

Sentiment Analysis on Gold Currency

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This research was conducted to examine the Gold Currency in the scope of the economy in terms of scientific research in published journals and indexed by Scopus. The method used is sentiment analysis from secondary data in the form of 100 journals published in the last three years and then processed using Ms. software. Excel 2016 and SentiStrength. The results show that research on Gold Currency in the scientific literature has increased. The sentiment analysis results show a tendency for negative perceptions in the scientific literature towards Gold Currency, with negative high sentiment of 1% and negative sentiment of 36%. The neutral sentiment at 43%, then positive sentiment at 20%. The benefit of this research is for literature material and considerations related to Gold Currency. As well as efforts to find out the threats, negative perceptions, and shortcomings of Gold Currency. In addition, to find out positive perceptions, advantages and benefits of Gold Currency.

Keywords: Sentiment Analysis; Gold Currency; Negative sentiment

OPEN ACCESS

ISSN 2715-6346 (Online)

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Received: 19 October 2020

Accepted: 7 November 2020

Published: 31 December 2020

Citation:

(2020) Sentimen Analysis on Gold
Currency
Ekonomi Islam Indonesia. 2:2.

INTRODUCTION

Gold has one quality in common with money, it is a store of value. Gold, on the other hand, is preferable to other financial assets such as currency since its value is not dependent on future debt and revenues and there is no chance of default (Muhammad-Bashir et al., 2015). Investors want avenues of certainty for their assets in times of instability and uncertainty, and gold provides certainty in terms of financial safety and security (Saharuddin & Rama, 2017). Its round-number price demonstrates that it is psychologically helpful and durable in the face of uncertainty (Kristoufek & Vosvrda, 2016). For investors, it has been enticing since, unlike other commodities, it is long-lasting, transportable, acceptable, and easily verifiable.

For many years, gold has been seen as a safe haven from market volatility as a marketable financial asset. Gold is frequently referred to be a safe-haven asset in market reports (Joy, 2011). Furthermore, Gold is an excellent choice for a pilot study of the impact of commodity price changes on major currency exchange rates. Gold is a relatively uniform commodity that is traded in a well-organized spot and futures market practically continually (Sjaastad & Scacciavillani, 1996). Gold also serves as a safe haven for most of the world's most prominent stock markets (Baur & McDermott, 2010). However, for other emerging markets, gold has proven to be a weak shelter. It may thus be inferred that gold, as a safe haven asset, plays a little function in emerging markets (Baur & McDermott, 2010). In certain circumstances, gold is not a good long-term inflation hedge (Hoang, Lahiani, & Heller, 2016).

Gold was used as a hedge until the nineteenth century since it was the foundation of the monetary system in the form of the 'gold standard.' Following the Bretton Woods failure, which established the exchange rate system in the 1970s, a pure fiat money-based international monetary system was introduced, with no gold backing. Since then, it has been evaluated to see if it can serve as an internal and external hedge. Internal hedge refers to the movement of gold prices in regard to other commodity indices, whereas external hedge refers to the movement of gold prices about changes in currency prices (i.e., exchange rate). For example, when a currency depreciates, commodity prices rise in that currency, as does the price of gold (Vasantkumar, 2019). Currency movements in large currencies have an inflationary (deflationary) impact on commodity prices in major currency countries, as well as small currency countries. Investments in gold, which are less subject to exchange rate risk, are a good way to hedge against such swings (e.g., dollar depreciation and inflation) (Wang & Lee, 2021).

Gold has regularly acted as a hedging asset against the dollar (Joy, 2011). Taskinsoy (2019) investigate the exchange rate variations of the Sterling pound/the US dollar and the yen/the US dollar with

gold to assess gold's potential to hedge against the dollar. They discuss gold's ability to act as a hedge in both the short and long term. The availability of a variety of financial products that monitor gold prices, according to Reboredo (2013), gives them safe options against the exchange rate. Similarly, Reboredo & Rivera-Castro (2014) uses a copula technique to investigate whether gold functions as a hedge or a safe haven against the US dollar, and finds gold to be both a hedge and a safe haven.

Apart from the advantages and role of gold in the world economy, there are different perceptions regarding gold being used as currency. There are various perceptions regarding gold currency. Where the thing that underlies the debate is the advantages and disadvantages if gold is used as a currency. Therefore, it is important to examine the value of the perception of literature publications on Gold Currency to become additional literature and as material for evaluation and consideration for the monetary system to review and consider gold currency for the economy. As well as efforts for things that need to be evaluated from threats, negative perceptions, and the lack of Gold Currency itself. In addition, this research is also important to know the good side, advantages, and positive perceptions of gold currency.

