Sentiment Analysis on Islamic Capital Market during Covid-19 Pandemic

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This research was conducted to examine the Islamic capital market during the COVID-19 pandemic in Indonesia and in terms of scientific research in the journal published by Dimension. The method used is descriptive bibliometric statistical analysis and sentiment analysis from secondary data in the form of 203 papers published in the last 3 years, 2020 to 2022, then processed using VOSViewer, Microsoft Excel 2019 and SentiStrength. The results showed that bibliometric mapping was divided into 3 clusters; cluster 1 consists of 8 topics, cluster 2 consists of 11 topics and cluster 3 consists of 7 topics. Sentiment analysis from the literature shows good sentiment (positive) by 30%, bad sentiment (negative) by 21%, neutral sentiment by 48%, and the rest has a High Negative sentiment of 1%. This study found that during the pandemic the Islamic capital market trend fluctuated but still showed positive performance.

Keywords: Islamic Capital Market, Sentiment Analysis, Bibliometrics

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INTRODUCTION

The coronavirus outbreak has become an international disaster and is spreading all over the world. At first this phenomenon did not affect the capital market, but with more and more confirmed victims, the capital market reacted negatively. This phenomenon has a significant impact on the economy and global financial markets respond with dramatic stock price movements (Fadhel, Adrianto, and Alfarisi 2022).

According to Suryo Utomo as Director General of Taxes of the Ministry of Finance which was released in Republika on July 15 2020, he revealed that there were three major impacts of the corona virus on the existing economy, namely the first impact would result in people's household consumption or people's purchasing power would increase. fell quite deeply because household consumption and people's purchasing power are the backbone of 60 percent in an economy. This happened because many people lost their jobs due to the co-19 pandemic (Sholiha 2020).

The second impact is that the Covid-19 pandemic will result in weak investment due to existing and long-lasting uncertainty and impact on business cessation. Then the third impact is the weakening of the world economy, causing a decline in commodity prices and the cessation of exports by Indonesia to several countries (Sholiha 2020).

An economic development in a well-known country cannot be separated from the capital market. The Islamic capital market functions as an investment medium for Muslims in the capital market which prioritizes Islamic principles. The Islamic capital market has its own characteristics such as the prices given are still within reasonable limits, the information provided is accurate, free or far from the words usury, gharar, as well as gambling or transactions that violate sharia rules. Shares traded on the Islamic capital market must come from issuers who comply published sharia criteria and obligations should use mudarabah, musyarakah, ijarah, istisna' and salam (Lestari 2020).

During the Covid-19 period, Islamic stocks were able to survive even though the economy was down because Islamic stocks had transaction power so they remained stable and Islamic instruments were less volatile. Hasan stated that Islamic stocks were much better at dealing with crises and economic recessions, which can be seen from the management and risk perspective when compared to other companies that apply conventional principles (Lathifah et al. 2021).

In general, sharia stock transactions have increased and conventional stocks have decreased amid the current pandemic conditions (Siregar, 2020). Such as stocks in the consumer goods sector, especially in the pharmaceutical sector, because at a time like this, people buy a lot of drugs, which has an impact on several pharmaceutical companies. The shares of pharmaceutical companies that experienced an increase were PT Indofarma Tbk. (INAF) and PT Kimia Farma Tbk. (KAEF), these two companies are subsidiaries of PT Bio Farma. It turned out that these pharmaceutical stocks strengthened due to positive sentiment that Bio Farma will produce 250 million doses of vaccine and will cooperate with or engage INAF and KAEF in distributing the Covid-19 vaccine to various countries (Lathifah et al. 2021).

The formulation of the problem of this research is to find out what are the trends related to bibliometric analysis and sentiment analysis in scientific publications about the Islamic capital market during the Covid-19 period in Indonesia. Trends in the development of the theme of the perception of the Islamic capital market during the Covid-19 period were analyzed using VOSViewer, Microsoft Excel 2019 and SentiStrenght software to generate keyword trends.

