


# Sentiment analysis of cash waqf using the SentiStrength lexicon-based approach

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## ABSTRAK

### Introduction

Cash waqf is getting popular due to its potential contribution to support socio-economic initiatives as well as its flexibility for donors to participate. Despite this, criticisms surrounding cash waqf are also increasing as the sector continues to expand, which might adversely affect sentiment among future donors.

### Objectives

This study aims to analyze sentiments and perceptions towards cash waqf and subsequently identify specific factors affecting public perceptions toward cash waqf.

### Method

A total of 242 Scopus-indexed scholarly publications related to cash waqf (1979–2025) were analyzed using the sentiment analysis model: the lexicon-based tool SentiStrength. Sentiment distribution, consistency, and model performance were compared to provide a comprehensive interpretation.

### Results

The findings indicate that neutral sentiment is the highest, with a percentage of 46%, followed by positive sentiment at 34% and negative sentiment at 20%. The positive sentiments include the permissibility of cash waqf from the Islamic perspective by Imam Zufar, the potential of cash waqf to enhance the productivity of immovable waqf assets, an innovative instrument for socio-economic development, the significant role of cash waqf in economic development, and the flexible use of cash waqf to support business ecosystems in diverse sectors. On the other hand, several negative sentiments towards cash waqf cover debates about the impermanence of money as an object of waqf, suboptimal performance of trustees (nazir), relatively low societal awareness and literacy, a mismatch between its potential and the realization,

### JEL Classification:

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the utilization of cash waqf mostly for religious and social activities (not in productive sectors that may generate income), lack of standardized reporting for cash waqf management, and lack of transparency in reporting to the public.

### Implications

The findings urge policymakers to tackle the negative sentiments by improving governance, enhancing public awareness, strengthening institutional management of cash waqf, and addressing transparency issues. By addressing these issues, growth of the waqf sector can be further enhanced and accelerated due to increased public trust and participation in cash waqf.

### Originality/Novelty

This study offers a novel contribution to Islamic social finance research by applying sentiment analysis to a corpus of 242 Scopus-indexed academic articles focused on cash waqf. While previous studies have extensively explored the legal, operational, and financial dimensions of cash waqf, limited attention has been given to how this topic is framed and evaluated in scholarly discourse. By employing SentiStrength, a lexicon-based sentiment classification tool, this research identifies underlying positive and negative sentiment patterns within academic narratives, thereby uncovering dominant perceptions and concerns around cash waqf implementation.

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## INTRODUCTION

Cash waqf has gained increasing recognition as a significant Islamic social finance instrument, due to its flexibility and capacity to engage a wider segment of society, including those with limited financial means (Ab Shatar et al., 2021; Ambrose & Asuhaimi, 2021; Dedi & Hardivizon, 2018). As an alternative to traditional asset-based waqf, cash waqf allows donors to contribute in varying amounts, thus providing more inclusive access to support social development (Mohsin et al., 2016). The potential of cash waqf to finance sectors such as education, healthcare, environmental conservation, and economic empowerment continues to attract attention in many Muslim-majority countries (Hassan et al., 2019; Musa & Salleh, 2018; Yumna et al., 2024).

Across countries, various governance models and policy frameworks have shaped how cash waqf is implemented. In Malaysia, waqf is centrally regulated under the State Islamic Religious Councils (SIRCs) across thirteen states (Justine & Abd Jalil, 2022; Yayasan Waqaf Malaysia, 2025). These councils act as sole trustees for all types of waqf, meaning any form of private trusteeship is considered unlawful (Usman & Rahman, 2023). Despite the centralized system, administrative challenges persist, including inconsistent management across states, unqualified nazhirs, a lack of compliance with Shariah accounting practices, limited financial resources, shortage of skilled personnel,

and the absence of a centralized waqf financial database ([Abdullah & Ismail, 2017](#); [Jalil et al., 2019](#)).

In Indonesia, attention to cash waqf is growing, supported by a relatively clear legal foundation. The Indonesian Council of Ulama (MUI) legitimized cash waqf through a fatwa in 2002, declaring it permissible as long as the principal amount remains intact. This was reinforced by Law No. 41 of 2004 on Waqf, Government Regulation No. 42 of 2006, and Regulation No. 1 of 2009 issued by the Indonesian Waqf Board (BWI). These legal instruments allow Islamic financial institutions to act as nazhir, forming a robust institutional structure for implementation, accountability, and innovation in waqf management. The potential of cash waqf in Indonesia is also substantial, estimated at IDR 180 trillion annually ([BWI, 2022b](#)). However, actual cash waqf collection remains low, only IDR 1.4 trillion as of March 2022. Several factors contribute to this gap, including the low competency of nazhirs, only 303 out of 400,000 are certified ([BWI, 2022a](#)), as well as regulatory and technological limitations ([KNEKS, 2022](#)). Public trust also plays a significant role, with Indonesian millennials showing relatively low confidence in waqf institutions ([Aldeen et al., 2022](#)). To address these concerns, efforts to enhance awareness and governance have been recommended ([Ismail, 2022](#); [Siswanto et al., 2018](#)).

