

Bibliometric Analysis of Determinants of Stock Price Returns in Indonesia

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Abstract

Investment is activity aimed at making a profit. One manifestation of strategic investment management is through selecting the right investment instruments. Currently the instrument with the highest interest in Indonesia is stock. One indicator to measure investment success is stock price returns. Therefore, a study is needed to examine the determinants of stock price returns in Indonesia, so this research is to explain the literature statistics on the determinants of stock stock returns, explain the determinants of stock price returns through bibliometric clustering and density analysis in Indonesia. The data needed is in the form of scientific literature originating from Google Scholar. The results of the research show that (1) the total number of papers that examine the determinants of stock returns in Indonesia is 59 and there has been an increase in studies in the period 2021 to 2023. (2) there are five main topic clusters that are discussed in research, (3) The density model show that there are 19 keywords that appear most frequently, as for these determinants such as deposit interest, exchange rate, profit per share, company financial condition, structure capital, profitability, solvency, price earning ratio, and price to book value.

Keywords: Determinant; Indonesia; Return of Stock; Bibliometric Analysis.

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Introduction

Investment is an activity carried out by individuals or institutions to gain profits. To optimize and spur profits, investment activities must be guided by strategic investment management, formulated through several categories. These categories include (1) allocation of human resources, (2) market timeliness (in terms of buying and selling assets owned), and (3) allocation of securities and assets owned (determining the distribution of assets and security guarantees from an investment activity) (Nuzula & Nurlaily, 2020). In general, the medium that facilitates investment activities is known as the capital market. The capital market brings together the parties involved in the investment process, including investors, investor managers, issuers, supervisors, organizers, brokers, trustees, and capital market support institutions. These parties are involved in the trading process in the capital market.

The components traded in the capital market are referred to as investment instruments. Investment instruments include stocks, sukuk or bonds, and other securities (Kapoh, 2019). Shares are a sign of capital ownership by an entity in a company. Sukuk or bonds are identical to lending instruments in the form of securities ownership, but there are differences in the legal basis between the two devices. Sukuk tools are based on sharia principles (Fauziah & Tulmafiroh, 2020), while bonds are based on conventional rules (Hanapi, 2019).

The demand for investment instruments in the capital market is relatively diverse. Based on the data in Dihni's report (2022), the investment instrument with the highest demand in the capital market is shares (as much as 14.5%), while the position of other devices is below the rank of shares. The high interest is based on socio-cultural dynamics and the development of Science-Technology (IPTEK). The disruption of science and technology in all walks of life, especially for the capital market, has triggered socio-cultural changes in society. Not only does it directly impact the ease and efficiency of technology utilization for the capital market, but science and technology also bring new transformations to the socio-cultural conditions of society. The presence of technology encourages the emergence of social media platforms as an intermediary for disseminating certain information, one of which is the stock investment campaign. Research by Firdhausa & Apriani (2021) and Firdhausa & Apriani (2021) shows a significant acceleration in the number of millennial investors, along with technological developments and stock investment publications on social media. This fact is also reinforced by KSEI's public statistical data (2020), which proves there was an increase in the number of investors from 2019 to 2020 by 3,880,753 entities. This increase is a sign that the development of stock instruments is considered good, even amid the COVID-19 pandemic. However, the increase in investors or share ownership in the capital market also has implications for the competition for profits from share ownership. Therefore, the stock price return parameter is considered appropriate to measure and evaluate the development of the shares owned.

Stock returns describe the benefits shareholders or investors obtain in their investment activities. The amount of return can be used as an indicator for investors to measure how much profit they get from investment activities. Returns are categorized into realized and expected returns (Almira & Wiagustini, 2020). Realized return refers to the actual profit earned by investors or investors in a certain period, while expected return refers to speculative profits based on historical returns and capital market conditions. Existence stock returns are composed of two main components: yield, which represents the cash value obtained in a certain period, and capital gain, which is the profit obtained from stock investment activities. Capital gain relates to the return investors receive; the higher the capital gain value, the greater the stock return obtained (Kususma & Topowijono, 2020). To measure stocks, namely the relative strength index indicator (Alhilfi, 2019), moving average convergence divergence (Hung, 2016), Bollinger bands (Day et al., 2023), and stochastic oscillator.