Based on this background, this research is the first attempt to examine the perceptions of scientific literature on the theme of the Islamic capital market during the Covid-19 period. Among the possible benefits of this research is an understanding of how far market research perceptions evolve shari'ah shares in the world of research as illustrated by the selection of published articles. In addition, this study examines the meta-analysis of research patterns on the shari’ah stock market. This research framework, part two, offers a comprehensive summary of the literature review. The third section describes this technique in depth. In the fourth section, the findings of the descriptive study are presented and reported. The final section of the paper provides a summary of the research.

LITERATURE REVIEW

Corona Virus Disease-19 or now known as COVID-19 is a virus that was first discovered in Wuhan, China which spread very quickly and caused various deadly diseases (Setianni 2020). The Corona virus outbreak has become an international disaster and has spread to all corners of the world. At first this phenomenon did not affect the capital market, but with more and more confirmed victims, the capital market reacted negatively. This phenomenon has a significant impact on the economy and global financial markets respond with drastic stock price movements (Fadhel,
Adrianto, and Alfarisi 2022).

In the Capital Market Law Number 8 of 1995, the definition of capital markets is explained specifically, as activities related to public offerings and securities trading, public companies related to the securities they issue, as well as institutions and professions related to securities (Sholiha, 2020). Whereas for the Islamic capital market are public offerings (Lestari, 2020) and activities related to securities trading, while public companies are related to securities issued and securities-related institutions and professions that operate in accordance with Islamic Sharia principles (Sholiha, 2020).

The principle of the Islamic capital market is clearly different from the conventional capital market. A number of sharia securities in the capital market have been publicly traded, for example sharia stocks, sharia bonds, sharia mutual funds, and others. Mutual funds are defined as a container used to raise funds from the investor community which is then invested in a securities portfolio by investment managers (Lestari, 2020).

According to the Directorate General of Finance and Risk Management, the Ministry of Finance of the Republic of Indonesia, the Covid-19 pandemic has had a major impact on the Indonesian economy, such as tariffs, PNBP, natural resources, capital flows and reduced risk appetite. That is, self-isolation reduces consumption, Indonesia’s export performance of both goods and services, economic growth performance, sectors covered by accommodation, transportation, retail and manufacturing further reduce the current account deficit for goods and a decline in foreign tourism has the potential to increase the current account deficit by 4,444 or push CAD (DJP Kemenkeuri, 2020).

The Indonesian sharia capital market continues to experience significant developments. This growth was marked by an increase in the number of 4,444 sharia investors to 12,238 in 2016, or an increase of 150% from 4,908 investors compared to sharia investors in 2015. Currently, the Indonesian sharia capital market has two indices: the Jakarta Islamic Index (JII) and the Sharia Stock Index. Indonesia (ISSI). As of May 2017, there were 333 Sharia shares, 4,444 of which had a market capitalization of IDR 3,385 trillion (Setiawan, 2017).

METHODOLOGY

This study uses the Dimensions metadata (https://www.dimensions.ai) to analyze data from published papers and other scientific articles on the theme of the Islamic capital market during the Covid-19 period from 2020 to 2022. A qualitative approach combined with descriptive statistics for publications on the Islamic capital market is the methodology used in this study. According to Yusuf (2017: 328), a qualitative research method is an inquiry scheme or inquiry strategy that is concerned with exploring food, characteristics, symptoms, understanding, concepts, symbols, and descriptions of a phenomenon; using several ways and presented narratively. Descriptive qualitative research is a method of collecting, compiling, presenting research data in summary form provided that the data must be summarized in a consistent and acceptable manner, either in tables, graphs or graphical presentations, to serve as a basis for various assessments.

Sentiment analysis or opinion development is used to identify public sentiment on a particular issue. In its simplest form, text analysis is entered to work with words instead of numbers. Subjectivity categorization, detection orientation, opinion holders, and identification of targets are the three subprocesses of sentiment analysis.

In addition, the results of sentiment reviews can be expressed sentimentally as sad, happy, or angry to create research that can be a guide for forming perspectives on certain themes (Rusydiana & Marlina, 2020). This research was processed using Microsoft Excel 2019 and SentiStrength was used to calculate sentiment analysis maps for Islamic capital market research during the Covid-19 period.

