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US Top Bank Failures: A GARCH Approach to Analyzing Economic Consequences

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ABSTRACT: This study aims to examine the economic consequences of US Top Bank Failures, particularly in Indonesia, with the expectation of providing a predictive model for economic conditions in the event of similar global economic situations. The research employs difference testing and GARCH modeling to analyze investment instruments and the global economy, focusing on the volatility of each instrument's value. Data collection was conducted through secondary sources from websites. The results indicate that stock indices, inflation rates, gold prices, and cryptocurrencies experienced significant value differences as an impact of bank failures. For GARCH analysis, it was identified that the GARCH(1,1) model is optimal for stock indices and exchange rates, the GJR-GARCH(1,1) model is the best for world gold and cryptocurrency, and the EGARCH(1,1) model is most suitable for predicting inflation rates. Based on the findings, the study highlights the importance of developing tailored investment strategies during periods of financial uncertainty. For the Indonesian market, maintaining economic resilience through sound fiscal and monetary policies is critical to mitigating external shocks. Advanced volatility models, such as GARCH variants, can help investors and policymakers anticipate market behavior, optimize risk management, and enhance economic stability during crises.

KEYWORDS - Bank Failure, Economic Consequenses, Stock Index, Cryptocurrency, Invesment, GARCH.

I. INTRODUCTION

Global phenomena such as the COVID-19 pandemic, conflicts between nations, rising inflation, and income inequality have slowed global economic growth. This economic slowdown has led many business owners to shut down their operations. The World Bank's global economic outlook report predicts that this situation could jeopardize economic recovery in developing countries. Global growth is also projected to decline from 5.5% in 2021 to 4.1% in 2022 and 3.2% in 2023 (Luki, 2022).

As a result of the global economic slowdown, several major banks around the world are now facing significant crises. Silicon Valley Bank, one of the largest-capitalized banks globally, was unable to withstand the prevailing economic pressures, leading to its collapse. The collapse of these banks was triggered by economic uncertainty in the aftermath of the COVID-19 pandemic, rising interest rates, and the decline in crypto assets (CNBC, 2023).

Several other banks also faced crises. In addition to Silicon Valley Bank (SVB), Signature Bank, based in New York, also collapsed. This major bank in the cryptocurrency industry went under after market instability in stablecoins. Stablecoins experienced a massive outflow after the New York regulators and the Securities and Exchange Commission applied pressure on their issuers. Another bank, Credit Suisse, also collapsed. The collapse of Credit Suisse was caused by the poor performance of its stock. Credit Suisse was affected by several major scandals, including tax evasion, corruption related to Mozambican funds, money laundering involving narcotics, and the Archegos and Greensill scandals.The collapse of top banks in the US has raised concerns about potential instability in the global and Indonesian economies. The collapse of Silicon Valley Bank (SVB) triggered a decline in the majority of banking stock prices in Indonesia, leading to a negative correction in the Jakarta Composite Index (IHSG) (Chandra, 2023).

According to several Indonesian economic experts, the Minister of Finance of the Republic of Indonesia, and the Chief Executive of the Financial Services Authority (OJK), this phenomenon does not have a direct connection to Indonesia's investments or business relations with SVB. This is because the majority of SVB's clients are technology startup companies. However, data from the Fiscal Policy Agency of the Ministry of Finance indicates that stock indices in the United States, Europe, and Asia have generally weakened. Concerns about a potential recession have become the primary sentiment in global stock markets (Rodani, 2023).

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The phenomenon and stigma surrounding the collapse of some of the world's largest banks have resulted in widespread economic uncertainty. This situation has further fueled concerns about a potential global recession. Therefore, it is crucial for societies to assess their country's economic resilience to avoid losses caused by economic downturns. To mitigate such risks, individuals must prioritize choosing safe investment options, especially when the global economy shows no signs of recovery.

Several previous studies have analyzed the volatility of stock indices, including the Indonesia Stock Price Index (JCI), and reported varying findings (Agustina et al., 2024b) (Alghifary et al., 2023) (Hamil et al., 2023) (Puspitasari, 2024).

