpone capital expenditure, which undermines both individual corporate growth and broader economic momentum.

Consumers are also directly affected by rising interest rates. Higher mortgage and credit card rates reduce disposable income and purchasing power. Given that con-

sumer spending accounts for nearly 70% of U.S. GDP, such contraction can substantially affect corporate revenues and earnings [19].

Monetary policy can also affect international competitiveness. When U.S. interest rates rise, foreign capital often flows into dollar-denominated assets, appreciating the U.S. dollar. While this may benefit importers, it negatively impacts multinational corporations, as foreign earnings become less valuable once converted into a stronger U.S. dollar [20].

Short-term stock market reactions often hinge not on the rate decision itself but on the gap between investor expectations and actual policy moves. The stock market could unexpectedly increase if the extent of the interest rate rise is lower than market expectations, due to „bad news ends“. Therefore, being aware of both the monetary policy and the market forecasts provides us with a more comprehensive and practical understanding of the relationship between interest rates and American stocks.

4. Investment Recommendations

In these complex and volatile economic environments, the forward-looking perspective and dynamic adjustment ability are significant for success in investing in the stock market. Therefore, I have the following recommendations for the investors. Firstly, please give priority to economic cycle when making decisions. Whenever there is an expansion in the economy, one could actively seek opportunities in the consumer and technology sector that are cyclical, and shift to more conservative industries like consumer staples and utilities that have stable cash flow when the growth slows down or when there is a signal for recession. Secondly, it is necessary to have a clear understanding of the double-sided effect of inflation on different industries-during periods of high inflation, high growth tech stocks often come under pressure whereas the enterprises that hold strong pricing power can maintain profits. Most importantly, it is necessary to understand the language behind the federal reserve policy. This actual impact of interest rate hikes is already reflected in the market anticipation. Therefore, one should not only react to the interest rates but also be sensitive to the variance between the actual interest rates and its forecasted rates. Overall, having a diversified portfolio across different sector acts as a buffer against uncertainty is a wise choice since one can diversify away macroeconomic risks by allocating assets across different industries and investments categories.

5. Conclusion

This article systematically discusses how GDP, inflation and interest rate these three major macroeconomic variables impact the complex mechanisms of the U.S. stock

market. Based on the analysis, these variables do not exert influence independently, but through an interrelated channel which includes the profitability of corporations, discount rate, investors' risk preferences and the policy anticipation. One of the most significant findings is that the relationship between macroeconomic conditions and the stock market performance is not a simple linear one. Monetary policy plays a crucial intermediary role which introduces a contradictory element into the relationship. These findings provide investors with important and practical implications by illustrating that successful investment decisions are not exclusively dependent on superficial macroeconomic data, but also its mechanism and how that affects market expectations.

There are certain limitations to this paper. First, while this paper provides a holistic analysis from a macroeconomic perspective, it didn't dive deep into the microeconomics aspects of how individual companies respond to the change in macroeconomic factors. Additionally, the financial markets are in a phase of rapid change, new structural factors, such as geopolitical issues or breakthroughs of Artificial intelligence have gradually become more significant. Therefore, the persuasiveness of its explanation may be challenged in the future.

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