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# DID GOLD, BITCOIN, AND FOREX ACT AS SAFE HAVEN ASSETS FOR SOUTHEAST ASIAN STOCK INDEXES DURING THE COVID-19 PANDEMIC?

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## ABSTRACT

*The COVID-19 pandemic and the bearish market have led investors to find a safe-haven asset during this financial turbulence. Gold, US Dollar, and Bitcoin traditionally could be safe-haven assets in previous financial crises. However, safe-haven assets are mainly different during each market crash. Therefore, this paper aims to examine gold, US dollars, and Bitcoin as safe-haven assets during the COVID-19 market turmoil in several South East Asian countries such as Indonesia, Malaysia, Singapore, and the Philippines. All variables use daily data time series from January 2020 - September 2020. This study will conduct an empirical analysis using Generalized Autoregressive Conditional Heteroscedasticity (GARCH). Our result shows that during the COVID-19 pandemic, US Dollar could act as a safe-haven asset in Indonesia, Malaysia, and the Philippines. It implies that when the condition is uncertain during a pandemic, many investors switch their investments to US dollars in those three countries. On the other hand, gold and bitcoin are not safe-haven assets, but they could only act as hedging for several countries in South-East Asia.*

***Keywords:*** *Safe Haven Asset, Gold, Bitcoin, US Dollar, GARCH, COVID-19*

## INTRODUCTION

The COVID-19 outbreak is considered a "once-in-century" pandemic (Gates, 2020). This virus first appeared in Wuhan, China, and was reported to WHO on December 31, 2019, and has begun to spread worldwide. Until 2020, the number of people infected with COVID-19 was approximately 34 million confirmed cases (World Health Organization, 2020). In Indonesia, this case has reached around 300,000 cases (Indonesia Ministry of Health, 2020). Many confirmed cases from the COVID-19 outbreak caused several countries worldwide to lock down and close their borders, disrupting export-import activities in various countries. For example, Germany's export-import data in April 2020 was the worst since 1990, and Germany's exports fell 24% YoY because its trading partners were affected by Covid-19 (Chambers, 2020).

Indonesia has also experienced a disruption of export and import since many countries have halted imports or have tightened and added specific standards. In addition to lockdowns, several countries have also made policies regarding physical distancing, travel restrictions, and the closure of several economic sectors.

These various policies are detrimental to the health sector, and all sectors are also affected by the COVID-19 virus. Some countries have experienced the death of economics for specific periods. Still, the policies have to be implemented by several countries to prevent the spread of a more severe virus and an economic impact that is more difficult to fix, including in Indonesia. In 2003, the world also experienced a pandemic similar to COVID-19, known as the SARS outbreak, which originated from the SARS-Cov-1. The outbreak caused the global economy to experience losses of around $ 30-100 billion (Smith, 2006). These losses are not comparable to what the COVID-19 outbreak has caused an estimated $ 8 to $ 15 trillion in losses (World Health Organization, 2020). According to (Fernandes, 2020), estimates that the presence of the COVID-19 outbreak will cause a global economic slowdown by 2.8%. In an extreme case like Spain, it can experience a decrease of 15%. Based on data on August 5, 2020,

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the Indonesian economy has decreased by 5.32% yearly (BPS, 2020). In 2008-2009 there was also a global economic crisis, considered the worst financial crisis in history for the last 80 years. The problem was called "the mother of all crises," which originated in America and rapidly spread worldwide, including Indonesia. However, during this crisis, the impact felt by Indonesia was not that great because, at that time, Indonesia only had an export-to-GDP ratio of around 29%.