Research on the impact of economic events on inflation has also yielded diverse results across different contexts (Bigerna, 2024) (Pham et al., 2023). Studies on the influence of global economic conditions on world gold prices have demonstrated inconsistent outcomes (Salikin & Wahab, 2024)(Arisandhi & Robiyanto, 2022) (Agustina & Barus, 2023) (Chemkha et al., 2021) (Kayral et al., 2023) (Triki & Ben Maatoug, 2021) (Tetteh & Ntsiful, 2023). Additionally, the relationship between exchange rate fluctuations, particularly the USD/IDR rate, and macroeconomic events has been widely studied with varying conclusions (Arisandhi & Robiyanto, 2022) (Ruangsrimun, 2024) (Pham et al., 2023) (Agustina et al., 2024b) (Xu et al., 2023) (Ain Shahrier, 2022). Lastly, investigations into the volatility and market behavior of cryptocurrencies, especially Bitcoin, have produced contrasting findings depending on the methods and periods analyzed (Sarkodie et al., 2022) (Beneki et al., 2019) (Chemkha et al., 2021) (Taera et al., 2023) (Aloui et al., 2024) (Umar et al., 2021) (Kayral et al., 2023).

This study aims to analyze the impact of the collapse of major global banks on investment commodities such as the Indoesia Stock Price Index (JCI), inflation, world gold prices, exchange rate (USD/IDR) and cryptocurrency (Bitcoin). By utilizing the GARCH approach, this research is expected to provide guidance for investors to make more informed investment decisions amidst global economic uncertainties. The insights gained are anticipated to help society reduce the risk of losses caused by economic crises.

II. LITERATURE REVIEW

A. Stock Price Index

A stock index is a statistical measure that reflects the overall price movement of a selected group of stocks, chosen based on specific criteria and methodology, and periodically reviewed. Its purposes and benefits include measuring market sentiment, serving as a foundation for passive investment products such as Index Mutual Funds and Index ETFs, as well as derivative products, and acting as a benchmark for active portfolios. Additionally, a stock index is used as a proxy to measure and model investment returns, systematic risk, and risk-adjusted performance. It also serves as a reference for asset classes in asset allocation strategies (IDX, 2024). In Indonesia, the Jakarta Composite Index (JCI), or Indeks Harga Saham Gabungan (IHSG), is the main index that tracks the combined performance of all stocks listed on the Indonesia Stock Exchange (IDX). It aggregates the price movements of various stocks across sectors, providing a snapshot of the market's health. A rising JCI indicates positive market sentiment, while a declining JCI signals potential challenges, making it an essential benchmark for investors, analysts, and policymakers.

B. Inflation

Inflation is defined as the general and continuous increase in prices. Inflation can occur anywhere and is always a monetary phenomenon, as it involves a decrease in the value of a monetary unit relative to a commodity. Inflation is considered one of the most important factors influencing a country's economic growth, with negative effects (Simanungkalit, 2020). Generally, not all instances of inflation have negative effects on the economy. In particular, mild inflation can even stimulate economic growth. This is because mild inflation encourages businesses to increase their operations. However, inflation levels can suddenly rise or occur as a result of specific events that go beyond government expectations, such as the effect of large currency devaluation or political instability.

C. World Gold

Gold is a precious metal widely used as a medium of trade and as a financial exchange standard in various countries. Gold investments are highly favored by the public because of their stable value, which often appreciates over time. It is one of the most popular investment types due to its accessibility and is considered a low-risk (Low Risk) investment option (Agustina et al., 2024a). When gold prices rise, investors are often more inclined to invest in gold rather than stocks. Gold is often considered a safe haven asset, which means investors are likely to turn to gold during times of economic or political uncertainty. When geopolitical tensions arise, demand for gold is likely to increase as investors seek refuge from volatile stock and currency market risks. Gold prices will fluctuate due to the geopolitical crisis due to increasing demand as a safer asset.(Agustina et al., 2024b)

D. Exchange Rate

The exchange rate is a comparison of the value of one country's currency against another country's currency. The US Dollar (USD) is used as a global currency for international payments between countries worldwide. Currencies can experience both depreciation

and appreciation at any given time. Several factors can influence exchange rates, including the supply and demand for foreign currencies, the balance of payments position, inflation rates, interest rates, income levels, government regulations, as well as expectations and speculation in the market (Chen, 2024).