In Turkey, cash waqf has long been used to support social welfare programs, including scholarships and refugee assistance ([Saiti et al., 2021](#)). While state universities receive funding primarily from the government budget for operations and infrastructure, they also engage in community-based initiatives such as parking lot rentals and service programs to sustain waqf contributions ([D. A. Razak et al., 2016](#)). However, due to the voluntary nature of cash waqf, administrative weaknesses remain, often resulting in inefficient fund management. Many institutions focus more on distribution than investment, which undermines sustainability ([Saiti et al., 2021](#)).

These examples illustrate that despite increasing interest and institutional progress, challenges such as governance quality, transparency, and public perception remain critical to the effective utilization of cash waqf. While numerous studies have examined legal, financial, and operational aspects of cash waqf ([Mohsin et al., 2016](#); [Saiti et al., 2021](#); [Thaker, 2018](#)), fewer have explored how sentiment and perception, particularly in academic literature, reflect underlying opportunities or concerns. At the same time, sentiment analysis methods have gained traction in fields like public policy, health, and halal industries ([Feizollah et al., 2022](#); [Jang et al., 2022](#); [S. Liu & Liu, 2021](#)), suggesting untapped potential for application in Islamic finance discourse.

Therefore, it is important to understand how perceptions of cash waqf are shaped within academic literature, as scholarly discourse reflects the direction of thought, the legitimacy of concepts, and the formulation of strategies that influence stakeholders. In response to this need, this study analyzes sentiment toward cash waqf in academic publications with SentiStrength, a lexicon-based model.

## LITERATURE REVIEW

### Cash Waqf

Waqf, as defined by fuqaha, involves holding the principal and utilising its proceeds (Qudamah, 2007). Recently, two related terms have emerged: cash waqf and waqf through money. The key difference lies in the waqf object. Cash waqf refers to endowments in monetary form managed productively, with proceeds benefiting mauquf 'alaih (BWI, 2009). Its collection is often purpose-specific, with investments in shariah-compliant sectors to preserve the principal and generate returns (Fahrurroji, 2019). Waqf through money, however, involves donating money to acquire waqf assets based on the waqif's intent for worship or public welfare. Here, the waqf object is not money itself but assets purchased with it, which must be preserved (Fahrurroji, 2019).

Cash waqf, classified as movable property, gained acceptance in the 8th century through Imam Zufar (Cizakca, 2004; Thaker et al., 2016; Thaker et al., 2021). Its popularity has grown, with wealthy Muslims contributing to institutions that use these funds for social services (Cizakca, 2004; Kachkar, 2017). Due to its liquidity and flexibility, cash waqf is integrated into socio-economic initiatives, such as SMEs (Lahsasna, 2010; Thaker et al., 2016; Tohirin, 2010), education (Aziz et al., 2013), microfinance (H. Ahmed, 2007; Haneef et al., 2013; Nadwi & Kroessin, 2013), economic development, poverty alleviation (Saiti et al., 2021), and healthcare services (Ahmed, 2013). Researchers highlight its role in diverse social sectors (Thaker, 2018). Traditionally, waqf was linked to physical assets like land or buildings, limiting participation to asset owners. Cash waqf now enables broader involvement, allowing anyone to contribute for societal benefit and Allah's pleasure (Ab Shatar et al., 2021; Osman & Muhammad, 2012; Sulaiman et al., 2019).

### Previous Research

This research is built upon an exploration of various studies related to the theme, serving as a basis for arguments and further investigation. A review of previous sentiment analysis studies reveals variations in data sources, classification methods, and feature extraction techniques. For instance, Feizollah et al. (2022) analyzed user sentiment on Twitter and Facebook regarding halal cosmetics and tourism using deep learning algorithms, finding predominantly positive public sentiment toward both sectors. Similarly, Al Sari et al. (2022) examined sentiment on Saudi Arabian cruise ships using data from Instagram, Snapchat, and Twitter, applying machine learning models such as Multilayer Perceptron (MLP), Naive Bayes (NB), Random Forest (RF), Support Vector Machine (SVM), and Voting, all of which achieved high accuracy, with around 80% of sentiments being positive.

Another work by Mostafa (2020) analyzed global halal food sentiment on Twitter using the NRC and AFINN lexicon approaches, concluding that sentiment toward halal food was largely positive. Liu & Liu (2021) examined English-language tweets about the Covid-19 vaccine using the VADER lexicon approach, finding that 42.8% of the 2,678,372 tweets expressed positive sentiment, 26.9% were neutral, and 30.3% were negative.

