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Efficient Market Hypothesis In Indonesia During Election Period 2018-2019

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Abstract:
The capital market in Indonesia has witnessed substantial growth since 1988, evolving from 24 listed companies to 619 by 2019. The Composite Stock Price Index (IHSG) also exhibited impressive expansion. As the capital market plays a pivotal role in long-term funding and societal ownership of company shares, it is considered a crucial tool for national development, aiming to achieve income parity and equitable development outcomes. In this context, the Efficient Market Hypothesis (EMH) becomes relevant, emphasizing the importance of timely information availability and price responsiveness to new information for market efficiency. The first hypothesis, examining market efficiency, utilizes probability values derived from a randomness test (Random Walk Method). The second hypothesis, evaluating the difference in efficiency conditions before and during election years, employs Wilcoxon's signed rank test. The statistical analysis concludes that both hypotheses are accepted. It is important to note that the research has limitations, primarily using a single index with daily secondary data obtained from adjusted close prices.

Key Word: *Efficient Market Hypothesis, IHSG, Random Walk Method, Wilcoxon signed rank test.*

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I. Introduction

The capital market in Indonesia has grown significantly since the end of 1988. In 1988, there were only 24 listed companies; by 2019, there were 619 listed in Financial Services Authority (OJK). This represents an impressive growth in the number of listed companies on the Indonesian capital market. In the same way, the Composite Stock Price Index (IHSG), which had a trading value of 12,000 (in billion) Rupiah in 2013 at the end of 2018, had grown to an average trading value of 16,000 (in billion) Rupiah by the end of 2018.

The growth of the capital market, particularly in Indonesia, has particular objectives and focus as, in addition to providing long-term funding, it encompasses three essential elements. The first of the three is to further stimulate public enthusiasm in mobilizing and raising money for effective use. The second is quickening the pace at which the community can become owners of company shares; the third is income parity achieved by distributing company share ownership equally. Furthermore, the capital market is thought to be a useful tool for accelerating a nation's development. As a result, the capital market is crucial to attempts to promote equitable income distribution and development outcomes.

To demonstrate how to apply markets, a concept related to capital market efficiency theory has been introduced. In the meanwhile, the idea under consideration is the efficiency market hypothesis, or EMH for short. A market is considered efficient if its stock prices promptly incorporate all new and pertinent information that becomes available. With this knowledge in hand, it is evident that an effective capital market is characterized by two primary factors: (1) the timely availability of pertinent information, and (2) the ability of prices to react to new information.

Like any other capital market, Indonesia's is delicately linked to a number of events that influence the country's economic environment. Of all the variables affecting this market, political developments are particularly significant ones. The political environment in Indonesia, thriving and diverse islands, has the potential to have a major impact on its capital market and cause ripple effects throughout the financial ecosystem, such as government policy changes, and new president election.

Elections and other political developments in Indonesia have a significant impact on market dynamics and investor mood. Particularly during elections, there is a great deal of expectation and scrutiny. Election results have the power to alter regulatory frameworks, economic policies, and the atmosphere for business. Politicians' platforms, election outcomes, and campaigns are all closely watched by investors because they may hint at future changes.

Based on the description provided in the introduction, the hypotheses formulated from the problem statement are as follows:

1. The Indonesian capital market (Bursa Efek Indonesia/BEI) is efficient before and during the election period.

2. There is a difference in the level of capital market efficiency in Indonesia (BEI) between the period before the election and the election year itself.

II. Literature Review

Capital Market in Indonesia

The capital market functions as a medium through which fund owners, also referred to as investors or financiers, and fund borrowers, also known as issuers, can interact. In an effort to optimize their returns, investors look for capital market instruments to diversify their investment portfolios. The capital market is essential to businesses because it makes it easier for them to obtain funding and promotes the growth of numerous industries' economies. All things taken into account, the capital market functions as a network that makes it easier to trade long-term financial instruments and to add financial assets (like debt). It also enables investors to use the secondary market to change and adjust their investment portfolios at the same time. The capital market's main purpose is to improve and facilitate the flow of long-term capital while upholding efficient market standards.

According to the Indonesian Stock Exchange (*Bursa Efek Indonesia*, BEI), the capital market plays two essential roles in Indonesia's economy. First, it serves as a means for businesses to raise capital. Through the capital market, companies can obtain funding from investors to support expansion, innovation, and long-term growth. This access to capital helps strengthen businesses and contributes to overall economic development. Second, the capital market provides a platform for individuals and institutions to invest their funds. Investors can participate by purchasing financial instruments such as shares, bonds, and mutual funds. In doing so, they have the opportunity to grow their wealth while also supporting the financing needs of companies and the broader economy.