E. Cryptocurrency

Cryptocurrency is a technology based on blockchain, often used as a digital currency with functions similar to other currencies. Several forms of cryptocurrency will be discussed in this research, namely Bitcoin, Ethereum, and Ripple. Bitcoin utilizes a peer-to-peer network, where advanced cryptographic protocols are used as its distribution medium. Bitcoin enhances system efficiency and enables the provision of financial services at much lower costs, giving users more power and freedom (Bhiantara, 2018) (Hassani et al., 2018).

The following is an overview of the conceptual framework tested in this research.

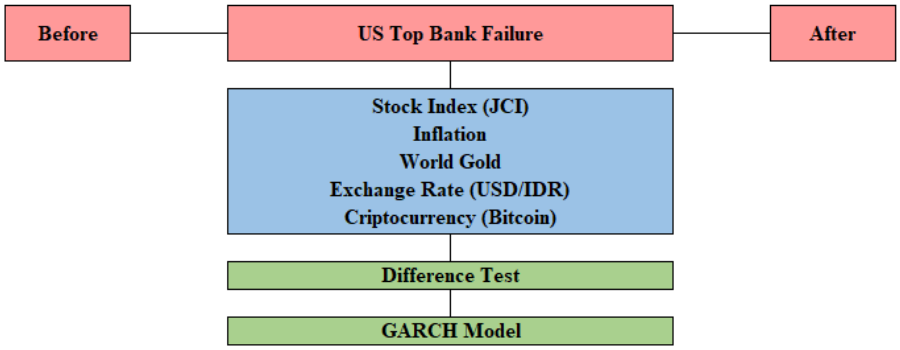


Figure 1 Theoretical Framework

Based on the Figure 1, this study will conduct tests to examine the differences in the variables of JCI, inflation, world gold prices, exchange rates (USD/IDR), and cryptocurrency (Bitcoin) between the market conditions before and after the occurrence of the US Top Bank Failure. This research aims to explore how the failure of major banks impacts various economic sectors and financial markets. Furthermore, this study will use the GARCH (Generalized Autoregressive Conditional Heteroskedasticity) model to analyze market volatility resulting from the post-crisis instability and to understand its effects on the variables under study. The GARCH model will provide deeper insights into the fluctuations that occur and allow for a more accurate analysis of how the bank failures affect the global economy and financial markets.

III. METHODS

This research is a quantitative study that uses a difference test data analysis technique to examine the impact of the variables under study on the observed situation. The research object consists of each instrument indexed using secondary data, with data taken from the closing prices (closing price) on Yahoo Finance (https://finance.yahoo.com), Trading Economics (https://tradingeconomics.com), and Central Bank of Indonesia (https://bi.go.id) as needed for the variables. This study will compare pre-crisis and post-crisis conditions, specifically 30 days before the crisis and 30 days after the crisis occurred, starting from January 26, 2023 until May 4, 2023. The sample type used is restricted probability sampling, with the sampling technique being Cluster Sampling, which involves selecting samples based on areas or clusters (Sekaran & Bougie, 2016).

The data analysis techniques used in analyzing the data in this research include:

1. Descriptive statistics
   This test is used to show the characteristics of the data from this research. This test is to see the research data's mean, median, maximum, and minimum. Descriptive statistics help in looking at the distribution of data and the distribution of data used in this research.
2. Difference Test
   This test was carried out to see if there was a significant difference between the conditions before and after the Red Sea crisis. Before conducting a differential test, the researcher conducted a normality test first. The normality test aims to find out whether each variable has a normal distribution or not. As for the test, it was carried out by looking at the distribution of data before and after the war. The normality test used Kolmogorov-Smirnov (K-S) statistical analysis. After that, from results of normality test, the type of hypothesis test to be used will be decided. Hypothesis tests are carried out to answer the research

question. If the data is distributed normally, One sample t-test will be used. However, if the data is distributed abnormally, one-sample Wilcoxon signed rank test will be used (Agustina & Barus, 2023).