The VADER lexicon method was also used by Riani et al. (2022) to analyze sentiment on cash waqf from Twitter, revealing a dominant positive sentiment, indicating optimism and support for its development. In contrast, Khaira et al. (2020) utilized the SentiStrength lexicon-based approach to assess sentiment on cyberbullying, finding that 45.4% of tweets contained bullying elements.

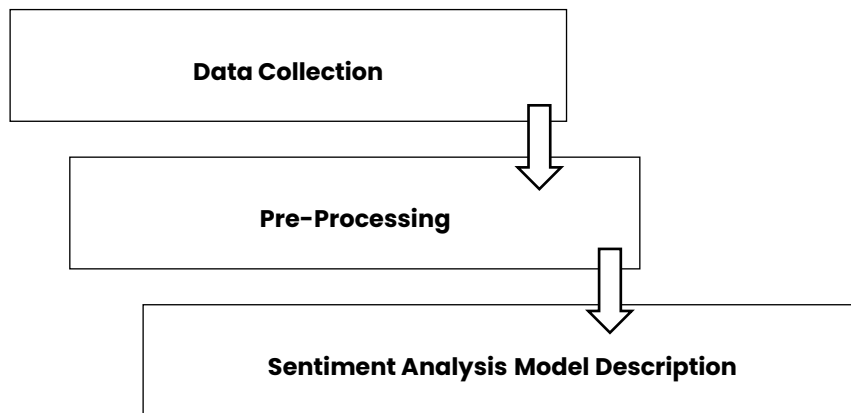
Sentiment analysis based on publication data includes studies such as Rusydiana & Marlina (2020), who analyzed sentiment on halal certification using Scopus-indexed articles, finding a predominantly neutral sentiment through SentiStrength. Alamoodi et al. (2021) reviewed sentiment on Covid-19 and infectious diseases in scientific articles, revealing mostly negative public sentiment. Similarly, Rusydiana & Izza (2022), used the SentiStrength lexicon-based approach to assess sentiment on women entrepreneurship in Scopus-indexed publications, concluding that expert opinions were generally neutral.

## METHOD

### Study Design

This study utilizes a qualitative research approach by applying sentiment analysis method: a lexicon-based model (SentiStrength). Sentiment analysis identifies emotional tone in text by detecting words or phrases that express sentiment (Dalipi et al., 2021; B. Liu, 2012). SentiStrength detects sentiment through a dual-scale lexical system that allows for the coexistence of positive and negative values within the same sentence (Norman et al., 2011; Sianipar & Setiawan, 2015). Sentiment analysis, also known as "opinion mining" or "emotion AI," is a process that involves analyzing text, processing natural language, and utilizing computational linguistics and biometrics to detect and interpret emotions and subjective content (Barbounaki et al., 2021). Broadly, it is used to assess people's opinions on a particular subject. These opinions can take the form of evaluations or judgments, emotional expressions from the writer, or intended emotional impacts on the reader (Riani et al., 2022). As explained by Dehaff (2010) in Riani et al. (2022), sentiment analysis primarily aims to categorize text polarity, determining whether the sentiment conveyed in a sentence, document, or specific aspect is positive, negative, or neutral. This technique is widely applied in business to analyze sentiment in social media data, assess brand perception, and gain customer insights. Its applications are most common in marketing and service industries, including in the context of Islamic philanthropic instruments such as cash waqf.

Sentiment classification includes three categories: positive, negative, and neutral. Each category is assigned a score ranging from the most negative (-5) to the most positive (5), with 0 representing neutrality (Fitriyah et al., 2020; Liu & Liu, 2021; Reshi et al., 2022). Sentiment scores are determined by summing the sentiment values of sentences processed through SentiStrength. A positive sentiment indicates an optimistic perspective on the topic, while a negative sentiment reflects criticism or dissatisfaction in the analysis. The sentiment analysis procedure is outlined in Figure 1.

**Figure 1***Research Steps*

Source: Authors' analysis.

### Data Collection

In this phase, the researcher determines the source for sentiment extraction ([Alamoodi et al., 2021](#)). The research relies on secondary data obtained from the Scopus database, comprising scholarly publications with the highest citation counts on cash waqf. A systematic review with meta-analysis serves as the information retrieval strategy. The Scopus database is chosen for searching, filtering, extracting, and organizing relevant studies. Data collection involves searching for Scopus-indexed journals using the keyword "cash waqf", "waqf", "Sentiment". A purposive sampling technique is applied, selecting samples based on specific criteria. This includes purposive decision samples, where selection aligns with research objectives, and quota samples, which categorize data based on predefined population dimensions ([Wijaya, 2013](#)). The sampling process involves entering "cash waqf" into the Scopus database, screening journal articles, and gathering metadata. The study analyses 242 documents from the year 1979 to March 2025.

