A SCIENTOMETRIC ANALYSIS IN ISLAMIC EQUITY MARKET: WHERE SHALL WE GO?

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Abstract: This study aims to determine the development and development of research trends in the published Islamic equity market and to shape research streams. The data used in this study were 449 scientific articles published in the period 1986-2021. The data sources used are scientific journals indexed on Dimension.ai using the search keyword "Islamic Equity Market". Data processing using R Bibliometric Biblioshiny packages. Research in the field of Islamic equity market is dominated by research based on scientific journals. The results found indicate the development of publications researching the Islamic equity market has increased significantly since 2014. This research provides information on the development of research with the theme of Islamic equity market as well as mapping popular streams in Islamic equity market research.

Keywords: Islamic equity market; development; journals; citations; investor

INTRODUCTION

The development of the capital market is increasingly rapid in a globalized economic framework, this makes the capital market able to respond to many situations and conditions both theoretically and empirically. In this theoretical and empirical study, a number of co-movement developments can be found between the development of equity markets in a number of countries, both in the equity market and bond market (Dewandaru et al., 2013; Firmansyah & Maulana, 2021). The development of Islamic economics has caused a shift in the choice of financial instruments in the capital market to be more diverse. The development of this instrument in Islamic economics is always studied in Islamic funds which are starting to develop in the world of investors with capital allocations that have a strong religious basis (Peillex et al., 2018). From the development of Islamic economics which gave rise to alternatives to Islamic funds, a new sub-study emerged which was named the Islamic equity market, which is a financial instrument that is included in the development of the world equity market. In practice, markets that emerge from the Islamic equity market and conventional equity markets interact with each other in a certain period of time and under certain conditions, both of which can become a standard in portfolio optimization that forms a special opinion on common-factor value determinants (Hoque et al., 2016). The development between Islamic equity market and conventional market is an interesting study that is currently developing. There are many speculations and opinions that
mention the differences and similarities between the needs of investors for a different financial instrument between the Islamic equity market and the conventional market. However, in its development, both differentiated and undifferentiated, it was found that Sharia compliance rules were not restrictive enough to make the global Islamic equity market index different from the conventional market index. In addition, if a real difference is formed between the Islamic equity market and the conventional market, it will not have a significant impact on the economy and the capital market in particular (Hammoudeh et al., 2014).

This study aims to conduct a scientometric-based research that combines simultaneously thematic analysis (qualitative-based), bibliometric mapping and visualization in bibliometric graphing. In this study, it is proposed to map scientific publications related to the theme of Islamic equity market studies through scientometric studies conducted by looking at the development of research since 1986 until now. This mapping can be useful for other researchers to see the latest developments and history in research with the theme of Islamic equity market. The positioning of this research is very useful to help researchers see aspects of novelty that can be developed and help researchers to conduct better literature studies. The data used in this study were 449 scientific journals published in the year 1986-2021. The data sources used are scientific journals indexed on Dimension.ai using the search keyword “Islamic Equity Market” with the filter “title”. Data processing uses R Bibliometric which is used to determine the bibliometric map of the Islamic Equity Market.

LITERATURE REVIEW

Similar to other markets, the capital market is a meeting place between sellers and buyers. However, the difference with other markets can clearly be seen from the instruments traded. The capital market is a meeting place for parties who have excess capital capacity (investors) with those who need additional capital, both short-term and long-term capital. The capital market is a place or system to meet the needs of funds for the capital needed by the company and is a market where people buy and sell securities. Whereas the capital market is a capital transaction between the providers of capital (investors) and those who need capital (entrepreneurs) using stocks, bonds, mutual funds and their derivative instruments (derivative instruments). The capital market in a narrow sense is a place in an inter-organized physical sense where securities are traded which is called the Stock Exchange. The capital market is all the organized markets and institutions that trade credit notes (usually those with maturities of more than 1 year) including stocks, bonds, term loans, mortgages and savings accounts, and time deposits. The capital market in a broad sense is the need for an organized financial system, including commercial banks and all intermediaries in the financial sector, as well as securities/claims, long-term and short-term, primary and indirect.