With the COVID-19 outbreak, society will face enormous economic losses and want to place their assets in the right or safe assets during the market turmoil caused by this pandemic. Thus safe-haven assets are needed at this time. Safe-haven assets should be negatively correlated or uncorrelated with other assets or portfolios during the crisis period (Baur & Lucey, 2010). Several previous studies found that gold can be an asset categorized as a safe haven (Baur & Lucey, 2010; Baur & McDermott, 2010; Bredin et al., 2015; Ji et al., 2020). According to (Ji et al., 2020), Besides gold, commodities such as soybean can be safe-haven assets when the world economy is under pressure, such as during Covid-19. Foreign exchange currency (forex) can also be used as a guide in the economic crisis (Grisse & Nitschka, 2013; Habib & Stracca, 2012). In (Kopyl & Lee, 2016), research found that forex can be used as a safe-haven asset, and state debt securities can also be considered a safe haven. Other studies also say that cryptocurrency can be used as a safe-haven asset, but only a few types, such as bitcoin and tether (Bouri et al., 2017; Conlon et al., 2020; Urquhart & Zhang, 2019).

Investments categorized as safe havens can differ in each crisis condition (Bredin et al., 2015). Therefore, the types of safe-haven assets during the COVID-19 pandemic will vary from the previous problem according to market chaos conditions or crisis periods. However, only a few previous studies discuss safe-haven investment during this pandemic. Therefore this research wants to find safe-haven assets during the COVID-19 pandemic.

Thus formulation of the problem in this study is as follows: Is gold a safe-haven asset during the COVID-19 outbreak? Is cryptocurrency (Bitcoin) a safe-haven asset during the COVID-19 outbreak? Is the foreign exchange currency (USD) a safe-haven asset during the COVID-19 outbreak?

This research will help retail investors to limit their risk or as a hedge for assets in times of market crash or during market turmoil. In addition, this paper can also help financial advisors determine the best investments among gold, bitcoins, and forex to minimize losses during this economic crisis due to COVID-19.

This research will be divided into five parts. Section 2 describes the literature review, followed by Section 3, which formulates the framework and hypothesis. Section 4 explains the research methodology. Section 5 reveals the research results, and finally, section 6, the conclusions of the research results.

**Safe Haven Asset**

Many personality traits bear on investment behavior. There are several types of investor behavior. If we look at the risk, one of the types of investor behavior is loss averse, which is more focused on preventing losses than making a profit (Tversky & Kahneman, 1991). This loss prevention is one of the reasons why investors need to seek safe-haven assets (Baur & Lucey, 2010; Bredin et al., 2015; Conlon et al., 2018). In addition, according to (Kopyl & Lee, 2016), volatile markets drive people to seek safe-haven assets to minimize the risk and limit their losses during crises. Other than that, safe-haven assets can be used as a hedge during market turbulence. Safe-haven assets correlate negatively or are uncorrelated with market movement during market turmoil (Baur & Lucey, 2010; Baur & McDermott, 2010). In addition, safe-haven assets can also be defined as assets with high liquidity and the type of risk that investors are looking for when they want to prevent losses due to a market crash (McCauley & McGuire, 2009)

Safe-havens primary purpose is to help investors limit the risk of loss during market turbulence because assets that can be classified as safe-haven assets are assets that can increase or maintain their value during a crisis (Baur & Lucey, 2010).

It is essential to understand that safe-haven assets are not the same as safe assets because they only act during an economic crisis (Baur & McDermott, 2016). In several different crisis periods, safe-haven assets are also different assets since they can fluctuate depending on market conditions during a crisis (Bredin et al., 2015). Several safe havens have been discovered in different periods, commodities such

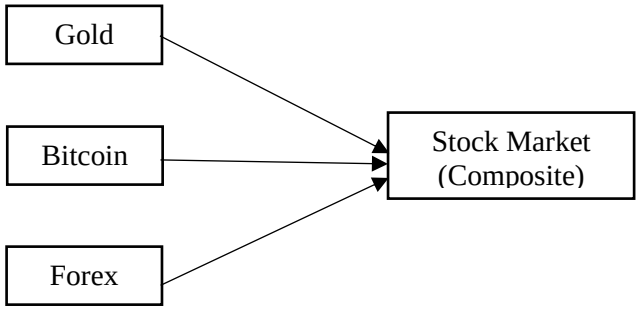
as gold, oil, and soybean, other than foreign exchange and cryptocurrency (Baur & Lucey, 2010; Baur & McDermott, 2010; Shahzad et al., 2020; Ji et al., 2020; Musialkowska et al., 2020; Ranaldo & Söderlind, 2010).