After retrieving the relevant documents from the Scopus database, bibliographic data such as publication year, source, and author affiliation were processed using Biblioshiny 4.1. In this study, the scientometric analysis serves as a supporting tool for describing the characteristics of the dataset. It is not treated as a primary analytical method, but rather used to provide context about publication trends, authorship distribution, and thematic focus before conducting the sentiment analysis.

### Pre-Processing

This stage involves data cleaning to eliminate noise and irrelevant content. The process includes removing repeated letters, correcting text, detecting language, and other refinements. Since raw data is often incomplete, inconsistent, and error-prone, pre-processing ensures that the data is structured and comprehensible.

The textual data is further normalized by:

- Converting all text to lowercase
- Removing special characters and punctuation
- Eliminating stop words
- Applying whitespace-based tokenization

The final clean dataset is stored in .csv format.

### Sentiment Analysis Model Description

This study employs models a lexicon-based model (SentiStrength). SentiStrength software is used to extract sentiment from the metadata. This tool uses a lexicon of words associated with predefined positive or negative values (Yousif et al., 2017). The algorithm assigns dual scores to each sentence to reflect the presence of both positive and negative sentiment (Najib et al., 2019). The lexicon approach in the Sentistrength software retrieves scores for each word as represented in the equation:

If the score  $> 0$  (1 to 5), then the word is considered positive.  
 If the score  $< 0$  (-1 to -5), then the word is considered negative.  
 If the score = 0, then the word is neutral.

Source: Vashishtha & Susan (2022)

Furthermore, these numbers are summed up to generate the final sentiment decision based on the rules.

If the positive value  $>$  negative value, then it's a positive sentiment.  
 If the positive value  $<$  negative value, then it's a negative sentiment.  
 If the positive value = negative value, then it's a neutral sentiment.

Source: Khaira et al. (2020)

**Table 1**

*Tools and Functions Used in This Study*

Tool / Library	Type	Function in the Research Process
Scopus Database	Data Source	Source of academic articles related to cash waqf
Biblioshiny 4.1	Scientometric Software	Conducted bibliometric analysis and visualization (e.g., authorship, keywords, trends)
Microsoft Excel	Spreadsheet Tool	Organizing, cleaning, and exporting article metadata
SentiStrength	Sentiment Analysis Model	Lexicon-based sentiment classification (positive/negative/neutral)

Source: Authors' analysis.



## RESULTS AND DISCUSSION

### Data Collection

In this section, a meta-bibliometric analysis is presented, conducted using Biblioshiny 4.1.

**Table 2**

*Data Information*

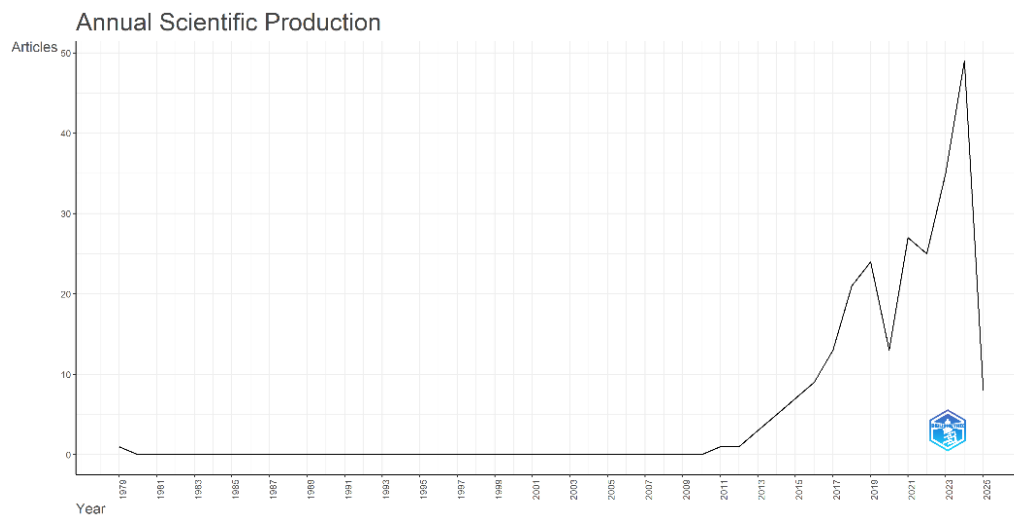
Description	Results
<i>Main Information About Data</i>	
Timespan	1979:2025
Sources (Journals, Books, etc.)	116
Documents	242
<i>Authors</i>	
Authors	518
Authors of single-authored docs	51
<i>Document Types</i>	
Article	184
Book	4
Book chapter	39
Conference paper	8
Review	7

Source: Secondary data. Authors' estimation using biblioshiny.

The table 2 presents key data on Scopus publications related to cash waqf. This study analyses 242 documents from 1979 to 2025, though the number may rise as 2025 progresses. The documents come from 116 scholarly sources, comprising 184 articles, 4 books, 39 book chapters, 8 conference papers, and 7 reviews. This categorisation helps assess literature quantity and composition, ensuring a comprehensive understanding of cash waqf trends and sentiments. While all document types are included, journal articles are the primary reference due to their rigorous peer-review process. In total, 518 authors have contributed to Scopus-indexed research on cash waqf.