In understanding the Islamic equity market, we must first understand the legal requirements in sharia, fiqh and their application to the sharia capital market. Sharia is the rules and laws that have been outlined by Allah SWT in the teachings of Islam and are imposed on the Muslims. While fiqh is the interpretation of a number of religious figures
(ulama) on the Al-Quran and Al-Hadith as the primary source in Islamic law. Economic activity in the view of Islam is a *muamalah* activity, namely the activity of regulating human relations. As for the Islamic capital market (investment in the concept of sharia) this can be classified as part of the *muamalah* in Islamic economics, which is highly recommended in Islam to invest (Isfandiar, 2016). Islamic Sharia regulates the relationship between human beings and their environment in the concept of muamalah which is divided into two: *maddiyah* (relationships related to material and economics) and *adabiyah* (relationships related to moral and social aspects). Investment and trading activities on the stock exchange, including *muamalah maddiyah* (Wiyanti, 2013). It is time for every Muslim involved in this sector to show that Islam as a way of life can be practiced comprehensively, and that they can practice it istiqomah. Considering that anyone who is involved in this sector can fall into *muamalah batil* (*maysir, bay' al-ma'dum, taghir, gharar, ikhtikar, bay' najasy, tadlis and usury*) (Nafik, 2009).

In shariah transactions there are a number of basic principles, namely (1) freedom of contract based on mutual agreement (*tijaratan an taraddhin minkum*) with the obligation to comply with the contract (aqd), (2) prohibition of *usury* (interest), *maysir* (gambling) and *gharar* (obscurity), (3) the existence of *ahklaq* (ethics) in transactions, and (4) the need for documentation (agreements/written contracts) for non-cash transactions. In addition, this shariah principle can also be developed in transactions that must be clear (not unclear/jahalah) and must meet the criteria for halal transactions (Basya, 2020). The Islamic capital market was developed in order to accommodate the needs of Muslims around the world who want to invest in shariah-based financial instruments and in accordance with Islamic concept. In classical fiqh discussions have not been specifically studied about stocks or the stock market. In Islamic economics, a development that is often discussed and practiced is that there is a sign of capital participation/election of a person or entity that is similar to the stock system in the fiqh literature, often referred to as *musahamah* which comes from the word *sahm* (stock) which has the meaning of giving each other shares (Dahlan, 1996). The presence of the Islamic capital market has played an important role in changing the topography of the world's financial system. The Islamic finance industry has experienced rapid development in the last few decades. Currently the Islamic capital market is no longer a trend among Muslim countries alone, the development of the Islamic finance industry which reaches 15 percent per year worldwide has made even capitalist and liberal countries interested in opening this capital market service (Antonio et al., 2013).

**METHOD**

This study uses quantitative research methods. Qualitative research methods are always seen as a comprehensive method to see the research topic through the phenomena that occur in it, so that it can be presented systematically and actually (Firmansyah, 2019; Sugiyono, 2017). The data used is secondary data, this data has characteristics obtained from other sources so that researchers can directly process data, this is different from primary data which must be taken independently by researchers by paying attention to research objects and subjects (Firmansyah & Maulana, 2021). Qualitative research can use the stages in thematic analysis as a start in identifying problems and phenomena
The framework most used for conducting thematic analysis involves a six-step process: familiarizing yourself with the data, generating initial code, searching for themes, reviewing themes, defining and naming themes, and generating reports (Kiger & Varpio, 2020). Bibliometric research is research that uses a qualitative research approach by using a number of scientific articles to obtain information on the development of research topics (Cobo et al., 2011; Martínez et al., 2015).

This study uses data sourced from Dimension.ai. This study uses descriptive research based on a number of articles on Islamic equity market published in scientific journals between 1989 and 2021. This article uses an applied bibliometric method that traces research developments in Islamic equity market. The applied bibliometric review method focuses on the specifications of a number of scientific articles written so that a special and unique polarization can be obtained that can map a number of new research achievements. The software used in this research is R Bibliometrix using biblioshiny (Huang et al., 2021).