LITERATURE REVIEW

Since the 1970s, the relationship between gold prices and inflation has been studied extensively. Even though gold has not been a currency since the end of the Bretton Woods fixed exchange system on August 15, 1971, it continues to play an important function as a real, tangible, and safe haven asset. According to recent research, gold can be a beneficial investment in both emerging and developed nations, especially in times of market volatility (Muhammad-Bashir et al., 2015; Taskinsoy, 2019; Vasantkumar, 2019). Furthermore, central banks hold gold in their monetary reserves at all times. These statistics demonstrate that gold continues to play an essential role in today's global economic system (Tanin et al., 2021).

Some studies have looked at gold's effectiveness as an inflation hedge (Kristoufek & Vosvrda, 2016; Mitchener & Weidenmier, 2015), while others have looked at gold's safe-haven status about stock market swings (Joy, 2011) and oil price variations (Mundell, 2012). Iqbal (2017) have looked into the role of gold as a currency hedge or investment safe haven. Hoang et al., (2016) investigated gold's appeal to investors and its hedging capabilities, discovering asymmetric risk diversification for investors' gold holding positions. Reboredo & Rivera-Castro (2014) discovered that currency appreciations or depreciations had a significant impact on gold prices. Reboredo (2013) proved the positive association between the price of gold and the depreciation of the US dollar, making gold an effective

USD hedge.

In adverse market conditions, a weak (strong) safe haven is described as an asset that is uncorrelated (negatively correlated) with another asset (Saharuddin & Rama, 2017). However, gold is not always a safe haven for stocks; in fact, it is only a safe refuge for stocks when the stock market is severely negative and the characteristics of that safe haven are transient (Iqbal, 2017). Because its value is not reliant on debt and future revenue without the possibility of default, gold is preferable to other financial assets such as currencies (Aftab, Shah, & Ismail, 2019). However, gold prices denominated in major currencies are among the least efficient while very minor currencies are among the most efficient (Kristoufek & Vosvrda, 2016). Gold's utility in a currency portfolio, given that it demonstrates the efficiency of hedging in decreasing portfolio risk, as well as for lower VaR and superior performance in terms of the investor's loss function when compared to a currency-only portfolio (Reboredo J., 2013).

According to Pukthuanthong & Roll (2011), currencies have less impact on commodity prices than commodity prices have on currencies. Furthermore, exchange rates assist to explain the volatility of oil and metals, and they do not establish a long-term equilibrium link between commodity returns and changes in exchange rates, implying that precious metals should be diversified in the long run. Hoang, Lahiani, & Heller, (2016) in their research found several points. First, gold does not serve as a long-term inflation hedge. Second, only the United Kingdom, the United States, and India have gold as a short-term inflation hedge. Third, gold's position as an inflation hedge is determined by the country's environment, the gold market's features, and the data's temporal frequency. Fourth, there is no long-term equilibrium between gold prices and CPI in China, India, and France, to name three examples.

RESEARCH METHOD

This study uses data in the form of research journals and other research publications during the period 2019 to 2021 which have been published regarding the theme of Gold Currency perception in economic research and is indexed by Scopus. The methodology used in this research is a qualitative method approach with descriptive statistics of literature studies of 100 publication papers related to Gold Currency.

The approach used in this research is sentiment analysis or opinion development. Sentiment analysis is a research commonly used to measure public sentiment on a theme issue. Sentiment Analysis is a branch of research in the Text Mining domain which began to be widely used in early 2002. Sentiment analysis is research that is commonly used to measure public sentiment on a theme. The researcher uses SentiStrength software

which is widely used in sentiment analysis research.

Simply put, text analysis is meant for word processing and does not process numbers. Sentiment analysis consists of three main subprocesses, namely: Subjectivity Classification, Detection Orientation and Holder's Opinion & Target Detection. To date, most of the research in the area of sentiment analysis has been devoted to English because there are so many tools/resources for English. Some of the frequently used sources for sentiment analysis are SentiWordNet and WordNet. The basic task in sentiment analysis is to classify the polarity of the text in the level of documents, sentences, or features and aspects, whether the opinions expressed in documents, sentences and feature entities have positive, negative or neutral aspects.

Data in the form of trends in the development of the number of digital banking theme paper publications and the top authors who are the locations of research objects related to published articles were analyzed using Microsoft Excel 2016. As for measuring the sentiment map on the results of the Gold Currency perception questionnaire, researchers used SentiStrength software which is widely used in sentiment analysis research.