Most of the research that examines safe-haven assets is in countries such as China, the United States, Germany, Japan, Canada, and France. At the same time, little research has discussed safe-haven assets for Southeast Asian countries. Moreover, there is some research about safe-haven investments, but it did not conduct during the COVID-19 pandemic.

**Research Framework**

According to the literature review, four variables were formed, consisting of 3 independent variables and one dependent variable. The independent variables consist of gold, bitcoin (cryptocurrency), and forex, while the independent variable only consists of the stock market (composite). The following is the framework for this research:

Figure 1. Research Framework




## Hypothesis

Commodities can also act as safe-haven assets, for example, gold. (Baur & Lucey, 2010) found that gold could be a safe haven in the extreme conditions of the stock market crash in America, Britain, and Germany. Furthermore, (Shahzad et al., 2020) research has proven that gold is an undeniable safe-haven asset for several G7 stock indices (Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States).

Gold has repeatedly been included in safe-haven assets (Boubaker et al., 2020; Bouri et al., 2020). (Reboredo, 2013) concluded from the results of his research that gold is an asset that can act as a safe-haven asset and a hedge. Next, gold is categorized as a Safe-Haven asset only for the US and European stock markets but not for other countries (Baur & McDermott, 2010). Other studies also show that in the early 1980s, gold was not a safe-haven asset (Bredin et al., 2015). It means that gold as a safe-haven asset is also changeable depending on the crisis period under study (Lucey & Li, 2015).

Even though assets were categorized as safe havens in the previous crisis period, they cannot be said to remain safe-haven assets in the next crisis period. Most people will choose gold to hedge against the assets they already have. However, researchers believe that gold will still be a safe-haven asset during the crisis caused by the COVID-19 pandemic since the continuous rise of gold prices.

$H_1$: Gold represents a safe haven asset for major Southeast Asia stocks market.

An asset that has recently been categorized as a safe-haven asset is cryptocurrency. Bitcoin is the best-known cryptocurrency and the first electronic money in the world, created by Nakamoto in 2008. Bitcoin is not an investment with a physical appearance; its value is not determined based on a country's economy but based on the security of an algorithm that tracks all transactions (Urquhart & Zhang, 2019). Furthermore, according to (Urquhart & Zhang, 2019) bitcoin can be used as a safe haven during market turmoil, specifically for Canadian

dollars, Swiss francs, and pounds. Conlon et al., 2020 revealed that Bitcoin and Ethereum could not act as safe-haven assets. They also explained that Tether, part of the cryptocurrency, can be used as a safe haven for the entire stock index of China, America, Italy, England and Spain.

(Dutta et al., 2020) revealed that bitcoin can only act as a diversifier. Furthermore, if an investor wants to minimize their portfolio risk, it is preferred to choose gold over bitcoin. Other studies have also revealed that bitcoin cannot be used as a safe-haven asset because it is very volatile and less liquid than other assets (Smales, 2019). (Shahzad et al., 2019) stated that bitcoin is a weak safe-haven asset. They further stated that the role of bitcoin as a safe-haven asset can vary depending on the time of day and differ across the stock market.

Previous research has given different results regarding the role of bitcoin as a safe-haven asset; several studies have shown that bitcoin can be a safe-haven asset, but other studies have revealed that bitcoin is a weak safe haven asset or cannot act as a safe haven asset. Therefore, following the concept that safe-haven assets in each crisis can be different, researchers believe that at the time of COVID-19, the role of bitcoin as a safe-haven asset could be different.

$H_2$: Bitcoin represents a safe haven asset for the major Southeast Asia stocks market.

Many studies have discussed the potential for diversification of various forex currencies, especially after several financial crises (Habib & Stracca, 2012; Ranaldo & Söderlind, 2010). Previously, it was discussed that gold and bitcoin are often referred to as safe-haven assets. Still, apart from these two investments, the asset that has a role as a safe-havens during market turbulence is the currency exchange rate. According to (Kopyl & Lee, 2016), he explained that the US Treasuries and the Japanese Yen are very strong safe havens when financial instability occurs. In addition, Fatum & Yamamoto (2016) also found that the Japanese Yen (JPY) is the safest currency appreciated in the market turmoil and can be categorized as a safe-haven asset.