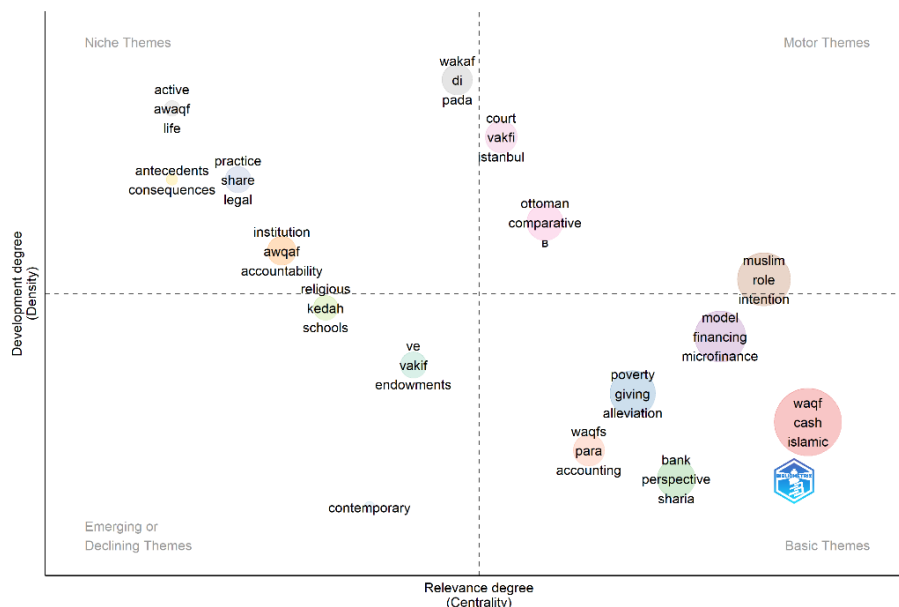
**Figure 2**  
The Number of Documents by Year



Source: Secondary data. Authors' estimation using biblioshiny.

The figure 2 illustrates the yearly trend of Scopus-indexed publications on cash waqf. The number of publications has generally increased, peaking at 49 in 2024. While a slight decline is observed in 2025, this may be due to the research being conducted early in the year. The number of publications is expected to grow as more studies are published throughout 2025.

**Figure 3**  
Thematic Map



Source: Secondary data. Authors' estimation using biblioshiny.

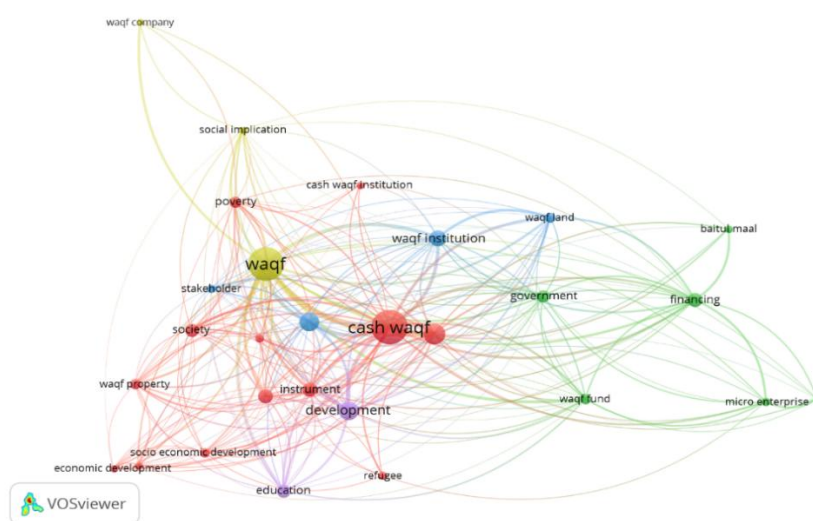
The figure 3 above depicts a thematic map of academic publications on cash waqf indexed in Scopus, categorised based on author keywords. The four quadrants are divided based on density (the y-axis) and centrality (the x-axis). Centrality measures

the importance of the chosen themes, while density assesses the development of the selected themes. According to Cobo et al. (2011) and Nasir et al. (2020), the characteristics of each quadrant are as follows:

- Emerging or Declining Themes.** The themes appearing in the lower-left quadrant represent new themes that may either improve and become more important or exit from the research area. These themes are less developed and less significant. Therefore, these themes have low density and centrality. These themes include contemporary, wakif, and endowments.
- Basic Themes.** The themes located in the lower-right part of the thematic map are basic or transversal themes. These themes represent low density but have high centrality. These themes are important to the research field but have not been extensively developed. These themes include waqf, cash, Islamic, accounting, sharia, and bank, along with related issues like poverty alleviation and giving.
- Niche Themes.** The themes in the upper-left part represent high density but low centrality. These themes are highly developed but not very important. Related themes include active waqf, legal practices, accountability, and the relevance of religious schools.
- Motor Themes.** The themes in the upper-right quadrant are well-developed motor themes that are essential for structuring the research field. These themes include the Muslim role, intention, financing, and microfinance, as well as historical studies like Ottoman comparative and wakfi courts in Istanbul.