Based on the stock investment competition in the capital market that occurs in Indonesia, studies need to examine the determinants of stock price returns in Indonesia. However, so far, no study has examined these determinants from various perspectives. Therefore, the objectives of this study are to (1) explain the literature statistics of the determinants of stock price returns in Indonesia, (2) explain the determinants of stock price returns in Indonesia through bibliometric clustering analysis, and (3) explain the determinants

of stock price returns in Indonesia through bibliometric density analysis. Remember that the determinants of stock returns consist of macro and micro. Both types of determinants can be well identified through bibliometric analysis and provide diverse information. Thus, the results of this study can be an additional reference for readers to determine strategic stock management based on existing determinants. Knowledge of these determinants can also be used to optimize the most significant factors on stock price returns, making investment activities more efficient.

Research Design and Method

Bibliometric analysis is the basis for studying stock price returns in Indonesia. The manifestation of the results of bibliometric analysis can examine literature based on two categories, namely performance and science mapping based on existing data (Alam et al., 2021). There are three benefits of bibliometric analysis. The first benefit is to make it easier to review hundreds of studies, the second benefit is to help researchers provide more comprehensive and in-depth analysis results, and the third benefit is to make it easier for researchers to analyze the results and gain knowledge from the visualization of the analysis (Sawhney, 2022). The data required in this study include scientific articles or journals, theses, dissertations, scientific proceedings, and books. The main research topic raised in this study is the determinants of stock price returns that occur in Indonesia.

There is a set procedure in this bibliometric analysis. The process begins with literature exploration, which consists of (1) selection of critical topics, (2) determination of online databases, (3) inputting terminology for search (including titles, keywords, and abstracts), (4) screening the literature, (5) determining the language of the literature, (6) extracting. The extraction process was performed on publish or perish software. The data exploration step is based on the research of Alam et al. (2021). The description of each procedure is presented in Figure 1.

Topic keyword selection Determinants of Influence Stock price return	Online database data Google scholar	Terminology for search "Determinants of stock price returns" "Stock price return factors"
Literature screening Document type: scientific article, scientific proceedings, thesis, thesis, dissertation, book Subject categories: economics, financial business, financial research, accounting	Literary language Indonesian English	Extraction With formats. RIS

Figure 1. Elaboration of literature exploration

After the literature was collected and selected, the bibliometric analysis was continued. The bibliometric analysis was based on the cluster and density methods. The bibliometric analysis was carried out using VOSViewer software. The instruments used in the study are listed in table 1.

Table 1. Research tools

No	Tools	Usability
1	Publish or Perish and google scholar	Exploration of scientific literature appropriate to the research topic and filtering data
2	VosViewer	Visualization of scientific literature findings using clustering and density bibliometric analysis.
3	Ms. Excel	To tabulate and select data
4	Ms. Word	Description of research findings and writing research findings in scientific articles

Results and Discussion

Result

The statistical findings of the literature on determinants of stock price returns in Indonesia can be used to see how often this topic is studied in Indonesia. Some of these statistical indicators consist of the number of papers, citations, number of years, citations per year, and citations per paper. Based on literature statistics from the publish or perish analysis, the number of documents discussing stock price returns in Indonesia is 59 papers. These papers include scientific articles and theses. The range of years of publication of papers in scientific journals and theses starts from 2005 to 2023, with a total of 15 years. The enthusiasm of readers on the topic of determinants of stock price returns in Indonesia is relatively high because the total number of authors who make the citations is 437. Furthermore, citations per year amounted to 24.28 papers per year, while citations per paper amounted to 7.41. When enthusiasts studying the determinants of stock price returns in Indonesia want to write about the topic, this statistical information can be used to determine subtopics so that the author can determine renewable issues. In Figure 2, the enthusiasm for determinants of stock price returns in Indonesia has an increasing trend from 2005 to 2023. From 2005 to 2023, the amount of literature that examines the topic of determinants of stock price returns is in the range of 1 to 4 papers. However, since 2021, this topic has increased to 7 to 16 documents per year. This increasing trend can be based on the stock investment campaign aimed at the people of Indonesia, so stock investors in Indonesia have increased. Therefore, many researchers want to conduct studies on this phenomenon.