The currencies of big countries that have closed economies can also provide good protection if the world is facing a turmoil market (Habib & Stracca, 2012). Still talking about currencies, Wen & Cheng (2018) researched emerging markets, specifically Brazil, Chile, Czech, Russia, South Africa, China, India, Malaysia, and Thailand. It was found that the role of the US Dollar as a safe-haven asset is much better than gold. Another study by Ranaldo & Söderlind (2010) revealed that the Japanese Yen and Swiss Franc currencies strengthened compared to the US dollar. Finally, Coudert et al. (2014) researched 26 countries from 1999 to 2013 and found that the US dollar and the Japanese yen were safe-haven currencies. They also suggested that the Swiss franc did not meet the safe-haven assets criteria.

Just like other assets, researchers believe the role of forex can change over time and conditions. However, even in the COVID-19 pandemic, forex can still be a safe-haven asset. Therefore this study will examine the role of forex as a safe-haven asset during the COVID-19 pandemic.

$H_3$: US Dollar forex represents a safe haven asset for major Southeast Asia stocks market

## RESEARCH METHOD

The data used in this study are daily data from January 2, 2020 - September 30, 2020. We use the data from January 2020 since the covid 19 virus has been spreading since January 2020. The data used include the closing price of the Jakarta Composite Index (JCI) on the Indonesia Stock Exchange, the Kuala Lumpur Composite Index on the Kuala Lumpur Stock Exchange, the Strait Time Index on the Singapore Stock Exchange, PSEi on the Philippine Stock Exchange. All stock exchange data is obtained from (Yahoo Finance, 2020). In addition, this study also uses daily data from the closing prices of gold, bitcoin, and forex (USD/IDR, USD/SGD, USD/MYR &USD/PHP), which are obtained from (CoinMarketCap, 2020; Investing, 2020) respectively.

The variables used in this study are daily data returns from:

**Gold**

$$R_{Gold,t} = \frac{Gold_t - Gold_{t-1}}{Gold_{t-1}}$$

Where:
$Gold_t$ = Closing price of gold on day t
$Gold_{t-1}$ = Closing price of gold on day t-1

**Bitcoin**

$$R_{Bitcoin,t} = \frac{BTC_t - BTC_{t-1}}{BTC_{t-1}}$$

Where:
$BTC_t$ = Closing price of Bitcoin on day t
$BTC_{t-1}$ = Closing price of Bitcoin on day t-1

**Forex (USD)**

$$R_{Forex,t} = \frac{Forex_t - Forex_{t-1}}{Forex_{t-1}}$$

Where:
$Forex_t$ = Closing price of forex on day t
$Forex_{t-1}$ = Closing price of forex on day t-1

**Stock Market**

$$R_{Composite,t} = \frac{Composite_t - Composite_{t-1}}{Composite_{t-1}}$$

Where:
$Composite_t$ = Closing price of index on day t
$Composite_{t-1}$ = Closing price of index on day t-1

In this study, the analysis used is GARCH (1,1). The GARCH model is the result of the development of the Autoregressive Conditional Heteroscedasticity (ARCH) model. In time series data analysis, the ARCH model was developed to avoid high-order possibility based on the parsimony principle; therefore, in 1986, a model was developed, namely the Generalized Autoregressive Conditional Heteroskedasticity (GARCH) by (Bollerslev, 1986). The equation of the GARCH model that will be used in this study is as follows:

$$R_{Gold/Bitcoin/Forex} = \alpha + \beta_1 R_{Composite} + \beta_2 R_{Composite(Q10\%,5\%)} + \varepsilon_t$$