**Figure 4**

*Co-Occurrence Network*



Source: Secondary data. Authors' estimation using VOSViewer.

The figure 4 show the keyword mapping related to the cash waqf theme is illustrated through a co-occurrence network, dividing keywords into four clusters

represented by different coloured circles. These clusters are formed based on studies on cash waqf, with lines connecting them to indicate "link strength", showing the frequency of keywords appearing together. This mapping helps identify key research themes and relationships within the cash waqf literature.

**Table 3**

*Research Cluster*

Cluster	Key Words	Relevant Journals
Cluster 1: Cash Waqf and Islamic Social Finance	<ul style="list-style-type: none"> <li>- Cash waqf</li> <li>- Cash waqf institution</li> <li>- Economic development</li> <li>- Endowment</li> <li>- Instrument</li> <li>- Muslim community</li> <li>- Poverty</li> <li>- Poverty alleviation</li> <li>- Refugee</li> <li>- Society</li> <li>- Socio economic development</li> <li>- Waqf poverty</li> </ul>	(Amuda, 2019; Ascarya, 2022; Ascarya & Masrifah, 2023; Fauziah, 2021; Gundogdu, 2019; Johari & Alias, 2013; Lawal & Ajayi, 2019; Mannan, 2018; Misbah et al., 2022; Mohamad Suhaimi et al., 2014; Mohsin, 2013; Purwanto et al., 2021; S. H. A. Razak, 2020; Saiti et al., 2021; Uluyol et al., 2021; Umar, 2021; Usman & Rahman, 2023)
Cluster 2: Cash Waqf and Microfinance	<ul style="list-style-type: none"> <li>- Baitul Maal</li> <li>- Financing</li> <li>- ICW ME (Integrated Cash Waqf Micro Enterprise)</li> <li>- Microenterprise</li> <li>- Waqf fund</li> </ul>	(Abdullah & Ismail, 2017; Ascarya, 2022; Ascarya et al., 2023; Ascarya & Masrifah, 2023; Hasib et al., 2020; Kachkar, 2017; Nadwi & Kroessin, 2013; Rofiqoh et al., 2021; Saad & Anuar, 2009; M. A. B. M. T. Thaker, 2018; M. A. B. M. T. Thaker et al., 2016; M. A. M. T. Thaker et al., 2016)
Cluster 3: Institutions, Management, and Governance of Cash Waqf	<ul style="list-style-type: none"> <li>- Management</li> <li>- Stakeholder</li> <li>- Waqf institution</li> <li>- Waqf land</li> </ul>	(Abdullah & Ismail, 2017; A. U. F. Ahmad & Hasan, 2017; Aldeen et al., 2022; Ambrose & Asuhaimi, 2021; Berakon et al., 2022; Hidayah & Mutiara, 2022; Justine & Abd Jalil, 2022; Masrizal et al., 2023; Maulina, 2022; Rahahleh et al., 2019; Sarker, 2019)
Cluster 4: Cash Waqf and Enterprises	<ul style="list-style-type: none"> <li>- Social implication</li> <li>- Waqf</li> <li>- Waqf company</li> </ul>	(Alssadi, 2020; Mohsin, 2013; Rahman & Sohel, 2019; Ramli & Jalil, 2013; Saad et al., 2017)
Cluster 5: Education Waqf	<ul style="list-style-type: none"> <li>- Development</li> <li>- Education</li> </ul>	(A. R. Ahmad et al., 2016; Alam, 2018; Ayub et al., 2020; Aziz et al., 2014; Hamber & Haneef, 2017; Huq & Khan, 2017; Nor & Yaakub, 2017; Rameli et al., 2021; Rusydiana et al., 2021; Shamsudin et al., 2015; M. A. B. M. T. Thaker & Pitchay, 2018; Usman & Rahman, 2023; Yusuff et al., 2017)

Source: Secondary data. Authors' analysis.