The research data is the publication of a paper on the theme of the Islamic capital market during the Covid-19 period. Trends in the development of the theme of the perception of the Islamic capital market during the Covid-19 period were analyzed using the VOSViewer software to generate keywords and top authors (Rusydiana et al., 2021). Meanwhile, to measure sentiment maps in the publication of papers and public opinion on the theme of perceptions of the shari’ah capital market during the Covid-19 period, the SentiStrength software was used, which is widely used in sentiment analysis research. This software will assess each opinion expressed by respondents on a scale of -5 (very negative) to 5 (very positive).
RESULTS AND ANALYSIS

Graph 1 above illustrates the number of publications that have been published about the Islamic capital market during the Covid-19 pandemic. There were 203 publications published during the 3-year observation period, from 2020 to 2022, ranging from 57 to the peak of publication, which was 85. The most published articles on the Islamic capital market topic were in 2021, namely 85 articles, then in 2022 there were 67 and in 2020 was the lowest publication during the Covid-19 pandemic, namely 57 articles.

Bibliometric analysis

This section will display a graphical visual mapping of a publication with the theme of the Islamic capital market during the Covid-19 pandemic. Keyword mapping study findings are used to map the co-
occurrence of important or unique terms in a particular article. Mapping is a method for identifying items of knowledge and their configuration, dynamics, interdependence, and interconnections.

Science mapping is a technique for visualizing science subjects that is similar to bibliometrics. This is achieved by creating a landscape map on which scientific subjects can be shown. Figure 2 illustrates the findings of the joint word map network visualization for the publication of Islamic capital market themed publications during the Covid-19 pandemic in Indonesia.

![Figure 2: Keyword Mapping Visualization](image)

This mapping shows several keywords that often appear in Islamic capital market themed papers during the Covid-19 pandemic in the collection of data studied and their relationship with other keywords in 4 clusters, namely:

Cluster 1 colored red consists of 8 keywords: Capital Markets, Indonesia Stock Exchange, DSN MUI, Jakarta Islamic Index, Sharia Principles, Sharia Stocks, Indonesia and Sukuk.


Cluster 3 in blue color consists of 7 keywords: Sharia Bank, Capital, Islamic Bank, Existance, Islamic law, Profit, Sharia Capital Market and Transaction.

The colored circles are used to organize keywords which are divided into 3 clusters. The following mapping results will be obtained if categorized based on the year of publication, using purple, green and yellow color intervals. Longer years of publication are shown in a darker color, while lighter colors indicate a shorter year of publication.

This data can be used in determining keyword trends. Bibliometric analysis shows several keywords that are widely used from 2020 onwards, namely Islamic Capital Market, Indonesia Stock Exchange, Investment and Sharia Shares. Meanwhile, the keywords used most recently or in 2021 are Knowledge, Investment, Sharia Shares, Interest and Financial Literacy.
The keywords that appear the most are highlighted by a giant circle, using the same data as in the previous two images. The line relationship between keywords, on the other hand, shows how closely they are connected. Sharia Capital Market, Sharia Stock and Investment are therefore the most popular keywords.

The author's bibliometric mapping can also be obtained using the VOSViewer program, as shown in Figure 4 below. The more articles he publishes in Islamic capital market themed papers in his collection of studies, the bigger and brighter the halo shown by the name of the author.

Items (labels) that are designated the same as visible items are cluster density displays. Depending on the item density at the time, each item point has a different color. This shows that the color of the points on the map is determined by the number of objects connected to each other. This section is invaluable for understanding the overall structure of a bibliometric map by focusing on which parts of the items are deemed relevant to the analysis. The results interpret the authors who have written the most publications using this worksheet.
Based on these findings, a density map was generated, resulting from an analysis of all published Islamic capital market articles, both related and unrelated. When sorted by author, there are many clusters. Sufiati Anisa, Abriste Devi, Muhammad Farhan Qudratullah and Muhyidin are the authors who have published the most publications on Islamic capital, namely 4 documents.

**Sentiment Analysis**

The author tries to estimate sentiment towards the Islamic capital market during the Covid-19 pandemic in a research journal. Sentiment analysis is a type of study that is widely used to gauge public opinion on a topic. The analysis uses 203 research journals on the Islamic capital market during the Covid-19 pandemic from 2020 to 2022 as a secondary data source. SentiStrength, a tool for analyzing data obtained from journal publications, was used in this study.