Table 2. Matrix Indicators

Matrix Indicators	Quantity
Jumlah paper	59
Citation	437
Year	15
Citations per year	24,28
Citations per paper	7,41

Source: The results of the author's data processing (2023)



Figure 2. Graph of the number of papers on the topic of determinants of stock returns in Indonesia from 2005 to 2023

Source: The results of the author's data processing (2023)

Determinants of Stock Price Return in Indonesia through Bibliometric Clustering Analysis

The results of bibliometric analysis using the clustering method show that five topic clusters have the most robust attachment. The main keyword that appears most often in studying determinants of stock price returns in Indonesia is "stock returns." After "stock return," the next most frequent sub-keywords include "return," "determinants of stock return," "listed," and "stock." The keyword "stock return" has the most robust attachment to "determinants of stock return," "stock return," "return," "shares," and "listed." The keywords "return" has the most robust relevance with "asset" and "stock return." The keyword "determinants of stock return" has the most robust relevance with "stock return," "listed," and "stock return." The keyword "listed" has vital relevance with "determinants of stock return" and "stock return." Finally, the keywords "stock" have essential relevance with "Indonesia stock exchange" and "stock return." This relevance is indicated by the length of the line connecting the keywords, the shorter the line, the stronger the relevance. Similarly, the symbology shows the frequency of occurrence of keywords; the more significant the circle and font of the keyword, the more often the keyword appears. The results of this determinant bibliometric analysis are in Figure 3.

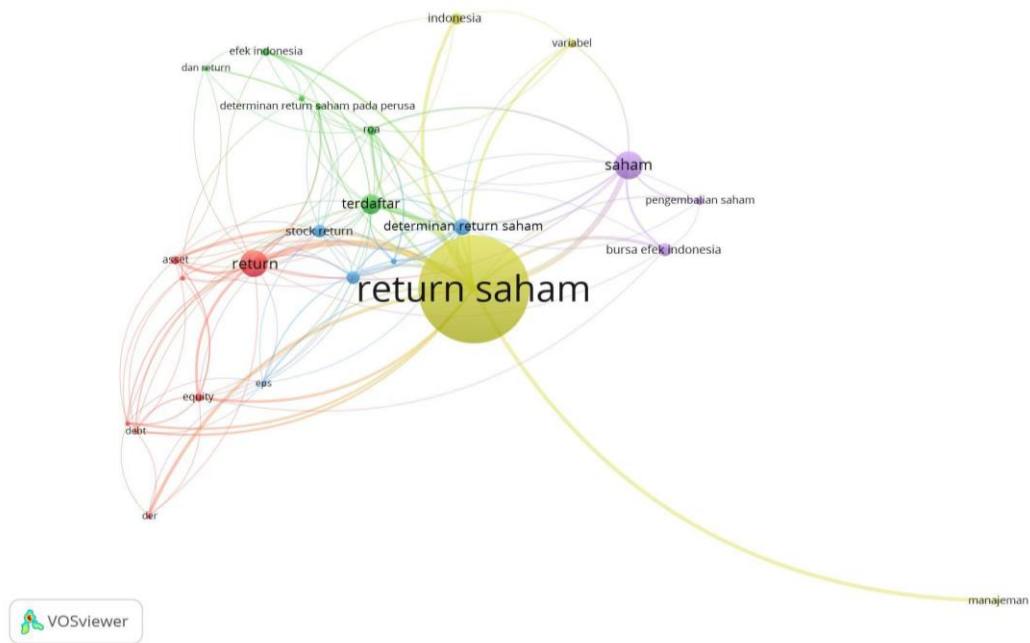


Figure 3. Bibliometric clustering analysis of literature determinants of stock returns in Indonesia

Source: The results of the author's data processing (2023)

Figure 3 also explicitly shows the clusters of keywords most strongly connected and bound to one topic. The clustering is distinguished by five colors: yellow, red, blue, green, and purple. The yellow color has four keywords, the red color has seven keywords, the blue color has five keywords, the green color has six keywords, and the purple color has three keywords. The detailed clustering is listed in table 3.