## Pre-Processing

To ensure the text data was suitable for sentiment analysis, a series of pre-processing steps were applied to the abstract sections of all selected articles. This process included lowercasing all text, removing punctuation and numerical characters, filtering out common stopwords, performing tokenization, and applying lemmatization to standardize word forms. For example, the original sentence:

“Among the various institutions and practices singled out as distinctly Ottoman contributions to Islamic civilization, one has drawn surprisingly little comment and analysis. Neither so eye-catching as the *devşirme* system nor as fundamental as the *kanun*, it still emerges as an important factor in Ottoman, thence Islamic, history. This is the legitimized practice of usurious piety, the *waqf al-nuqud* (cash waqf), the establishment of a trust with money the interest from which might pay the salary of a teacher, or preacher, or even unashamedly pass into the pocket of the founder of the trust.”

was transformed into a simplified sequence of keywords:

“institution practice ottoman contribution islamic civilization draw comment analysis devsirme system fundamental kanun important factor awqaf nuqud cash waqf trust money interest salary teacher preacher pass pocket founder”

As illustrated in the example above, the raw text underwent several pre-processing stages including lowercasing, punctuation and stopword removal, tokenization, and lemmatization. This reduced syntactic complexity and preserved only meaningful content words such as institution, waqf, trust, and salary. The cleaned text was then used as input for the sentiment classification models.

## Sentiment Analysis Model Description

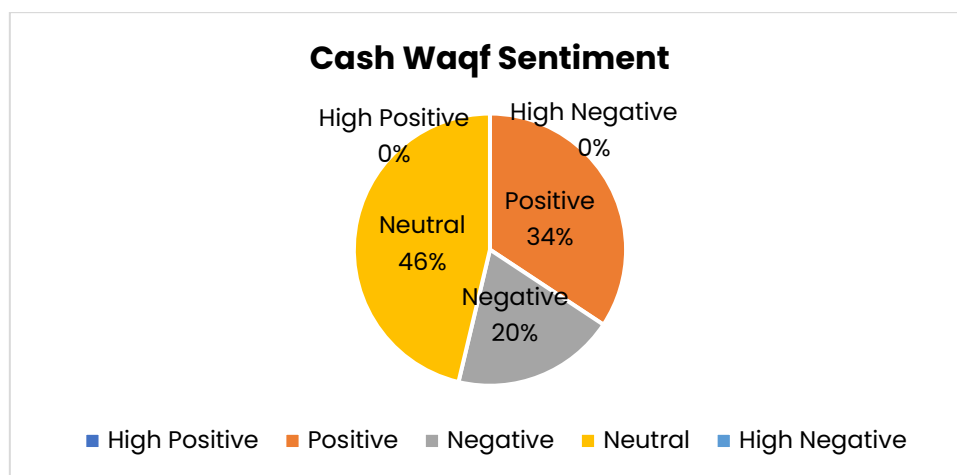
The sentiment analysis conducted in this sub-section utilizes the same dataset previously described in the Data Collection section, which also served as the basis for the scientometric analysis. However, unlike the bibliometric exploration, the textual data here has undergone pre-processing, such as tokenization, stopword removal, and lemmatization, to prepare it for sentiment classification. A total of 242 Scopus-indexed scholarly publications on cash waqf, spanning from 1979 to 2025, served as the corpus for this stage of the study. After undergoing screening and classification in the meta-analysis process, these documents were then subjected to sentiment analysis using SentiStrength, a lexicon-based tool. The following figures present the distribution of sentiment polarity identified.

**Table 4***Coefficient of Variation Analysis*

Coefficient	Value
Standard Deviation	1
Mean	0
Coefficient of Variation	4.56

Source: Secondary data. Authors' analysis.

To assess the consistency and stability of sentiment classification results from each model, a descriptive analysis was conducted on the mean, standard deviation, and coefficient of variation (CV). SentiStrength model recorded a mean sentiment score of 0, with a standard deviation of 1, resulting in a CV of 4.56. This extremely high CV reflects a high degree of variability, largely due to the lexicon-based nature of SentiStrength, which relies on predefined emotion-laden keywords.

**Figure 5***Sentiment Polarity*

Source: Secondary data. Authors' analysis.

Based on the Figure 5, it is evident that literature on cash waqf published and indexed in Scopus has diverse sentiments, including positive, negative, and neutral sentiments. Each sentiment has a different proportion, with neutral sentiment being the most dominant at 46%, followed by positive sentiment at 34% and negative sentiment at 20%. Positive sentiment represents an optimistic and approving perception of cash waqf literature, supporting the concept and development of cash waqf. On the other hand, negative sentiment reflects a pessimistic and disapproving view of cash waqf's development, suggesting disagreement with its existence as a form of waqf. This data indicates that most sentence expressions are neutral in their stance toward cash waqf. However, it's also noteworthy that there are more positive responses than negative ones. Therefore, this situation should be further developed by increasing the number of scholarly publications in indexed journals.

To complement the sentiment distribution results, this study also identified specific themes that commonly appear in academic texts expressing either positive or negative sentiment toward cash waqf. These themes were extracted through content observation of key abstracts and phrases flagged by both sentiment models. Table 5 summarizes the main factors contributing to positive and negative sentiment in the literature.