3. GARCH Model

Financial time series often exhibit periods of low volatility followed by periods of high volatility; a phenomenon known as volatility clustering. To model this characteristic in economic and financial time series, ARCH and GARCH models are commonly employed (Bollerslev, 1986).

a. GARCH Model

In financial price volatility modeling, the GARCH family is chosen for its ability to capture dynamic volatility changes and clustering of volatility. Among these models, the one commonly selected is referred to as the GARCH (1,1) model (Karmakar, 2005).

b. GJR-GARCH Model

The GJR-GARCH model was employed to examine asymmetric characteristics in financial market returns. According to this model, it suggests that investors are more anxious about negative returns than they are about positive returns, leading to what is known as the leverage effect (Karmakar, 2005).

c. E-GARCH Model

This model is the exponential GARCH model to account for the asymmetry in the fundamental GARCH model. The E-GARCH model could account for more lags in conditional variance (Nelson, 1991).

IV. RESULTS AND DISCUSSION

Based on the closing rates of the JCI, inflation, exchange rate (USD/IDR), world gold prices, and cryptocurrency (Bitcoin) observed 30 days before the SVB Bankruptcy announcement, 30 days after the SVB Bankruptcy announcement, and during those period, the findings of the research are as follows:

Table 1 Descriptive statistic for Study's Variables

Statistic/Variables	JCI	Inflation	Exchange Rate	World Gold	Cryptocurrency
Entire Period					
Mean	6.822,509	4,951	15.094,480	1.921,191	25.504,210
Median	6.833,180	4,970	15.117,000	1.922,490	24.375,960
Maximum	6.945,480	5,470	15.489,000	2.051,720	30.485,700
Minimum	6.565,730	4,000	14.671,500	1.811,040	20.187,240
Std. Dev.	81,691	0,477	222,471	73,749	3.003,869
Skewness	-1,061	-0,487	-0,079	0,023	0,192
Kurtosis	4,195	1,948	2,196	1,571	1,629
Jarque-Bera	15,079	5,229	1,707	5,198	5,151
Probability	0,001	0,073	0,426	0,074	0,076
Before Event					
Mean	6.865,278	5,328	15.158,120	1.859,290	23.011,740
Median	6.868,650	5,470	15.187,100	1.850,875	23.143,320
Maximum	6.941,850	5,470	15.450,000	1.950,360	24.565,600
Minimum	6.766,760	4,970	14.855,000	1.811,040	20.363,020
Std. Dev.	45,772	0,211	148,886	39,819	950,668
Skewness	-0,321	-1,000	-0,250	0,882	-0,638
Kurtosis	2,526	2,214	2,714	2,638	3,357
Jarque-Bera	0,797	5,767	0,415	4,051	2,195
Probability	0,671	0,056	0,813	0,132	0,334
After Event					
Mean	6.781,647	4,574	15.017,690	1.984,861	28.173,910
Median	6.802,120	4,330	14.957,000	1.989,355	28.263,210
Maximum	6.945,480	4,970	15.479,000	2.051,720	30.485,700
Minimum	6.565,730	4,000	14.671,500	1.904,140	24.197,530
Std. Dev.	89,329	0,365	254,117	37,587	1.729,284

Skewness	-0,644	0,024	0,480	-0,529	-0,881
Kurtosis	3,107	1,399	2,117	2,822	3,253
Jarque-Bera	2,088	3,207	2,128	1,437	3,962
Probability	0,352	0,201	0,345	0,488	0,138

The results of descriptive statistics for selected variables over the entire period (from 26 January 2023 to 04 May 2023) are presented in Table 1. According to standard deviation, Bitcoin was the most volatile with a value of 3.003,869, while Inflation was the least volatile, with a value of 0,477. This indicates that Bitcoin was more likely to experience large swings in price than the Inflation rate. The price distributions of JCI, inflation, and the exchange rate (USD/IDR) are negatively skewed, indicating that the probability of rate decreases is higher than that of price increases. Meanwhile, the rates for world gold and Bitcoin show the opposite trend. Overall, throughout the entire period, the inflation rate did not experience significant volatility, indicating that during this time, Economy in Indonesia did not face excessive inflationary turbulence.