RESULT AND DISCUSSION

Meta-Analysis

This section describes the number of published papers on the theme of perception of Gold Currency. In the last 122 years, there have been 937 publications on Gold Currency indexed by Scopus, from 1899 to 2021. Table 1 describes the distribution of papers per year that varies over the last 122 years with a range of 0 to 75 papers. The most widely published Gold Currency perception theme papers were in 2020 and 2018, with the number of publications each year being 75 papers and 66 papers. The minimum number of publications was in 1990-1997 and the year that can be seen from the graph or table, where the number of publications in that year was not indexed by Scopus.

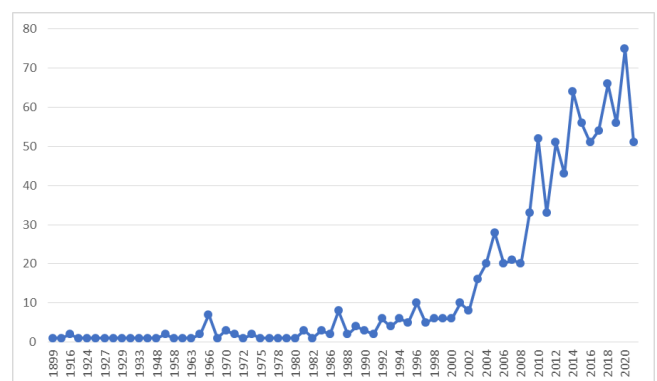


Figure 1: Number of Gold Currency Perception Theme Papers

Table 1: Number of Digital Banking Perception

Theme Papers	
Year	Number Of Articles
1899	1
1908	1
1916	2
1922	1
1924	1
1925	1
1927	1
1928	1
1929	1
1932	1
1933	1
1941	1
1948	1
1949	2
1958	1
1960	1
1963	1
1964	2
1966	7
1968	1
1970	3
1971	2
1972	1
1973	2
1975	1
1977	1
1978	1
1979	1
1980	1
1981	3
1982	1
1983	3
1986	2
1987	8
1988	2
1989	4
1990	3
1991	2
1992	6
1993	4
1994	6
1995	5
1996	10
1997	5
1998	6
1999	6
2000	6
2001	10
2002	8
2003	16
2004	20

2005	28
2006	20
2007	21
2008	20
2009	33
2010	52
2011	33
2012	51
2013	43
2014	64
2015	56
2016	51
2017	54
2018	66
2019	56
2020	75
2021	51
Total	937

Based on the tables and graphs above, there is a tendency for papers published with the theme of Gold Currency to increase. Where almost every year there are publications indexed by Scopus. There was a significant increase from 2019 to 2020. However, there was also a significant decrease from 2020 to 2021. The Scopus indexed publication data related to Gold Currency used in this study amounted to 100 papers that were screened and focused on the last three years, namely 2019-2021.

Sentiment Analysis

The author tries to calculate the sentiment of published journals that discuss Gold Currency. As is well known, sentiment analysis is a research commonly used to measure public sentiment on a theme. As a secondary data source, research was conducted on 100 pieces of literature. The tool used in this research is SentiStrength as a tool for processing data obtained from published journals indexed by Scopus. Then the results obtained are opinions classified into 5 types of ranking: namely opinions that are high positive (very good), positive (good), neutral (neutral), negative (bad), and high negative (very bad). The results of sentiment analysis on Digital banking which are divided into 5 types of categories can be seen in the following figure:

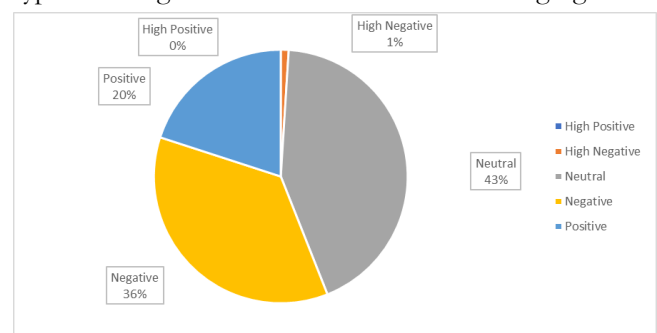


Figure 2: Sentiment Analysis Result

From the picture above, it can be seen that the existence of Gold Currency in the published economic

literature and indexed by Scopus is quite a lot and has various sentiments according to the grouping of SentiStrength, namely the very good category (high positive) at 0%, then positive sentiment, namely as much as 20%, bad sentiment (negative) as much as 36%, very bad sentiment (high negative) 1% and the rest have a neutral sentiment (neutral) 43%.