**Table 5**

*Positive and Negative Sentiment*

Positive Sentiment	Negative Sentiment
<ul style="list-style-type: none"> <li>• The permissibility of cash waqf from an Islamic perspective.</li> <li>• Cash waqf can enhance the productivity of waqf assets.</li> <li>• Innovative instruments for socio-economic development.</li> <li>• The significant potential of cash waqf for economic development.</li> <li>• The choice of instruments for investing cash waqf funds varies.</li> <li>• The varying nominal amount of cash waqf creates affordable access for all segments of society.</li> <li>• The use of cash waqf with numerous alternatives and flexibility is highly suitable for creating a diverse business ecosystem with various sectors.</li> </ul>	<ul style="list-style-type: none"> <li>• The debate about the impermanence of money.</li> <li>• Suboptimal performance of Nazhir.</li> <li>• Low socialisation and literacy among the public.</li> <li>• The potential is not proportional to the realisation and benefits obtained.</li> <li>• The use of cash waqf funds is limited to religious and social activities.</li> <li>• There is no standardisation in reporting the management of cash waqf funds, resulting in a lack of transparency in reporting to the public.</li> </ul>

Source: Secondary data. Authors' analysis.

## CONCLUSION

This study analyzed sentiment toward cash waqf using a lexicon-based model (SentiStrength). A total of 242 academic articles related to cash waqf from 1979 to 2025 were extracted from the Scopus database. The findings indicate that neutral sentiment is the highest, with a percentage of 46%, followed by positive sentiment at 34% and negative sentiment at 20%. It was found that positive sentiment includes the permissibility of cash waqf from the Islamic perspective by Imam Zufar, the potential for cash waqf to enhance the productivity of waqf assets, innovative instruments for socioeconomic development, the significant potential of cash waqf in economic development, a variety of instrument choices for investing cash waqf funds, varying nominal amounts of cash waqf to create affordable access for all segments of society, and the flexible use of cash waqf is highly suitable for creating a business ecosystem with diverse sectors. Meanwhile, some negative sentiments towards cash waqf encompass debates regarding the impermanence of money, suboptimal performance of waqf trustees (nazir), relatively low societal awareness and literacy, the disparity

between potential and realised benefits, the limited use of cash waqf for religious and social activities, and the absence of standardised reporting in cash waqf fund management, leading to a lack of transparency in reporting to the public.

Based on the study's findings, several recommendations are proposed:

- a. For practitioners: Nazir should enhance transparency in financial reporting to build public trust. Institutions should leverage technology to improve accessibility and actively promote public awareness to address financial literacy and inclusivity challenges. Outreach efforts can include social media campaigns, mosque-based gatherings, collaborations with educational institutions, engagement with waqf ambassadors and influencers, and organizing seminars on waqf.
- b. For Government/Regulators: Optimising waqf regulations is crucial for preventing mismanagement. Authorities should focus on improving the quality of human resources in waqf institutions to strengthen accountability, transparency, and professionalism. This can be achieved through training programs, incentives for nazhirs, standardisation or certification processes, and establishing clear financial reporting guidelines.
- c. For Academic Researchers: Future research should not rely solely on academic literature, but also include perspectives from practitioners and the broader public. Incorporating diverse data sources, such as social media, public forums, and survey data, can offer more dynamic insight into public sentiment. Furthermore, the development and training of domain-specific sentiment analysis models (e.g., Islamic finance-adapted FinBERT variants) can enhance model sensitivity to religious and legal discourse surrounding cash waqf.

### Author Contributions

Conceptualization	S.M., N.A., & S.K.	Resources	S.M., N.A., & S.K.
Data curation	S.M., N.A., & S.K.	Software	S.M., N.A., & S.K.
Formal analysis	S.M., N.A., & S.K.	Supervision	S.M., N.A., & S.K.
Funding acquisition	S.M., N.A., & S.K.	Validation	S.M., N.A., & S.K.
Investigation	S.M., N.A., & S.K.	Visualization	S.M., N.A., & S.K.
Methodology	S.M., N.A., & S.K.	Writing – original draft	S.M., N.A., & S.K.
Project administration	S.M., N.A., & S.K.	Writing – review & editing	S.M., N.A., & S.K.

All authors have read and agreed to the published version of the manuscript.

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### Institutional Review Board Statement

The study was approved by Program Studi Ekonomi Syariah (S2), Universitas Tazkia, Kab. Bogor, Indonesia.

### Informed Consent Statement

Informed consent was not required for this study.



## Data Availability Statement

The data presented in this study are available on request from the corresponding author.

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## Conflicts of Interest

The authors declare no conflicts of interest.

## Declaration of Generative AI and AI-Assisted Technologies in the Writing Process

During the preparation of this work, the authors used ChatGPT, DeepL, Grammarly, and PaperPal to translate from Bahasa Indonesia into American English and improve the clarity of the language and readability of the article. After using these tools, the authors reviewed and edited the content as needed and took full responsibility for the content of the published article.

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