RESULT

Source

This study aims to see the development of research on the topic of Islamic equity market with a bibliometric-based research approach. At the beginning of the study, it is necessary to identify main information that can be classified as statistical descriptive using data as the main features of the dataset (Ahnert & Krebs, 2021). The stages of research carried out in determining sources are familiarizing themselves with the data, generating initial code, looking for themes, reviewing themes, defining and naming themes, then starting to collect data and process it. Table 2 shows the results of collecting a number of document collections used in research with the theme of Islamic equity market. The number of documents used in this study was 449 consisting of scientific articles. The search uses homebased data from Dimension.ai by using the search keyword, namely “Islamic equity market”. From the search results, the total searches obtained from 1986-2021 are 449 documents. Average years from publication are 5.08 articles per year. The average citations per document is 8,474, this provides information that the document has a high enough average citations to discuss the Islamic equity market. As for the total references used in the Islamic equity market research, there are 5554 references during the period 1986 to 2021.

Annual Scientific Production

In this study, the results for the annual scientific production for the Islamic equity market research theme were found, which is shown in figure 1, namely information on annual scientific production from 1986 to 2020. Figure 1 shows the development of annual scientific production from 1986 to 2020 and it is found that the development of annual scientific production fluctuates up and down. The lowest production was in a number of years, namely 1988, 1992 and 2004-2006. This low production shows that during this period the research theme on Islamic equity market did not become the dominant research theme.
Three Fields Plot

In doing bibliometric analysis, the three-field element approach can be used to see the development of research elements by comparing the interactions between the three components and objects in the research. As for the positioning of the elements, it is determined based on the research needs to see the development of a research. The elements formed are divided into three positions, namely the left element, the middle element and the right element. Everything will be simultaneously interconnected between the left element to the middle element, and the middle element to the right element. The size of each rectangle in each list indicates the number of publications associated with that element (Rusydiana, 2021). The data that can be generated to be formed into three fields elements are authors, affiliations, countries, keywords, keywords plus, titles, abstracts, sources, references, and cited sources. In this research, modeling of three fields elements is used, namely sources -> author -> title.

From figure 2, information is found from the interaction between element sources, author and title. The first element is showing journals that publish the theme of Islamic...
equity market research that has relationships with a number of authors in the second element. In the picture above, there are 12 journals indexed in the three fields plot for the first element which publishes research with the theme of Islamic equity market. The top journal that publishes research with the theme of Islamic equity market is the Pacific-Basin Finance Journal which has relationships with almost all authors on the three-field plot. Furthermore, the second element shows a number of authors who conduct research on the theme of Islamic equity market. The second element is related to the third element in which each author relates to a number of dominant keywords found in the research for the Islamic equity market theme. There are 20 best authors who are researchers in this second element. The size of the rectangle describes the quantity of scientific articles owned by the author. The authors who have a broad scope in research on the theme of Islamic equity market are Mensi W., Hammoudeh S., Sensoy A., and Ashraf D. The last element there are about 20 related topics that have a relationship from the second element (author).

**Sources Growth and Top Authors Production Over the Time**

In its development, a number of journals publish a scientific article based on their focus and scope. In this focus and scope, there is still a general research theme, so that sometimes by conducting specific bibliometric research, a particular trend can be found that belongs to a journal in its own focus and scope. The development of the focus and scope of a journal has different trends from each theme that is relevant to the journal. Research to find the specifications of a focus and scope used in a journal based on a specific theme can be identified using source growth.