This section describes the publication of articles based on journals from various national and international publications indexed by Dimensions. Among the 203 studies, research with the theme of Islamic capital markets during the Covid-19 pandemic was published in the following journals:

<table>
<thead>
<tr>
<th>Focus Study</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSF Preprints</td>
<td>38</td>
</tr>
<tr>
<td>Journal of Theoretical and Applied Islamic Economics</td>
<td>21</td>
</tr>
<tr>
<td>Journal of Islamic Economics and Business</td>
<td>9</td>
</tr>
<tr>
<td>Finansha- Journal of Sharia Financial Management</td>
<td>3</td>
</tr>
<tr>
<td>Scientific Journal of Islamic Economics</td>
<td>2</td>
</tr>
<tr>
<td>Syntax Literate Indonesian Scientific Journal</td>
<td>2</td>
</tr>
<tr>
<td>Journal of Management and Finance</td>
<td>2</td>
</tr>
</tbody>
</table>

Opinion findings are classified into five types of ratings based on journal papers connected to the Islamic capital market during the Covid-19 pandemic, including those with high ratings, positive (very good), positive (good), neutral (neutral), negative (bad), and high negative (very good), bad). The following figure shows the findings of sentiment analysis on the Islamic capital market during the Covid-19 pandemic, which are classified into five types of categories.

Based on the table above, there is a tendency for disparity in journal contributions in articles that discuss the Islamic capital market during the Covid-19 pandemic. Multidisciplinary topics such as Islamic economics, finance, management, marketing, business, law, etc. are all areas of research that are interested in discussing the Islamic capital market. Thus, various journals with various disciplines are presented in our data set, such as OSF Preprints, Journal of Theoretical and Applied Islamic Economics, Journal of Islamic Economics and Business, Finansha- Journal of Sharia Financial Management, Scientific Journal of Islamic Economics, Syntax Literate Indonesian Scientific Journal, Journal of Management and Finance, etc. However, it is possible that the number of articles may increase along with the development of science and the increasing trend of the Islamic capital market in the world of research.
Table 2: Top 5 Authors

<table>
<thead>
<tr>
<th>Authors</th>
<th>Number of Publications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sufiati Annisa</td>
<td>4</td>
</tr>
<tr>
<td>Abriste Devi</td>
<td>3</td>
</tr>
<tr>
<td>Muhammad Farhan Qudratullah</td>
<td>3</td>
</tr>
<tr>
<td>Muhyidin</td>
<td>3</td>
</tr>
<tr>
<td>Surya Ningsih Damanik</td>
<td>3</td>
</tr>
</tbody>
</table>

Table 2 lists the five most productive article authors with publications on the Islamic capital market during the Covid-19 pandemic in Indonesia in 2020-2022. Sufiati Annisa, Abriste Devi, Muhammad Farhan Qudratullah and Muhyidin published the most paper publications related to the Islamic capital market, namely 4 publications, then Surya Ningsih Damanik published 3 paper publications during the Covid-19 pandemic.

One of the studies written by Muhyidin (2020) with the title "Capital Market Index In Islamic Economic Perspective". This study aims to assess the operation of the Islamic capital market, whether it has been able to eliminate elements of gharar with certainty in practice in the field, as well as how the mechanism is carried out for this purpose. From the studies conducted, it can be concluded that the establishment of the Islamic capital market has shown significant efforts in eliminating gharar elements in its operations. This is done with the mechanism that all securities that enter the flow of the Islamic capital market go through a strict selection of the JII Islamic Sharia (Jakarta Islamic Index). In addition, the formation of the Jakarta Islamic Index (JII) changed its name to the Indonesian Sharia Stock Index (ISSI) which also helps operations in the Islamic capital market.