However, the results from the period before the SVB Bankruptcy announcement (from January 26, 2023, to March 9, 2023) show that, although the inflation rate was the least stable, its rate distribution exhibited negative skewness. This indicates that, before the SVB Bankruptcy announcement, the probability of an inflation rate decrease was higher than that of an increase. This suggests that, during the period prior to the SVB Bankruptcy announcement, Indonesia experienced a decline in the inflation rate. Overall, in the period before the SVB Bankruptcy announcement, it is evident that the World Gold Price was more stable than the other variables.

Nevertheless, the results from the period after the SVB Bankruptcy announcement (13 March 2023 to 04 Maya 2024) show that the JCI was the second least volatile variable after the Inflation Rate. The low volatility of this index corresponded with negative skewness, meaning that after the SVB Bankruptcy announcement, the probability of a rate decrease was higher than the probability of a price increase. In other words, after the announcement, the JCI rate decreased, which could lead to a decline in investment value in the Indonesian stock market.

Table 2 Independent samples Test for difference testing.

Variable	Sig. (2-tailed)	Hypothesis Test Result
JCI	0,000	Significant
Inflation	0,000	Significant
Exchange rate (USD/IDR)	0,069	No Significant
World Gold	0,000	Significant
Cryptocurrency (Bitcoin)	0,000	Significant

Based on the results of difference testing in Table 2, the variables JCI, Inflation, World Gold, and Cryptocurrency (Bitcoin) show the difference between before and after the SVB Bankruptcy Announcement. Meanwhile, the Exchange Rate (USD/IDR) show that there is no difference between before and after the SVB Bankruptcy Announcement.

From these results, JCI, inflation, world gold, and Bitcoin experienced a change in sentiment due to the SVB Bankruptcy announcement. This indicates that the SVB Bankruptcy announcement has impacted Indonesia's economy and global investment instruments, leading to significant economic disruption driven by political and economic uncertainty.

However, the Exchange Rate (USD/IDR) do not show a difference between before and after the SVB Bankruptcy. This may have happened because the exchange rate (USD/IDR) is influenced by multiple factors beyond the SVB Bankruptcy announcement, such as Indonesia's monetary policy, global trade dynamics, and foreign capital flows. Additionally, the stability of the exchange rate might reflect effective interventions by the central bank to mitigate volatility or the resilience of the Indonesian currency against external shocks during that period. Consequently, while other variables showed shifts in sentiment, the exchange rate remained relatively stable, indicating its distinct response to economic and political events.

Time series data were analyzed to identify the presence of unit roots. Most statistical tests and methods rely on the assumption that statistical properties remain constant over time. Ensuring a stationary time series is crucial for effectively modeling and forecasting the relationships between variables.

Table 3 Augmented Dickey–Fuller test results for Study's Variables.

Variables	ADF t	ADF Prob	Trend Prob
JCI	-9,318	0,000 *	0,781
Inflation	-8,8623	0,000 *	0,9598
Exchange rate	-8,495	0,000 *	0,5298
World Gold	-7,636	0,000 *	0,8317
Cryptocurrency	-7,813253	0,000 *	0,9685

Table 3 presents the outcomes of the augmented Dickey–Fuller (ADF) test applied to the daily closing rates of the study's variables from January 26, 2023, to May 4, 2023. The ADF test was conducted to assess whether the time series data were stationary. A stationary time series is characterized by statistical properties that remain consistent over time. The variables analyzed in this research included stock indices such as JCI, inflation, the exchange rate (USD/IDR), world gold, and Bitcoin. The probability values for all variables were close to zero throughout the study period, indicating that the prices of all variables were stationary during this timeframe. The unit root null hypothesis was rejected for all log-returns of the stock indices, as all the variables were found to be stationary at their levels.