The financial and economic sectors are served by the capital market. Due to its ability to facilitate the convergence of two interests, those with excess money, or investors, and those in need of money, or issuers, it is regarded as having economic functions. The capital market allows people who have additional funds to invest instead of depending on money from business operations. Furthermore, the capital market is associated with financial functions since it provides fund owners with the chance to earn returns.

The capital market makes it easier to allocate additional funds for investments, which lessens reliance on money made internally by business operations. This acts as a means for investors to profit from investment opportunities provided by the capital market and allocate their excess capital in an efficient manner. To put it in simple terms, the capital market's financial role is to give fund owners opportunities to earn returns, while its economic function is to link entities with different financial needs.

According to Darmadji et al. (2011), the capital market plays an important role in a country's economic development through several key functions. It provides affordable, accessible, and timely financing for businesses and national development, reducing reliance on traditional bank funding. The capital market also pools funds from the public and channels them into productive economic activities, while strengthening financial market mechanisms and supporting monetary policy through open market operations. In addition, it encourages entrepreneurship and job creation by creating opportunities for business growth. Thus, the capital market helps mitigate high interest rates, improves the efficiency of resource allocation, and offers diverse investment alternatives for investors, making it a vital component of a well-functioning economy.

Stocks and the Composite Stock Price Index

Businesses can raise money through the issuance of stocks for a variety of purposes, such as expansion, R&D, debt reduction, and operational requirements. By purchasing stocks, investors gain ownership rights such as the ability to vote on important business decisions and the possibility of receiving dividends if the company chooses to distribute profits to its shareholders. Stocks are traded on stock exchanges, where transactions between buyers and sellers establish the value of each stock. This figure is subject to changes based on a number of variables, including the financial performance of the company, the state of the market, economic indicators, and investor sentiment in general. Investors frequently participate in the stock market with the expectation that the company will grow, increasing the stock's value over time. Investors are able to sell their stocks at a profit because of this expectation.

In Indonesia, stock performance is indicated by the performance seen in IHSG (*Index Harga Saham Gabungan*) which in English, is Composite Stock Price Index. IHSG indicates as the indicator of Indonesia's stock performance. This index serves as a trend indicator for the market, which means that its fluctuations show how the market is doing at any given moment, that is, whether it is active or not. All share prices that are listed on the Indonesia Stock Exchange are used in the Composite Stock Price Index calculation. Because the IHSG reflects and accounts for shares from all sectors or companies in Indonesia, namely the more than 619 companies listed on the BEI (Indonesia Stock Exchange), this makes the Composite Stock Price Index the primary indicator for Indonesia.

According to Jones (2013), the compensation or reward that investors receive from their investment activities is known as stock return. In stock investing, returns generally come from two main sources. The first is dividends, which are earnings distributed by a company to its shareholders from its profits. The second is capital gains, which arise from the difference between the stock's purchase price and its selling price. Reilly et al. (2012) further explain that return is calculated based on the difference between an asset's buying and selling prices, combined with any additional cash flows, and expressed as a percentage of the purchase price. While investing offers the potential for profit, it also involves the risk of loss. When the selling price of a stock is lower than its purchase price, the investor experiences a capital loss.

Stock returns are therefore closely tied to changes in share prices. When stock prices rise, returns tend to increase as investors can sell their shares at a profit. Conversely, when stock prices decline, returns decrease because the value of the shares held becomes lower.

Efficient Market Hypothesis

According to Jones (2013), capital market efficiency occurs when stock prices fully reflect all available information and respond quickly to the arrival of new information. The closer stock prices align with existing market data, the more efficient the market is considered to be. As new information emerges, prices naturally adjust, sometimes accurately and at other times excessively or insufficiently. These adjustments result from investors making buy and sell decisions based on available information in an effort to maximize returns. In assessing market efficiency, two key perspectives are considered: the completeness of information available in the market and investors' ability to process and act on that information. When these conditions are met, a market can be regarded as efficient.

Several conditions are required for an efficient capital market. These include open market entry with no barriers to participation, perfect competition in which no individual or institution can influence prices, and equal access to tradable assets. Efficiency is further supported by the absence of transaction costs, uniform tax treatment, and unrestricted access to information at no cost. In addition, market efficiency assumes neutrality from government or external intervention so that trading activities are not distorted.