Figure 3 shows the source of growth originating from cumulate occurrences, (Taqi et al., 2021). Figure 3 shows how the development of cumulative occurrences from each journal for the years 1986 to 2020, where the curve illustrates how the fluctuations in the development of source growth developed for the Islamic equity market research theme. It was found that a number of journals began to develop in Islamic equity market research since 2006 until the latest data in 2020. The average progression for the trend is increasing, with the highest increase found in the SSRN Electronic Journal. The second position is occupied by the Pacific-Basin Finance Journal, which has increased since 2014, slowing down in the 2014-2010 range and starting to get an uptrend in 2018-2020. Meanwhile, other journals such as Emerging Market Finance and Trade, International Journal of Islamic and Modlue Eastern Finance and Management and Journal of Islamic Accounting and Business Research have an increasing trend and standards from 2013-2014 until 2020. These developments illustrate that increased productivity and development on the theme of Islamic equity market research starting from 2006 until now.
Figure 4 shows the results of processing R bibliometrix biblioshiny for top authors production over the time. These results indicate that the most productive writer in researching the theme of the Islamic equity market is Choudhury MA who wrote from 1986 to 2018. The concentration of writers who have focused on research in the Islamic equity market since 1986-2020 is polarized between 2010 and 2020. The rapid development of the Islamic equity market cannot be separated from past economic developments that have emerged since the 2000s. Many writers were prolific in the 2010-2020 range and can be identified into two patterns. The first pattern at the first time a trend appeared in Islamic equity market research was the 2010-2016 range where the research was dominated by Ashraf D, Bacha OI, Hammoudeh S, Sensoy A, Masih M, Dewandaru G and Still AMM. The second pattern is found in the 2016-2020 developments where the most productive writers in that period are Balli F, Hassan MK, Mensi W, Buallay A and Chowdhury IH. On an ongoing basis it can be estimated that research on Islamic equity market research will continue to grow after 2020.

Country of Corresponding Author

In figure 5 it is found that research that takes the theme of Islamic equity market is still dominated by Asian countries (especially countries that have a predominantly Muslim population) plus China, Japan and Russia. As for the African region, the Muslim-dominated country has not yet had developments in Islamic equity market research, only Egypt and Morocco have begun to develop. As for Africa, countries that are not predominantly
Muslim, such as South Africa, have begun to develop an Islamic equity market.

Figure 5. Map of Country Scientific Production

Figure 6. Most Global Cited Documents

Figure 6 shows information for the most cited documents in the world. The first position is occupied by Hayat R. who published research in 2011 in Emerging Market Review with citations reaching 173 citations. The second position is occupied by Hoepner AG. who published research in 2011 in the European Journal of Finance with citations reaching 164 citations. In the third position there is a study written by Saeed M. which was published in 2001 in the Journal of Business Ethics which has citations reaching 127 citations.

Word Dynamic and Trending Topic

Furthermore, for bibliometric analysis that uses keywords as part of the identification of research developments, an approach with word dynamics and trend topics can be used. Figure 7 shows the output results for word growth in the research theme for the Islamic equity market. Word dynamic is an approach which visualizes on an annual basis how the development of words used in a particular study or research. Word dynamic describes the number of occurrences of a keyword in each year (Dadkhah et al., 2020). To show the word dynamic in research, the use of each word per year used can be identified and compared with other words in each year (Tayebi et al., 2019).

By doing this mapping and visualization, it can be found a word development that is part of the preparation of keywords in research. Figure 7 shows the word growth of the
Islamic equity market research theme. The most developed word first is "Islamic" which has been developing since 1996. The most widely used word in cumulative occurrences is "Islamic" followed by the words "evidence" and "market". The development of word growth tends to continue to increase from year to year with the determining year of development being from 2014 to 2016.