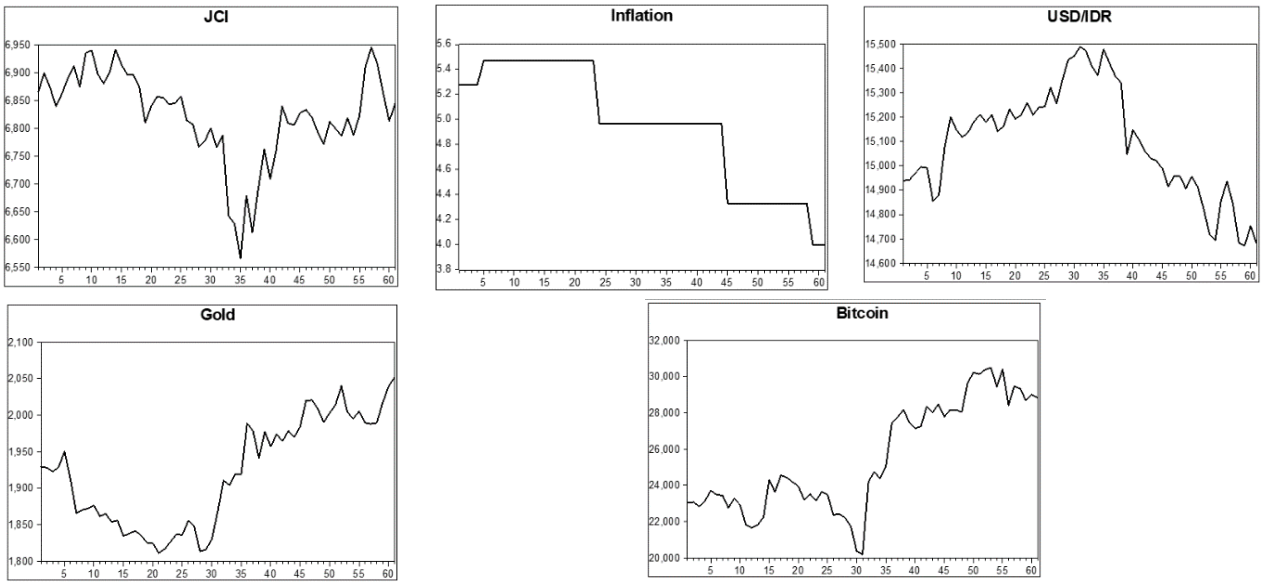
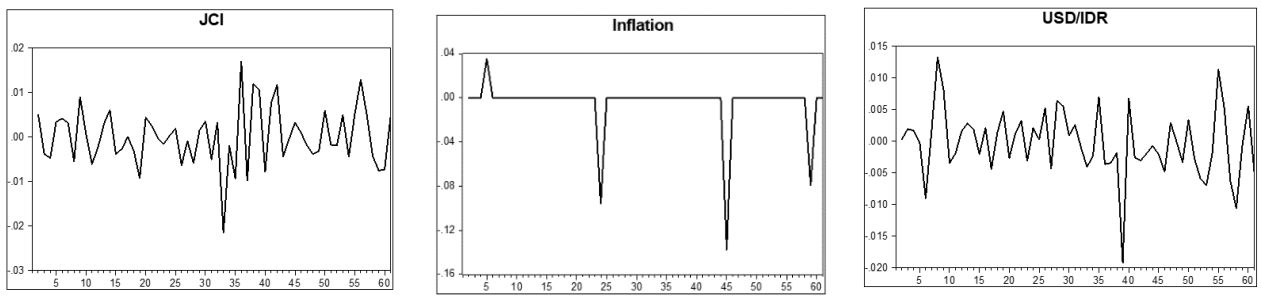


Figure 2 Price Trends over the period of 26 January 2023 to 4 May 2023.

