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The impact of NYSE market index growth on investors' trading volume

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Abstract

Investors' behaviour tends to be affected by various factors, including the shift in the market index growth. Thus far, there is no concrete evidence that support the association between market index growth and trading volume growth. This study therefore tested the relationship between these two variables in a longitudinal study involving market data that covers a period of 20 years. The existing literatures have provided support that a significant, positive association exists between market index growth and trading volume in the NYSE market. The result, however, does not support this notion. Instead, the relationship between market index growth and trading volume was found to be significantly negative.

Keywords:
market index; trading volume; NYSE market index; investors' behaviour.

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1. Introduction

Studies in the field of investment finance are primarily focused on the patterns of behaviour of individual investors. Investment finance is concerned with the behavioural patterns that determine an individual's approach to the strategic use of capital. Economic growth and stock market performance are strongly associated; when the economy is performing well, stock prices tend to climb, and vice versa. Consider that investors profit from a positive feedback loop which encompasses increased investment growth and increased economic development (Iqbal & Riaz, 2015). Thus, the stock market has seen increased trading activities due to investors' greater confidence in the stock market's future success (He et al., 2020).

Another example is the Great Depression-era stock market crash of 2008, where investors had suffered great losses and severe damage to their confidence (Sheta et al., 2015). This situation demonstrates the influence of the economy on investors' confidence in the stock market. Investors' sentiments and behaviour tend to be more cautious during this time due to the expectation that a recession will result in a reduction in stock market performance (Batrinca et al., 2018). Investors are often encouraged to reduce their investment in the stock market due to the high level of uncertainty, which can result in high levels of exposure to potential loss. During periods of uncertainty, investors' risk tolerance decreases while their comfort level with engaging in high-volume trading to offset portfolio volatility increases (He et al., 2020).

A study on financial markets is critical, where supply and demand for secondary investments can often be a driving force behind the types of trading that increases a stock's value on the stock exchange (Chiah & Zhong, 2020). This is because equities with high trading volumes frequently receive a boost that allows them to reach their full potential. In other words, an increase in stock

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market transactions will strengthen the synergy between economic growth and stock market success (Choi, 2019). This study is therefore motivated by the need for further in-depth research on the relationship between trading volume and the movement of stock prices within a stock market. Moreover, evidence that support the association between trading volume and stock prices are still very scant. This study was thus conducted to examine the relationship between trading volume and the growth of market stock prices in the New York Stock Exchange (NYSE) market.

2. Literature review

The rational expectations theory demonstrates that a change in the environment triggers a forecast of future changes in macroeconomics and investment growth potential (Widyarti et al., 2021). Risk-averse investors tend to be conservative in their investment decision-making whereby they are expected to avoid risky investments during risky times, which can be examined in close relation to the rational expectations theory. The current study hypothesises that if the market has recently performed poorly, investors tend to become more risk-averse and reduce their stock market trading activity. This argument is consistent with prior research on investors' reactions to market changes (Batrinca et al., 2018). This means that investors' decision towards investment in the stock market would be influenced by the market index's ups and downs as well as the performance of individual stocks. When the stock market performs better overall, investors will have more confidence that stock prices will continue to climb, which should lead to more trading and investment activity on their side (He et al., 2020).

Market indices have been used by economists and financial specialists as a reference in understanding the trend and performance of the stock market over a particular period (Choi, 2019). As noted by Tapa and Hussin (2016), business value and performance often follow a country's economic state, thus boom and bust in the economy will become the explanation for the rise and fall in the stock market. For example, the recent COVID-19 situation had observed a significant fall in the economy, recording one of the worst recessions in history, with a significant negative impact on the stock market in many countries where the stock market observed a sharp fall in market indices, indicating a significant pitfall for stock performance in the stock market (Chiah & Zhong, 2020). As a result, investors tend to withdraw from a variety of stock market investments in order to minimise their risk of losing their initial capital.