Table 3: Most Citations Publication

<table>
<thead>
<tr>
<th>Citation</th>
<th>Authors</th>
<th>Paper Name</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Zulchayra, Zahra; Ibrahim, Azharsyah; Fitria, Ana</td>
<td>The Effect of Socialization And Knowledge On Investment Interest In Sharia Capital Market</td>
<td>2020</td>
</tr>
<tr>
<td>3</td>
<td>Hardi, Spell Armaz</td>
<td>Islamic Philanthropy: Zakat on Shares in the Indonesian Sharia Capital Market</td>
<td>2020</td>
</tr>
<tr>
<td>2</td>
<td>Malkan; Kurniawan, Indra; Nurdin; Noval</td>
<td>The Effect of Knowledge About Sharia Capital Market On Interest In Share Investment In Sharia Capital Market</td>
<td>2021</td>
</tr>
<tr>
<td>2</td>
<td>Ramadhan, Good; Sutantri</td>
<td>The Correlation of the Merger of Three Sharia Banks and Public Awareness of Sharia Banking Products</td>
<td>2021</td>
</tr>
<tr>
<td>2</td>
<td>Rivo, Muchammad Choir; Ratnasari, Ririn Tri</td>
<td>Factors Affecting The Behavior Of Muslim Investors In Sharia Stock Investment Decisions</td>
<td>2020</td>
</tr>
</tbody>
</table>
Table 4 above lists the publications with the highest citations from each journal obtained from the Dimensions indexed metadata. The articles with the most citations were written by Zulchayra, Zahra; Ibrahim, Azharsyah; Fitria, Ana (2020) with the title "The Effect of Socialization And Knowledge On Investment Interest In Sharia Capital Market". This study discusses the extent to which the influence of socialization and knowledge on students' investment interest in the Islamic capital market. The results show that socialization and knowledge influence the investment interest of Banda Aceh students.

Furthermore, the author tries to calculate sentiment with the theme of the Islamic capital market during the Covid-19 pandemic published from 2020 to 2022 from the Dimensions indexed journal. As is well known, sentiment analysis is research that is commonly used to measure public sentiment towards a theme. The tool used in this research is SentiStrength as a data processing tool. Specific documents, both in articles, reviews, and conference articles related to the theme of the Islamic capital market during the Covid-19 pandemic, totaled 203 data sources.

![Figure 5: Category Percentage Sentiment Analysis](image)

We can see from the picture above that the existence of the Islamic capital market during the Covid-19 pandemic had a very positive (high positive) sentiment of 0%, followed by good (positive) sentiment of 30%, negative sentiment of 21% and very positive sentiment, bad sentiment (high negative) by 1%, and the remaining 48% have neutral sentiments.

The sentiment results above were obtained from the publication of journals about the Islamic capital market during the Covid-19 pandemic, then the abstract parts of the written text were sorted from very negative intervals (-5) to very positive (5) with a value of 0 neutral. The opinion score of the sentences submitted by the researcher in his journal is calculated by adding up the sentiment score of each word listed on SentiStrength.

Good (positive) sentiment is an abstract sentiment derived from literature that is positive and tends to be optimistic in response to the growth in the use of existing instruments in the Islamic capital market during the Covid-19 pandemic. Meanwhile, bad (negative) sentiment is an opinion that is negative and tends to be pessimistic in assessing the use of existing instruments in the Islamic capital market during the Covid-19 pandemic, or in other words there is still debate over the use and instruments available in Islamic capital market during the Covid-19 pandemic in Indonesian society.

In addition, the data above also shows that the majority of sentiment in the literature is more neutral in responding to the use of existing instruments in the Islamic capital market during the Covid-19 pandemic. However, we also find that the positive responses outnumber the negative responses. Therefore, this situation must be maintained and developed, one of which is by increasing the quantity of scientific literature literacy in indexed journals. With education on the use...
of existing instruments in the Islamic capital market in the field of Islamic finance and economics, it is hoped that it will be able to increase the insight and views of the Islamic capital market to the public.

### Table 4: Key Factors Affecting Sentiment

<table>
<thead>
<tr>
<th>Positive</th>
<th>Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perbankan Syariah</td>
<td>Saham Syariah</td>
</tr>
<tr>
<td>Sukuk</td>
<td>Investment</td>
</tr>
<tr>
<td>Sharia Securities</td>
<td>Investment Islamic Capital Market</td>
</tr>
<tr>
<td>Liquidity and efficiency</td>
<td>Principle of Sharia</td>
</tr>
<tr>
<td>Islamic Capital Market Institution</td>
<td></td>
</tr>
</tbody>
</table>

Table 4 above summarizes the research findings, which include the main characteristics that influence public sentiment, both positive and negative, based on articles published on the Islamic capital market in Indonesia for the last 3 years, namely from 2020 to 2022.