Thematic Map

Thematic map is a centering by taking into account a number of clusters that are connected to other clusters, the stronger the link, the better the cluster design that is formed which represents the research problem that will be crucial (Yu & Muñoz-Justicia, 2020). The thematic map is divided into two concentration boxes, namely the top left identifying the themes, bottom left merging or lining themes, top right motor themes and bottom right basic themes. In relation to positioning, information is used, namely for the vertical axis using the development degree (density) and the flat axis using the relevance degree (centrality) (Della Corte et al., 2019).
In figure 9, the research results from R Bibliometrix Biblioshiny are found for thematic maps. On the check themes of “index, Indonesia, stocks” and part of “impact, bank, comparison. For merging or lining themes there are parts of "impact, bank, comparison" and part of "performance, capital, banks". For the motor themes, it is occupied by “sharia, equities, sukuk” while for the basic themes it is occupied by part of “performance, capital, banks” and the whole of “islamic, equity, market”. The development of basic themes used refers to the Islamic equity market, developments in the realm of motor themes increase in the keywords "sharia, equities, sukuk. Meanwhile, in the realm of merging or lining themes in a very central position, there are the keywords "performance, capital, banks". This development has a special impact on the expansion of the study in the realm of comparison which is too dense in this thematic map. further developments may appear more variations of words that appear on the thematic map.

**Thematic Evolution (Bigrams)**

In seeing how the thematic map evolves from one period to another, we can use thematic evolution. Thematic evolution is a concept with a qualitative approach that can identify a word in different periods and can be found with various research approaches (Hernandez-Cruz, 2021). Thematic evolution is the output of R Bibliometrix Biblioshiny which describes how keyword groups move and evolve from one period to another. Thematic evolution consists of two parts, namely the left is the past period and the right is the current period. each section has charts that represent each of the dominant keywords used in each period. The thicker a keyword chart, the more dominant these keywords are used in a research period (Aparicio et al., 2019; Ramirez & Craven, 2017). To see the evolution of each keyword, a gray line is used that connects the keywords between periods. The vertical chart represents the author's keyword group and the edge shows the temporal flow or evolution tracked by the author's keyword. After that the occurrence of keywords between the two time slices will occur and the thematic evolution can be seen clearly and easily. The cluster size is given by the total co-occurrence found in the secondary data of the study. The results of the research for the theme of Islamic equity market can be seen in figure 10 below.
In addition, it is suspected that further developments will be more strongly connected between one polarization and another due to the development of studies in the Islamic equity market research theme which will continue to grow. With the more connected between authors, it will strengthen the deepening of the study in Islamic equity market in the development of Islamic economics throughout the world. This collaboration can be indicated as a monitoring collaboration and networking between author(s) by seeing an opportunity to increase research participation between countries (Altaf & Masrek, 2021). Collaboration between countries can be understood as an activity to improve the quality of research through collaboration in various ways (Prajapati & Canada, 2020). This collaboration network can be visualized through various approaches, but the most common is using environmental concentration. In the visualization, the more significant the icon shown through the color equation, the higher the collaboration between authors (Prajapati & Canada, 2020).

DISCUSSION

In fact, it can be said that there were no published articles with a focus on the Islamic equity market theme during that period. The development of research in the Islamic equity market began to increase in line with the increasing development of Islamic economic studies throughout the world. This begins with the developments from 2008 to 2020 where research on the theme of Islamic equity market has an increasing trend from year to year.
The highest increase was found in 2018 with nearly >60 publications published. This shows that in the period 2016-2018 there was an increasing trend for research with the theme of Islamic equity market which is getting better and becomes one of the leading research among studies in Islamic economics.

The most dominant research topics written by the author are Islamic, equity, markets, conventional and markets. There are 20 best authors who are researchers in this second element. the size of the rectangle describes the quantity of scientific articles owned by the author. The authors who have a broad scope in research on the theme of Islamic equity market are Mensi W., Hammoudeh S., Sensoy A., and Ashraf D. The last element there are about 20 related topics that have a relationship from the second element (author). The most dominant research topics written by the author are Islamic, equity, markets, conventional and markets. There are 20 best authors who are researchers in this second element. the size of the rectangle describes the quantity of scientific articles owned by the author. The authors who have a broad scope in research on the theme of Islamic equity market are Mensi W., Hammoudeh S., Sensoy A., and Ashraf D. The last element there are about 20 related topics that have a relationship from the second element (author). The most dominant research topics written by the author are Islamic, equity, markets, conventional and markets. and Ashraf D. The last element there are about 20 related topics that have a relationship with the second element (author). The most dominant research topics written by the author are Islamic, equity, markets, conventional and markets. and Ashraf D. The last element there are about 20 related topics that have a relationship with the second element (author). The most dominant research topics written by the author are Islamic, equity, markets, conventional and markets.