Reilly et al. (2003) reinforce this view by emphasizing that investors in an efficient market act as price takers and cannot influence security prices. Market efficiency is strengthened when information is widely available, inexpensive, and distributed simultaneously to all participants. Furthermore, information from issuers should reach investors without prior advantage to any party, and investors are expected to react promptly and collectively, allowing prices to reflect current conditions quickly.

Degutis et al. (2014) identify three models used to test capital market efficiency: the fair game model, the submartingale model, and the random walk model. This study focuses on testing the weak form of market efficiency. Under the random walk theory, stock price changes occur independently and follow a probability distribution. To examine this, the research applies the run-test method for Hypothesis 1, which assesses the efficiency of Indonesia's stock market performance, and the Signed Rank Test method for Hypothesis 2.

III. Methodology

Data Collection

Data gathered from https://finance.yahoo.com with closing price of IHSG (Composite Stock Price Index) in 2018 and 2019. The 2019 is the election period. The period is from 2nd January to 29th June for both 2018 and 2019.

Research Steps

To test Hypothesis 1, several sequential steps are undertaken to examine stock price efficiency using the run-test approach. First, stock prices in the current month are compared with those of the preceding month. The direction of each price change is then identified and classified using notations: a positive sign (+) for an increase, a negative sign (−) for a decrease, and zero (0) for no change. The frequency of each notation is calculated for every observation period.

$$m = \frac{\left[N(N+1) - \sum_{i=1}^{3} n_i^2\right]}{N}$$

$$\sigma_m = \left[\frac{\sum_{i-1}^{3} n_i^2 \left\{\sum_{i-1}^{3} n_i^2 + N(N+1) - 2N\sum_{i-1}^{3} n_i^3 - N^3\right\}}{N^2(N-1)}\right]$$

Next, the expected number of runs is calculated using Fama's (1970) formula, where m represents the expected run, n_i denotes the number of price changes for each sign, and N is the total number of price changes.

This is followed by calculating the actual number of runs (R), which represents the observed sequence of directional changes. The standard deviation is then computed using Fama's (1970) formula to measure the variability of the observed data. Based on this, the Z-value is calculated, as stock price changes are assumed to follow a normal distribution in accordance with the random walk theory. The calculated Z-value is used to determine the corresponding probability value by referring to the Z-table.

Subsequently, the significance level (α) is determined, and the results are evaluated by comparing the probability value with α. A randomness test is conducted for each selected company's stock prices. If the two-sided P-value is greater than α, it indicates a high probability that the sample supports the hypothesis, suggesting that stock price movements are random.

To test Hypothesis 2, which states that the efficiency condition of the Indonesian capital market (BEI) before the election differs from that during the election year, the Wilcoxon Signed Rank Test is applied. The procedure begins by ranking the absolute differences between paired observations from smallest to largest, regardless of their signs. In cases of identical differences, average ranks are assigned. Positive or negative signs are then applied to each rank based on the original direction of the differences, while zero differences are excluded from the analysis.

The positive and negative ranks are summed separately, and the resulting test statistic, denoted as T, is compared with the critical value Tα from the Wilcoxon signed-rank table. The hypothesis is accepted if T is greater than or equal to Tα, and rejected if T is less than Tα.

IV. Result

To test the hypothesis 1, run-test model is used with the results as given: If the probability value (P-Value) is greater than 5% (0.05), it indicates that the probability of the sample coming from the hypothesis 1 (H1) can be categorized as random. In simpler terms, if the P-Value is larger than 0.05, it means that H1 is accepted. On the contrary, if the P-Value is less than alpha 0.05, it suggests that the probability of the sample adhering to H1 is not random. In other words, a low statistical value for H1 implies that H1 should be rejected.

Table 1: 2018 Market Efficiency

Description	Value
Number of Data	115
Positive	60
Negative	55
Runs	54
E(R)	58.391
Standard Deviation	5.328
Z	-0.824
Probability	0.410

The research findings reveal that during the period from January 2 to June 29, 2018, which is before the simultaneous 2019 election period, the Indonesian capital market demonstrated market efficiency, as seen in the table below. The Probability value gained from Z-value are higher than alpha 5%, which is 0.410.

Table 2: 2019 Market Efficiency

Description	Value
Number of Data	115
Positive	60
Negative	55
Runs	55
E(R)	58.391
Standard Deviation	5.328
Z	-0.636
Probability	0.524

The research findings indicate that during the period from January 2 to June 29, 2019, which corresponds to the time of the 2019 simultaneous elections in Indonesia, the Indonesian capital market also displayed market efficiency.