With:

$$\varepsilon_t = \Phi_t \varepsilon_{t-1} + \ldots + \Phi_t \varepsilon_{t-p} + \eta_t$$

$$\eta_t = \sigma_t \epsilon_t$$

$\sigma^2_t = \alpha_0 + \alpha_1 \eta^2_{t-1} + \ldots + \alpha_p \eta^2_{t-p} + \beta_1 \sigma^2_{t-1} + \ldots + \beta_q \sigma^2_{t-q}$

$\epsilon_t$ is free and identically distributed N(0,1) and free of the preceding conditions $\eta_{t-p}$

$R_{Gold/Bitcoin/Forex}$ = Return from Gold/Bitcoin/Forex

$R_{Composite}$ = Return from Stock Market Index

$R_{Composite(Q10\%, 5\%)}$ = Return Stock Market, 0 if it is higher than quantile 10% and 5%

Before performing GARCH analysis, firstly, the data should pass a stationary test (unit root test) using Augmented Dicker Fuller (ADF) (Enders, 2014; Greene, 2003).

# ANALYSIS

## Augmented Dickey Fuller (ADF)

TABLE 1. ADF TEST AT LEVEL, 1 AND 2 ORDER

| No. | Variables | Level | 1st Order | 2nd Order |
|---|---|---|---|---|
| 1 | Gold | -12.85021* | -8.002349* | -9.738306* |
| 2 | Bitcoin | -5.447917* | -8.947619* | -9.172913* |
| 3 | JCI | -4.778323* | -6.107970* | -8.689182* |
| 4 | KLCI | -8.132852* | -7.5229662* | -7.308749* |
| 5 | PSEI | -4.572999* | -8.470689* | -7.162800* |
| 6 | STI | -3.840804* | -6.488947* | -8.128260* |
| 7 | USD/IDR | -6.423048* | -7.502853* | -9.156552* |
| 8 | USD/MYR | -7.986446* | -6.0544683* | -7.682893* |
| 9 | USD/PHP | -16.37309* | -7.429203* | -8.146884* |
| 10 | USD/SGD | -6.212167* | -6.550369* | -7.111571* |

*Level of Significance at the 1%

*Source: Data Processing Results*

Data that is not stationary can produce error relationships between two variables (spurious result), making the results invalid. The results of the stationary data test are shown in Table 1. The table shows all data variables on the ADF test at the level, 1 order and 2 orders have a significant level of 1% level. This shows that all data used in this study meet the stationary requirements or do not have an indication of a unit root. Therefore, all data does not need special treatment and can be directly analyzed using the GARCH model. There are many types of GARCH that can be used to analyze, but for data that do not need any special treatment, it is recommended to use vanilla GARCH or better known as GARCH (1,1).

## GARCH (1,1)

Table 2 shows the results of the GARCH (1,1). Hedge shows an asset is negatively correlated or has no correlation with other assets in an average period of time. Then, Q10% and Q5% indicate whether an asset can act as a safe-haven asset or not, where Q5% indicates a market condition (crisis) that is more severe or worse than Q10%. Table 2 shows that USD can be a strong safe-haven asset for the Indonesian market (JCI), as shown through the estimated coefficient for Q10% and Q5%, which shows a negative sign at the 1% significant level. These indicate that when there is market turmoil, the USD movement is not in line with market movements. In addition, USD can act as a hedge for Indonesia because the coefficient of estimation results is negative at a significant level of 1%.

Meanwhile, gold and bitcoin cannot be safe-haven assets in Indonesia during the crisis caused by COVID-19. It can be seen in the coefficient of estimation, which shows a positive sign at Q10% and Q5%. Bitcoin cannot act as a hedge for Indonesia because the coefficient of estimation shows a positive

sign or indicates that bitcoin tends to move in the same direction as JCI. However, gold actually shows that it can become a hedge for Indonesia even though it is not significant.