Sentiment results are obtained from the opinions expressed by the researchers in their research, then the words in the form of written texts are ranked from very negative (-5) to very positive (5) intervals with a value of 0 being neutral. The opinion score of the sentence submitted by the respondent is calculated by adding up the sentiment score of each word listed in SentiStrength. Positive sentiment is the opinion of researchers who are positive and tend to be optimistic in responding to the existence of Gold Currency by looking positively at the existence of Gold Currency and supporting the development of Gold Currency. Meanwhile, negative sentiment is a negative opinion and tends to express criticism in reviewing the development of Gold Currency, or in other words, its existence is still not optimal and requires improvement, and states that Gold Currency has not been applied professionally for various reasons.

These data indicate that the majority of researchers have more neutral sentiments in responding to the existence of Gold Currency. The next sentiment that is quite a lot is negative sentiment. Then the next biggest portion is positive sentiment. There is a high negative response with a small proportion.

FINDING

Table 2 summarizes the research findings, which cover the main characteristics that influence positive and negative public sentiment, based on 100 data articles published on the topic of Gold Currency over the past three years.

Table 2: Positive and Negative Public Sentiment

Positive	Negative
<ul style="list-style-type: none"> • Risk management • Hedging strategies • Poor safe haven • The price of gold is generally constant. 	<ul style="list-style-type: none"> • Gold prices in major currencies are less efficient • Gold as a hedge only in certain countries • Rare quantity • Gold's value is relatively high, making transactions with lesser amounts problematic. • Incite fraud by reducing gold content or counterfeiting gold.

The results of this study find the level of sentiment analysis of various published papers in

assessing opinions about the existence of Gold Currency. Neutral sentiment dominates with a percentage yield of 43%. This shows that there is still a knowledge gap about Gold Currency. This is a challenge for every element involved in the field to increase the quantity and quality of Gold Currency. In addition, educational facilities that are suitable and easily accepted by all parties related to Gold Currency are also needed so that there is no bias in the law and practice of the gold currency itself.

Many studies on Gold Currency have been carried out based on a literature review. Sentiment analysis provides an overview of responses and opinions about Gold Currency. However, Gold Currency is still a debate, where there are pros and cons related to it. Sentiment analysis results show that high negative sentiment is 1% and negative is 36%. This shows that the negative perception of Gold Currency is quite high. This means that there are still many pessimistic perceptions and do not agree with Gold Currency. This negative perception is based on the risk and weakness of the Gold Currency. The limited amount of gold, even rare enough, can threaten a country's gold supply. As precious metal and a non-renewable resource, limited gold reserves will find it difficult to keep up with world economic growth. In addition, the value of gold is high enough to be used as a standard of exchange rate and a means of payment that applies in people's daily lives. This high value makes it difficult to serve transactions that are worth less than the value of gold. The implementation of this system will also trigger the emergence of individuals who commit fraudulent acts, such as reducing gold content or even counterfeiting gold. Gold is also a hedge only in some countries and is not comprehensive (Hoang, Lahiani, & Heller, 2016), therefore Gold currency is considered less efficient (Kristoufek & Vosvrda, 2016).

Positive sentiment is also ranked third, with a sentiment rating of 20% based on journal publications. This is because gold's value is very steady when compared to other precious metals. This can aid in currency stability, particularly when compared to exchange rates or international exchange rates. The international monetary system is likely to become more uniform as the gold value remains stable in practically all countries. Risk management and hedging techniques (Reboredo & Rivera-Castro, 2014), as well as being a terrible refuge (Joy, 2011), are some of the other reasons for gold currency's good opinion.

CONCLUSION

This study presents an overview of the meta-analysis in the form of tables and graphs of the main trends in the perception of Gold Currency in the last 122 years, from 1899 to 2021. Content analysis is carried out by the number of publications per year. The results show that the quantity of research publications on Gold

Currency has increased in the last 122 years so it has the potential to continue to be studied and developed.

Regarding sentiment analysis, the assessment of Gold Currency from various literature indexed by Scopus shows a neutral sentiment of 43%, while 20% shows positive sentiment and 36% shows negative sentiment. The remaining 1% shows a negative high sentiment. This shows that the scientific literature shows variations in sentiment, dominated by neutral sentiment, followed by negative sentiment, and then positive sentiment and negative high.

It should be noted that the purpose of this research is to present an overview of the perception of Gold Currency from the Scopus indexed scientific literature, but the limitation is only in publications from 2019 to December 2021. The benefit of this research is for literature material and considerations related to Gold Currency. As well as efforts to find out the threats, negative perceptions, and shortcomings of Gold Currency. In addition, to find out positive perceptions, advantages and benefits of Gold Currency. This research has been carried out using specific meta-analytical indicators and sentiment analysis so that readers can get a general representation of the most significant data. However, the results presented are still dynamic and may change over time, with new trends emerging or variables increasing and decreasing in the future.

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