Based on Figure 2, the price trends for JCI, inflation, USD/IDR, gold, and Bitcoin over the period from January 26, 2023, to May 4, 2023, exhibit distinct patterns. The JCI shows moderate fluctuations with a noticeable decline mid-period before recovering towards the end. Inflation appears relatively stable with sudden discrete changes, indicating minimal volatility. The USD/IDR exchange rate demonstrates a declining trend after a peak, suggesting increased strength of the Indonesian rupiah against the U.S. dollar towards the end of the period. Gold prices initially decline before showing a significant upward trend, reflecting growing investor interest in safe-haven assets. Meanwhile, Bitcoin experiences consistent growth with periodic corrections, highlighting its volatile yet upward trend. These patterns suggest varying market responses influenced by both global and local economic conditions during the study period.



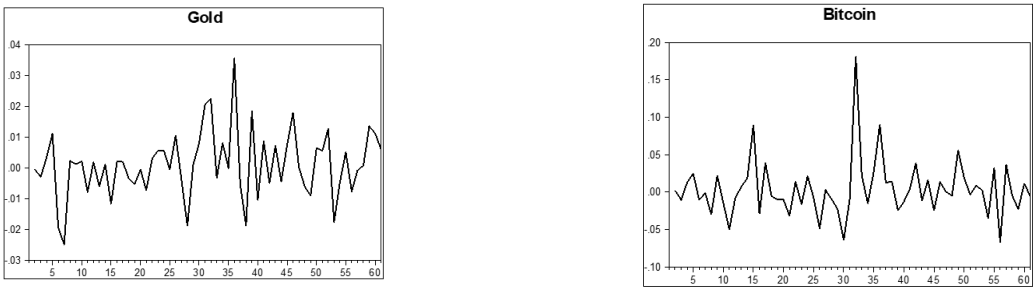


Figure 3 Price Fluctuations over the period of 26 January 2023 to 4 May 2023.

Based on Figure 3, the price fluctuations for JCI, inflation, USD/IDR, gold, and Bitcoin from January 26, 2023, to May 4, 2023, reveal distinct volatility patterns. The JCI demonstrates relatively stable fluctuations with a noticeable spike in volatility mid-period. Inflation shows minimal volatility, except for sharp and abrupt movements indicating rare events or external shocks. The USD/IDR exchange rate experiences moderate fluctuations, with sporadic spikes reflecting currency market reactions to external or domestic factors. Gold prices exhibit higher variability compared to other assets, suggesting sensitivity to global market uncertainties. Bitcoin, on the other hand, shows significant and frequent volatility spikes, consistent with its nature as a highly speculative asset.

Table 4 Results based on the GARCH models for entire study period

Variables	Model	Log	AIC	α (ARCH)	β (GARCH)	γ (Gamma)
JCI	GARCH (1,1)	-159,0163	5,410371	0,176	-0,931 *	-
	GJR-GARCH (1,1)	-304,4319	10,21088	-0,2899 *	1,099 *	0,2136 *
	EGARCH (1,1)	-303,6277	10,2173	-0,561 *	0,813 *	-0,493 *
Inflation	GARCH (1,1)	366,9474	-11,83434	0,149992	0,54751	-
	GJR-GARCH (1,1)	56,60191	-1,626292	-0,040362	0,498259	0,00759
	EGARCH (1,1)	257,9599	-8,228	-1,509 *	0,718 *	0,601 *
USD/IDR	GARCH (1,1)	-362,3017	12,07547	-0,1596 *	1,1282 *	-
	GJR-GARCH (1,1)	-288,2037	9,67881	0,194711	0,272468	0,1668
	EGARCH (1,1)	-367,5189	12,27931	-0,8586 *	-0,3374	0,099
World Gold	GARCH (1,1)	-287,8936	9,635856	0,161776	0,705452 *	-
	GJR-GARCH (1,1)	-280,2753	9,418863	-0,179488 *	1,116130 *	-0,208412 *
	EGARCH (1,1)	205,9007	-6,521334	0,495094 **	-0,595657 **	0,200449
Bitcoin	GARCH (1,1)	-513,1238	17,02045	0,353849	0,597634 *	-
	GJR-GARCH (1,1)	-507,5508	16,87052	-0,181481 *	1,149243 *	0,312702
	EGARCH (1,1)	-517,7288	17,20422	0,338111	0,05957	0,239455