TABLE 2. GARCH (1,1) TEST

| Assets | | JCI | KLCI | STI | PSEI |
|---|---|---|---|---|---|
| GOLD | All | **-0.016082** | 0.127499** | 0.064897 | 0.043526 |
| | Q10% | 0.109952* | 0.197632 | 0.047941 | 0.096426*** |
| | Q5% | 0.143692 | 0.410368*** | 0.287481*** | 0.075392*** |
| BITCOIN | All | 0.035139 | 0.069463 | **-0.424425** | 0.042972 |
| | Q10% | 0.354418** | 1.210307*** | 0.207299 | 0.636798*** |
| | Q5% | 0.557801*** | 0.977996*** | 0.746956* | 1.004305*** |
| USD | All | **-0.102800*** ** | **-0.136275*** ** | **-0.020094** | **-0.032638*** ** |
| | Q10% | **-0.206990*** ** | **-0.129440*** ** | 0.005886 | **-0.002302** |
| | Q5% | **-0.229863*** ** | **-0.165441*** ** | 0.009086 | **-0.002895** |

* Significance at 10%, ** Significance at 5%, *** Significance at 1%

*Source: Data Processing Results*

USD is also a solid safe-haven asset and can be a hedge for the Malaysian stock market (KLCI) since USD has a negative and significant coefficient of estimation at Q10% and Q5%, while Bitcoin and gold are not. Bitcoin and gold have positive coefficients, meaning their movement tends to be in the same direction as the KLCI. Unlike Indonesia and Malaysia, USD in the Singapore stock market (STI) does not act as a safe-haven asset as at the levels of Q10% and Q5%, USD shows a positive coefficient, although not significant. However, USD can still act as a weak hedge for Singapore. Just like in Indonesia and Malaysia, gold and bitcoin can not serve as safe-haven assets in Singapore. Bitcoin can be a weak hedge in Singapore, which means that bitcoin and STI move in opposite directions. Unlike gold, bitcoin cannot be a hedge for Singapore.

Gold and bitcoin also cannot become safe-haven assets and hedges during the economic crisis caused by COVID-19 in the Philippines (PSEI). However, USD can act as a strong hedge for the Philippines since it has a negative estimation coefficient with a significant level of 1%. Therefore, just like Indonesia and Malaysia, USD can also become a weak safe-haven asset for the Philippines during market turbulence caused by COVID-19.

**Discussion and Implication**

Based on the results in the GARCH table (1,1), it can be seen that gold is not a safe-haven asset during the crisis due to COVID-19. The results of this study are in accordance with Cheema et al. (2020) who also explained that gold cannot be used as a safe-haven asset during COVID-19. In addition, this is not the first time that gold, known as a safe-haven asset for many crises, has not become a safe-haven asset. It can be seen by Baur & McDermott (2010) shows that gold cannot be a safe-haven asset for Australia, Canada, Japan, and some developing countries such as BRIC countries. Furthermore, gold can only be a hedge for Indonesia.

Furthermore, this may occur because investors lost confidence in gold as a safe-haven asset due to the 45% drop in gold prices in 2011 - 2015 (Cheema et al., 2020), and the price volatility of gold. The volatile price of gold itself was caused by the movement of the US Dollar, which also continued to increase. A study by Arfaoui & ben Rejeb (2017) found an inverse relationship between the price of gold and the US Dollar. If the US Dollar has increased, then the price of gold has decreased, and vice versa. Furthermore, investors also have alternative investment choices with more variants, more liquid, safer, and more stable during this COVID-19. In addition, research (Baur & Lucey, 2010; Capie et al., 2005; Worthington & Pahlavani, 2007) also reveals that several things affect the price of gold, such as inflation, bonds prices, crude oil prices, so gold cannot be used as safe-haven assets. Also, it was caused by the deflationary conditions experienced by several countries, especially in Southeast Asia in 2020.

It can be seen from Table GARCH (1,1) that bitcoin is not a safe-haven asset during the crisis caused by COVID-19 but can be a hedge for Singapore. This study's results follow the findings made

by (Cheema et al., 2020; Conlon & Mcgee, 2020; Dutta et al., 2020; Smales, 2019) where they also argue that bitcoin cannot be a safe haven asset in a COVID-19 crisis. Bitcoin price movements are very volatile and not liquid, and the bitcoin market volume is still too small compared to traditional financial markets such as stocks. Furthermore, there is a low level of investor confidence in investing in bitcoin since there is no underlying asset that can guarantee bitcoin. Investors also prefer to put their money in risk-free investments.