Table 3. Clustering of keywords determining stock price returns in Indonesia

Cluster	Color and quantity	Keyword
1	Red (7)	“asset”, “bursa efek indonesia”, “debt”, “der”, “equity”, “equity ratio”, “return”
2	Green (6)	“dan return”, “determinan return saham”, “efek indonesia”, “indonesia stock exchange”, “roa”, “terdaftar”
3	Blue (5)	“determinan return saham”, “eps”, “per”, “periode”, “stock return”
4	Yellow (4)	“Indonesia”, “manajemen”, “return saham”, “variabel”
5	Purple (3)	“bursa efek indonesia”, “pengembalian saham”, “saham”

Source: The results of the author's data processing (2023)

Determinants of Stock Price Return in Indonesia Through Bibliometric Density Analysis

The topics included in the density analysis results (Figure 4) show the most frequently occurring issues in the review literature of this study. The font size, font ambiguity, and yellow color brightness indicate the occurrence frequency. The larger the font size, the more frequently the topic appears in Indonesia's study of stock returns. The clarity of the font also reinforces the visualization of the frequency of occurrence of the study topic and is in front of a bright yellow circle. The keywords consist of (1) stock return, (2) determinants of stock return, (3) listed", (4) Indonesia stock exchange, (5) stock return, (6) stock, (7) variable, (8) Indonesia, (9) roa, (10) determinants of return on the company, (11) and return, (12) Indonesia securities, (13) stock return, (14) return, (15) asset, (16) eps, (17) equity, (18) debt, (19) per.

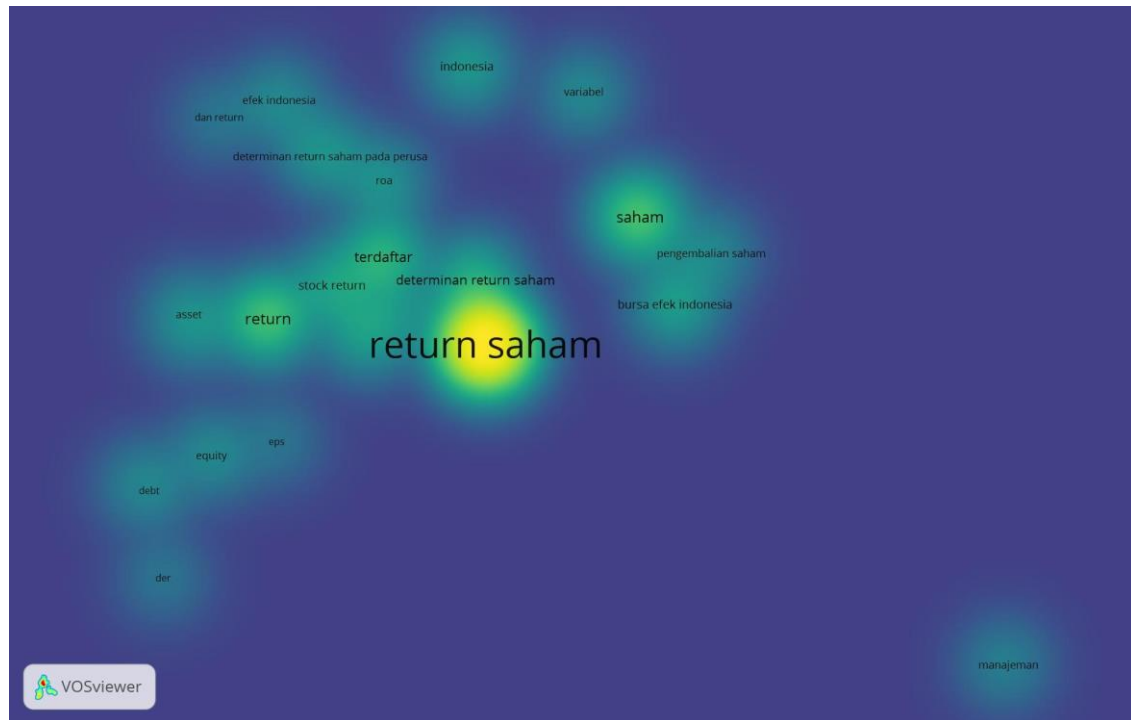


Figure 4. Bibliometric analysis of literature density of stock return determinants in Indonesia