In its development, there are a number of universities and institutions that have research numbers under 5 articles. Furthermore, there are Drexel University, La Trobe University, Pusan National University and the University of New Orleans, each of which publishes 5 scientific articles. Furthermore, there are universities that publish publications in the Islamic equity market with 4 articles each, namely Al Farabi Kazakh National University, Coventry University, Dongbei University of Finance and Economics, Griffith University, King Abdulaziz University, University of Malaysia, University of Nottingham Malaysia Campus, University of Oxford, University of Science Malaysia, University of Sousse and University of South Australia. Research can be carried out in various countries in this era of globalization. All countries are competing with each other to produce the best research (by quantity or quality) to have an impact on the world and effective problem solving. Conducting research requires time, experts and costs in completing a research project. In addition, it takes many stages in stating the originality and contribution of research to the development of science. In determining the visualization for the country of corresponding author, two approaches can be used, namely country mapping and table information. Figure 9 shows a visualization in the form of a world map for countries that have production specifications on the Islamic equity market theme. The use of publication quantity color is blue, where the darker the color (closer to dark blue), the higher the frequency of publications owned by that country in the Islamic equity market theme. As for the brighter blue, the less frequency of research production on the theme of Islamic equity market.
Trends in research topics in the Islamic equity market develop in various ways from year to year. In the 2009-2011 period, the trend of research topics was dominated by topic structures. In 2011-2013 the trend of research topics began to develop and shifted to the discussion of united, introduction and equity based. This development began to shift from research based on determining the structure of the Islamic equation market instrument towards a literature and basic introduction. In 2013 the trend of research topics shifted to focus on sharing and systems. In 2013-2015 the trend topic shifted to the discussion of development and regional studies in Malaysia. Subsequent developments in 2015 the trend topic switched to review, characteristic, empirical and finance. The topic of finance became a topic that emerged widely from 2011 to between 2017-2019. The most widely developed topic is the United topic, which has developed from 2005 to 2019 with the peak trend in 2011-2013. In the next development for 2015-2017, global trends, equities, comparative, funds and financial developed. Further developments in 2017 found a number of research trends using the keywords Islamic, equation, market, markets, conventional.

CONCLUSION

This study aims to see the development of Islamic equity market studies. Based on the study conducted in this research, it was found that 449 documents (all of which are scientific articles) have contributed to Islamic equity market research from 2006-2010. Furthermore, this development will be sustainable because researchers around the world are starting to become interested in participating in conducting research in the Islamic equity market. Journal bibliometric analysis and mapping has the aim of being able to add value to study mapping and developing more diverse perspectives in the development of Islamic equity market research themes. The findings of this study can help researchers to get a systematic, comprehensive and actual overview of the research field, subject, pattern, progress, innovation, growth, impact, and editorial policy in the study of articles with the theme of Islamic equity market. Researchers can continuously conduct further analysis of issues that may be further developed for issues that will be raised on the theme of Islamic equity market.

In the last year, 2021, a trend was found to research covid and brands. Many studies have focused on the impact of covid-19 in various science studies such as life sciences, social sciences, humanities, physical sciences, health sciences and even mapped the contribution of researchers in regional coverage for research on the impact of covid-19 (Aristovnik et al., 2020; Furstenau et al., 2021; Prajapati & Kanadia, 2020; Rusydiana, 2021). The development of covid-19 in early 2020 to 2021 has made a lot of research that looks at the impact of covid-19 on the equity market and in particular on the Islamic equity market being carried out. This may arise from concerns that the resilience of the capital market, which is being faltered by COVID-19, could also have an impact on a number of conditions owned by the Islamic equity market.

REFERENCES