One of the articles that has positive sentiment is an article written by Fitriani (2020) entitled "Application of Sharia Principles in the Capital Market Industry Through Sots (Sharia Online Trading System)". The study analyzes sharia on the IDX offering exchange. The findings from this study reveal that securities that enter the Islamic capital market flow through strict selection on the sharia index, namely JII (Jakarta Islamic iIndex). Selection is part of the bidding process before sharia securities are offered to investors through the capital market. Among Sharia, the index is always maintained at the investor level, namely Islamic stocks and Islamic mutual funds. bonds (Sukuk) which are an inseparable part of capital market transactions.

Meanwhile, articles with negative sentiments are articles written by Ramadhan, Good; Sutantri (2021), entitled "Correlation of the Merger of Three Islamic Banks and Public Awareness of Islamic Banking Products", this study discusses the performance of I-2020, the total assets of BSI resulting from the merger reached IDR 214.6 trillion with a core capital of more than IDR 20.4 trillion. With the value of these assets and core capital, the merged Islamic bank will enter the top 10 banks largest in Indonesia in terms of assets in terms of market capitalization. However, public knowledge of Islamic banking products in Indonesia is not satisfactory. A survey conducted by the Financial Services Authority (OJK) in 2016 showed that only 21.84% of the public used sharia banking products. The research findings indicate that there are several factors that influence public awareness of sharia banking products including a. Lack of public awareness about Islamic banks, b. Islamic banking operational network which is still limited c. The socialization carried out by Islamic banks is still not massive enough to affect one's comprehension and mindset. This is one of the causes of negative sentiment towards the Islamic capital market.

Finally, the neutral sentiment that dominates the theme of the Islamic capital market can be seen from the article written by Ghafar & Tohirin (2010) entitled "Islamic Philanthropy: Zakat on Stock in the Indonesian Sharia Capital Market". This research examines the development of Islamic philanthropy in the last few decades which has contributed significantly to the expansion of the implementation of zakat objects. The object of zakatable assets has become the focus of discussion by several scholars, socio-religious institutions, and the government in accelerating the growth of zakat in Indonesia. The results of this study indicate that the implementation of zakat shares in the PMS-IDX is a mutually beneficial relationship for both parties, even though the pattern of relations in the program falls into the category of mediated-engagement strategies with a pattern of contributory and brokering philanthropy.

**CONCLUSION**

This study aims to find out how scientific literature has developed on the theme of Islamic capital markets during the Covid-19 pandemic for the last 3 years from 2020 to 2022, with 203 literatures equipped with a Digital-Object-Identifier (DOI) indexed Dimension. The findings of this study in terms of bibliometric analysis show that the research development map on the theme of the Islamic capital market during the Covid-19 pandemic in Indonesia during 2020 to 2022 has fluctuated. in 2022, Islamic capital market theme is divided into 3 clusters in scientific research. Cluster 1 consists of 8 topics, cluster 2 consists of 11 topics, cluster 3 consists of 7 topics, and the most popular keywords are Islamic Capital Market, Indonesia Stock Exchange, Investment and Sharia Shares.
The results of sentiment analysis research on the development of the Islamic capital market during the Covid-19 pandemic in Indonesia show various types of sentiment. The results of the study show that scientific literature has a very positive (high positive) sentiment of 0%, then a positive (good) sentiment of 30%. Meanwhile, negative sentiment was 21%, high negative sentiment was 1%, and the remaining neutral sentiment was 48%. This means that most of the literature on the Islamic capital market during the Covid-19 pandemic in Indonesia tends to have neutral sentiment.

It should be noted that the purpose of this research is to find out the sentiments of researchers towards the Islamic capital market during the Covid-19 pandemic as well as an overview of research trends with the theme of Islamic capital markets during the Covid-19 pandemic in recent years. Although research has been carried out using bibliometric analysis and sentiment analysis specifically so that readers get an overview of the most critical data on this theme, the results presented remain dynamic. They may change as new trends emerge as variables increase in the future. Suggestions for future research can be to do a comprehensive sentiment analysis with additional study aspects or use more diversified technologies to get more comprehensive results.

REFERENCES