The following result, the US Dollar has a different impact than gold and bitcoin. It is shown in the GARCH (1,1) tabel US Dollar can be a safe-haven asset in Indonesia, Malaysia, and the Philippines. However, the most surprising finding of this study is that the US Dollar cannot be a safe-haven asset for Singapore. Singapore Dollar is strengthening against the US Dollar due to several reasons. First, there are indications that investors are interested in investing in Singapore due to the simplicity of existing regulations, tax incentives, and the stable political situation. Second, the death rate caused by COVID-19 in Singapore is low compared to other countries and finally, because of the intervention carried out by The Monetary Authority of Singapore (MAS), which regulates the Singapore Dollar.

Furthermore, there are several reasons the USD can act as a safe-haven asset in the crisis due to COVID-19. First, seen from the US unemployment rate data in April - November, it experienced a pretty drastic decline (Bureau of Labor Statistics, 2021) which caused conditions for the US economy is getting better. Second, US government bonds whose prices rise from August 2020 until the middle year of 2021. The results of this study are also supported by previous research, which states that the USD can be a safe-haven asset for several countries such as Malaysia, Thailand, Brazil, Chile, Czech, Russia, South Africa, China, India, and specifically the ability of USD as a safe-haven asset is stronger compared to gold (Wen & Cheng, 2018).

These findings also agree with (Baur & Lucey, 2010; Bredin et al., 2015; Lucey & Li, 2015), that these safe-haven assets can change depending on the country and the time of the crisis. We can see this by comparing the safe-haven assets in 2008, where that year, the Global Financial Crisis (GFC) was caused by the Subprime Mortgage. According to research conducted by Cheema et al. (2020) found that during the Global Financial Crisis, the US Dollar became a safe-haven asset for nine countries except for the United States. Furthermore, they also found that gold was a safe-haven asset during the GFC period. Another crisis was the Asian Financial crisis in 1997-1998. It did not clearly indicate whether gold was a safe-haven asset during the crisis. Finally, the crisis caused by the stock market crash in October 1987 shows that gold is a strong safe-haven asset only for the United States and Canada (Baur & McDermott, 2010).

**Limitation and Futures Research**

This study has several limitations, which are influenced by the situation and circumstances during the COVID-19 pandemic. The first limitation lies in the short research timeframe, which is only from January to September 2020, so the data used in this study is relatively short. This research only examines variables such as gold, bitcoin, and forex (USD), where there are other variables that can be investigated.

Further research is suggested to compare safe-haven assets in the financial crisis caused by COVID-19 with financial crises that have occurred previously in Southeast Asian countries. In addition, safe-haven research can be done within a larger time frame or add several other variables such as Treasury Bill, Treasury Bonds, Tether, Swiss Franc, or Japanese Yen.

## CONCLUSION

This research examines the performance of gold, bitcoin, and forex (US Dollar) as safe-haven assets from losses caused by the collapse of the stock market in Southeast Asia during the COVID-19 pandemic. The results of this study indicate that the US Dollar can protect and act as a safe-haven asset for several countries in Southeast Asia, such as Indonesia, Malaysia, and the Philippines, but this does not work for Singapore. Furthermore, bitcoin and gold cannot be safe-haven assets for countries in Southeast Asia. Investors have lost confidence in gold as a safe-haven asset since the price of gold fell as deep as 45% from 2011 - 2015. In addition, the bitcoin price is very volatile and has a small market

volume compared to traditional financial markets such as stocks. Furthermore, the low level of investor confidence in investing in bitcoin is caused by there being no underlying asset that can guarantee bitcoin.

Furthermore, at this time, investors have been given complete access to other more liquid, stable, safe investment instruments that have less risk, such as government bonds. This paper will help investors to gain profit and minimize their losses. It also helps fund managers protect their portfolio assets' value from the stock market crash. On the other hand, this can encourage the government and central bank to expand more investment variants that are more liquid, stable, and safe.

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