Note: ** refers to 10% significance level, and * refers to 5% significance level

The empirical results presented in the table highlight the performance of various GARCH models in capturing the volatility patterns of financial instruments during the study period (January 26, 2023, to May 4, 2023). The findings indicate that the GARCH(1,1) model is best suited for JCI and USD/IDR, as it provides the lowest Akaike Information Criterion (AIC) values. This suggests that the volatility in these variables is relatively symmetric, meaning that positive and negative shocks have a similar impact on their price movements. For Indonesia's economy, this could reflect a relatively stable response of the domestic equity market and exchange rate to external shocks, likely due to the presence of underlying economic resilience or effective monetary and fiscal policy interventions.

On the other hand, the GJR-GARCH(1,1) model performs better for world gold and Bitcoin, indicating the presence of leverage effects. These results suggest that negative shocks, such as financial crises or global uncertainties, lead to disproportionately higher volatility in these assets. For global investment instruments, this finding is consistent with the nature of gold as a safe-haven asset and Bitcoin as a highly speculative digital currency. During the SVB Bankruptcy Announcement, heightened uncertainty may have increased the demand for gold, driving volatility, while speculative behaviors amplified price fluctuations in Bitcoin. This reflects the global market's sensitivity to systemic financial shocks, where investors shift to perceived safe-haven assets or speculative opportunities during crises.

For inflation, the EGARCH(1,1) model is the most appropriate, effectively capturing the asymmetric and persistent volatility observed during the study period. This finding implies that inflation is highly sensitive to external economic shocks, such as the SVB Bankruptcy Announcement, which could have introduced uncertainties regarding monetary stability. In the context of Indonesia, this result could indicate challenges in maintaining stable inflation amidst global financial disruptions. Persistently high or volatile inflation could hinder economic recovery by reducing purchasing power and increasing business costs.

These findings collectively underline the interconnectedness of Indonesia's economy and global financial markets. The SVB Bankruptcy Announcement not only influenced domestic variables like JCI and USD/IDR but also had significant implications for global investment instruments such as gold and Bitcoin. For Indonesia, these results emphasize the importance of maintaining economic resilience through sound macroeconomic policies to mitigate the impact of external shocks. For global investors, the findings highlight the need for strategic portfolio diversification, particularly during periods of heightened uncertainty, to balance risk and returns effectively. The use of advanced volatility models, such as GARCH, GJR-GARCH, and EGARCH, provides valuable insights into these dynamics, aiding policymakers and investors in making informed decisions during periods of economic instability.

V. CONCLUSIONS

Based on the research results and discussion, the impact of the SVB Bankruptcy Announcement on financial variables highlights the need for tailored investment and economic strategies during periods of financial uncertainty. For the Indonesian market, the findings suggest that maintaining economic resilience through sound fiscal and monetary policies is crucial to mitigating external shocks. The GARCH(1,1) model indicates that JCI and USD/IDR exhibit relatively stable volatility patterns, making these assets potentially attractive for long-term investors seeking consistent returns amidst domestic market fluctuations. For global investment instruments, such as gold and Bitcoin, the results underline the importance of recognizing the asymmetric volatility captured by the GJR-GARCH(1,1) model. During periods of heightened uncertainty, such as the SVB Bankruptcy Announcement, investors should consider allocating a portion of their portfolios to safe-haven assets like gold, which tend to exhibit strong leverage effects during negative market shocks. Conversely, Bitcoin's speculative nature requires cautious investment strategies, focusing on short-term opportunities while being mindful of its high volatility. Inflation, modeled using EGARCH(1,1), demonstrates sensitivity to external shocks and persistent volatility, emphasizing the importance of stable monetary policy to ensure long-term economic stability in Indonesia. These findings collectively suggest that effective risk management and dynamic asset allocation are essential for navigating financial markets during crises. By utilizing advanced volatility models, investors and policymakers can better anticipate market behavior, implement informed strategies, and enhance resilience against systemic disruptions, ensuring sustainable economic and financial outcomes.

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