According to Souza et al. (2018), the number of trades can predict investors' stock market trading behaviour, with investors more inclined to participate in the market if its current expansion gives a strong positive signal to them. Investors increasingly look to market indices for direction and reference when making investment decisions; a rising market index offers the appearance that the stock market is developing, attracting more investors to the secondary market. Rising stock market activity, according to Al-Ajmi (2017), indicates that investors are confident about the potential for future growth and profits on their stock holdings. Investors are at the mercy of the indexes of the stock market, which rise and fall as a signal to purchase or sell in the current market (Iqbal & Riaz, 2015).

There is evidence provided from previous findings that suggest the possibility of a strong association between the market index and the volume of trading in the stock market. The following hypothesis was developed to highlight the anticipated findings for the current study.

H: There is a positive relationship between the market index performance and investors’ trading behaviour.

3. Research methodology

The methodology of this investigation is quantitative in nature, centred on the input of numerical data functioning as the unit of study. Quantitative studies are common in the fields of economics and finance, where such analyses are more suited to scrutinising the data for patterns and trends that may suggest the presence of a significant influence (Apuke, 2017). When it comes to drawing conclusions, the quantitative technique is defined as offering more objective findings that will serve as true evidence for the study, leaving no room for doubt or circumstances in which the research could be rejected by other perspectives (Sharela, 2016). The current study employed deductive reasoning, with the results serving as a baseline for testing hypotheses and forming the study's findings (Cooper & Schindler, 2014). This study also employed a longitudinal technique, with monthly data spanning from the year 2001 to 2022, with the aim to shed light on the market trends during both poor and good economic times.

The historical data for the New York Stock Exchange (NYSE) market index were taken through the secondary data market, where the data were collected from publicly available sources in web platforms such as Yahoo Finance. The 2008 financial crisis, as well as the recent COVID-19 issue, were accounted for in the data analysis. NYSE stock market was chosen due to the significant and high activity in the stock market within the global market indices.

The SPSS software was utilised as the primary tool for conducting the research analysis. The reliability test had served as a standard to ensure the consistency and validity of the market data supplied prior to analysing the correlation and regression analyses that were employed to examine the study's assumptions (Sekaran & Bougie, 2016). This study then summarises the findings in further detail, taking into account the expected result based on the existing literatures.

4. Data analysis and results

Table 1 shows the correlation analysis between market index growth and trading volume growth of NYSE. The results indicate a significant but weak correlation between the two variables (Pearson Correlation Coefficient = -0.331).

Table 1: Correlation analysis

	NYSE Market Index Growth	Trading Volume Growth
NYSE Market Index Growth	1	-0.331
Trading Volume Growth	-0.331	1

Table 2 displays the regression results where market index growth has been used as the independent variable in determining the trading volume growth. The result indicates that there is sufficient evidence from the historical data that pointed out the presence of the significant relationship between the NYSE market index growth against the trading volume growth within the stock market of NYSE (*p*-value = 0.000). The correlation between the variables, however, is unexpectedly negative. Thus, the formulated hypothesis could not be accepted.

Table 2: Regression analysis results

	Coefficients	Standard error	*t*-statistics	*P*-value
Intercept	0.023	0.010	2.258	0.025
NYSE Market Index Growth	-1.240	0.227	-5.460	0.000

* Dependent variable: Trading Volume Growth

5. Discussion and conclusion

The objective of this study is to examine the relationship between stock performance and trading volume. The initial findings from the literature review have provided strong indication on the positive influence of market index growth in the trading volume. However, the result of the regression analysis has shown a contrasting finding. Investors' trading volume tend to fall when the NYSE market index is performing well, which could be due to multiple external factors. This indicates a shift in the understanding on the previous concept related to the impacts of market index and investors' trading behaviour, in terms of their trading volume. This study has suggested that the market growth index may not be the main reference among investors in determining market performance. The negative correlation had triggered the need for the academic community to revisit the rational expectations theory in explaining investors' behaviours.

This study is limited by its sole focus on the NYSE stock market, and thus, does not validate similar findings in other countries. Similar studies in Europe or Asia shall provide a fair comparison towards the understanding of the relationship between the market index growth and trading volume growth. Moreover, the exclusive focus on market index growth has ignored other economic factors that can potentially affect investors' behaviours. Extending this study further to include inflation rates and gross domestic product index could possibly explain investors behaviour more accurately.

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