Both in the 2018 and 2019 periods, stock prices in the capital market followed a random pattern. Therefore, based on the run-test (random walk method), the capital market can be considered efficient, both during the 2019 election period and before the 2019 election year to date, as it exhibited a random pattern, with the probability value for both 2018 and 2019 are higher than the alpha (0.05).

On the other hand, to test H2, which explores whether there is a difference in market efficiency between the period from January 2 to June 29, 2019 and the period from January 2 to June 29, 2018, the Wilcoxon Signed-Rank test method was employed. The results are as follows.

Table 3: Wilcoxon Signed-Rank test Output

Positive	48
Negative	67
P-Value (two-sided)	0.0005121

The decision-making basis using the Wilcoxon test adheres to the criteria that if the P-value is < 0.05, then the second hypothesis stating that there is a difference in market efficiency between the period before and during the election is accepted. From the table, it is evident that the P-value is 0.0005121. Since this value is less than 0.05, it is concluded that the H2 is accepted. This means that there is a difference between the periods before and during the election. Therefore, it can be inferred that there is a variance in market efficiency during the simultaneous 2019 election year to date compared to the preceding year.

V. Result

The results of this study show that, in both 2018 and 2019, stock price movements in the Indonesian capital market followed a random pattern. This indicates that price changes could not be systematically predicted based on past information. Accordingly, when evaluated using the random walk approach, the capital market can be considered efficient both during the 2019 election period and in the period prior to the 2019 election year. These findings suggest that available information was quickly and accurately reflected in stock prices, even amid the political uncertainty surrounding the election.

In addition to confirming market efficiency across both periods, the study also finds a difference in the level of efficiency between the year leading up to the election and the election year itself. The analysis of stock price behavior indicates that market dynamics changed during the simultaneous 2019 election, reflecting variations in how information was absorbed and responded to by market participants. This difference highlights the influence of major political events on investor behavior and market conditions.

Based on the statistical tests conducted, both the first and second hypotheses proposed in this study are accepted. The first hypothesis confirms that the Indonesian capital market was efficient before and during the election period, while the second hypothesis supports the existence of differing efficiency conditions between the pre-election year and the election year.

However, this study is not without limitations. The analysis relies on a single stock index and uses daily secondary data derived from adjusted closing prices. As a result, the findings may not fully capture variations across different sectors or alternative market indicators. Future research could enhance the robustness of the results by incorporating multiple indices, longer observation periods, or additional variables to provide a more comprehensive assessment of capital market efficiency in the context of political events.

References

[1]. Sewell, Martin. "History Of The Efficient Market Hypothesis." Rn 11.04 (2011): 04.
[2]. Jones, Charles P. Investments: Analysis And Management. John Wiley & Sons, 2007.
[3]. Idx.Co.Id, Https://Www.Idx.Co.Id/Id/Tentang-Bei/Ikhtisar-Dan-Sejarah-Bei/. Accessed 9 Nov. 2023.
[4]. Darmadji, Tjiptono, And Hendy M. Fakhruddin. "Pasar Modal Di Indonesia." Jakarta: Salemba Empat (2011).
[5]. Sincere, Michael. Understanding Stocks. Mcgraw-Hill Education, 2014.
[6]. Reilly, Frank K., And Keith C. Brown. "Investment Analysis." Portofolio Management. Mason, Ohio: Thomson, South-Western (2003).
[7]. Sewell, Martin. "The Efficient Market Hypothesis: Empirical Evidence." International Journal Of Statistics And Probability 1.2 (2012): 164.
[8]. Degutis, Augustas, And Lina Novickyt?. "The Efficient Market Hypothesis: A Critical Review Of Literature And Methodology." Ekonomika 93 (2014): 7-23.
[9]. Rosner, Bernard, Robert J. Glynn, And Mei-Ling T. Lee. "The Wilcoxon Signed Rank Test For Paired Comparisons Of Clustered Data." Biometrics 62.1 (2006): 185-192.
[10]. Fama, Eugene F. "Efficient Capital Markets: A Review Of Theory And Empirical Work." The Journal Of Finance 25.2 (1970): 383-417.
[11]. King, Robert G., And Ross Levine. "Finance And Growth: Schumpeter Might Be Right." The Quarterly Journal Of Economics 108.3 (1993): 717-737.
[12]. Luintel, Kul B., Et Al. "Financial Structure And Economic Growth." Journal Of Development Economics 86.1 (2008): 181-200.
[13]. Hausmann, Ricardo, Dani Rodrik, And Andrés Velasco. "Growth Diagnostics." The Washington Consensus Reconsidered: Towards A New Global Governance 2008 (2008): 324-355.