Source: The results of the author's data processing (2023)

Discussion

The determinants of stock price returns in Indonesia consist of two factors, namely macro factors and micro factors. The existence and condition of both factors contribute to the value of stock returns received by capital owners and investors. Both elements are included in the literature findings from the bibliometric analysis. Macro determinants are more directed towards factors outside the company, such as economic and non-economic conditions. Economic factors relate to interest rates, inflationary phenomena, liquidity risks, foreign exchange rates, and market risks. The first macro determinant is the dynamics of interest rates in a country. Fundamentally, in the financial world, there are two ways to invest: risky and non-risky. Investing in stocks in the capital market has a high risk due to the factors that underlie the course of stocks in a company's economy. This is different from deposits, so when deposit interest rates in a country are high, it will reduce public enthusiasm for investing in stock instruments. Thus, stock returns will be low. The same thing happens to the second macro determinant, the exchange rate. The negative effect of the exchange rate on stock returns is shown when the foreign exchange rate increases, the rupiah will weaken. This has implications for a decrease in investors' intention to invest in stocks because there is a change in investor preferences from stocks to foreign exchange. This transformation contributes to the decline in stock demand so that a decrease will follow in stock returns. These two determinant findings are examined empirically in research (Nurhapsari, 2023).

Furthermore, the micro determinants of stock price returns in the company lead to the company's internal circumstances. Based on literature findings, the first macro determinant affecting stock returns is earnings per share, or Earnings Per Share (EPS). EPS is a significant

determinant of stock price returns because, based on regression analysis in the research of Annisa et al. (2023), EPS has a significance value of 0.0303 on stock returns obtained by company investors, especially in the gas and oil sector. This significance indicates that when the EPS value is high and experiencing growth, it will go hand in hand with an increase in the stock price return received by investors. The second micro determinant is capital structure. The involvement of capital structure in contributing to the stock return of a company is represented by the efficiency of managing the company's funds and capital, which is indicated by controlled debt management control, which can increase the positive reaction of investors so that this has an impact on improving the stock return of companies listed on the Indonesia Stock Exchange (IDX) (Fathihani, 2023). Fathihani's research (2023) also shows the third micro determinant: the financial distress of companies listed on the IDX. Financial distress indicates that the higher the financial crisis that occurs in a company, the lower the stock return obtained by investors.

Karyatun's research (2023) shows the fourth and fifth micro determinants, which explicitly explain that the company's profitability and solvency positively impact the stock returns earned by investors. The higher profitability will be directly proportional to the stock return obtained. This linear relationship is caused by high company profits, which will also have a high proportion of stock returns. In line with the company's solvency factor, when the company has a qualified ability to pay off its obligations, this is a sign that it has healthy financial management and that not all of its dependents have been handled. Thus, the company's stock return allocation can be given to investors maximally. The sixth and seventh micro determinants are the price-earnings ratio and price-to-book value (Hulu, 2023). The price-earning balance has an impact on the stock return earned by investors. The resulting stock return is low when the price-earning ratio is in the high category. The price to book value has a relevance that is directly proportional to stock returns. When the price-to-book value is high, the resulting stock return is also high, especially in public companies in the transportation sector.

Conclusions

Based on the research findings, several conclusions can be drawn, which include (1) that the total number of papers examining the determinants of stock returns in Indonesia is 59 and has increased from 2021 to 2023. (2) five main topic clusters are often discussed in research on determinants of stock price returns in Indonesia. The keyword "stock returns" is the most frequently discussed of the five clusters. (3) the results of the density model bibliometric analysis show that 19 keywords appear most frequently in the study of determinants of stock price returns in Indonesia, as for these determinants such as deposit interest, exchange rates, stock profits per share, company financial conditions, capital structure, profitability, solvency, price earning ratio, and price to book value.

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