

# Evolution of ROSCA to real property acquisition as a form of interest-free SBF model: a PRISMA-compliant systematic review

Real property  
acquisition  
through SBF  
model

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## Abstract

**Purpose** – This study aims to investigate the evolution of the concept and practice of the Rotating Savings and Credit Association (ROSCA) from informal fund collection for indivisible durables to real property acquisition under the interest-free SBF model by analyzing the previously conducted research that focused on the concept in terms of names, forms, and natures.

**Design/methodology/approach** – A PRISMA-compliant systematic literature review is adopted to ascertain the most relevant studies from various sources and analyze the extracted data or items to accomplish the research objective. Besides, bibliometric network, thematic, and statistical analysis are also applied to bolster the findings acquired from the systematic review. Furthermore, this study mathematically formulates and introduces the customized PRISMA systematic flowchart.

**Findings** – The results reveal that the concept of ROSCA has evolved over the years from informal to formal, micro to macro, individual to institutional, social to business, and fund collection for purchasing household items to real property acquisition since 1962. In this process, the focus area of the research has been shifted from characteristics, operation, and economics to law; source of funds, and history to social; benefits and contribution to digital, risk, and savings behaviour. It is noticed that the majority of the study are Africa-centric, followed by Asia; academic discussion on the ROSCA covers most of the social and economic arena, except the real property acquisition aspect. However, the SBF concept fills up this gap by introducing a real-property-acquisition-centric ROSCA model. The authors provide future agendas regarding focus areas that researchers may consider to develop the SBF concept.

**Originality/value** – The study focuses on the evolution of a savings-based model. No study concentrates on the evolution process of the model from ROSCA to SBF; in fact, no conspicuous academic study is found regarding the systematic review of ROSCA in the literature archive.

**Keywords** ROSCA, Savings-based finance, SBF, Housing finance, Interest-free, Islamic finance, Systematic review

**Paper type** Research paper

## 1. Introduction

In the first quarter of 2021, Turkey decreed a new law (*Law No.7292*) for savings-based finance (SBF) companies, also known as rotating savings and credit associations (ROSCAs) globally. The emergence of the law became substantially crucial due to the high customer demands for indivisible durables, such as housing, through the SBF model across Turkey's domestic market.

Along with this surged demand, the number of companies also increased considerably, resulting in forty (40) companies in Turkey by the end of 2020 (i.e. four times higher than the previous year) (Figure 1), concentrating primarily on housing and automobile financing. This significantly increased demand is not a sudden or isolated event; rather, a reaction to a



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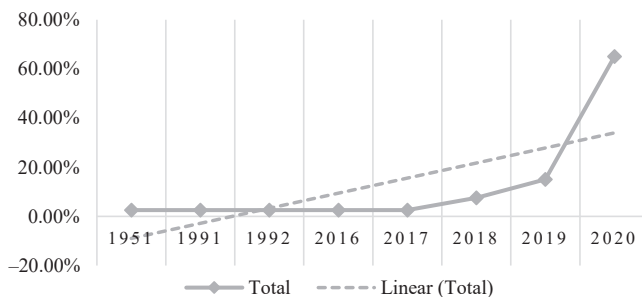
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deep-rooted real property (e.g. housing) acquisition hurdle in the Turkish economy, similar to many other emerging countries. In Turkey, high housing prices, inflation, high-interest rates, and the country's economic condition are not conducive to long-term payment systems; as a result, housing finance problems for low and middle-income people have remained unsolved for many years (Erguven, 2021). In other words, the lack of long-term and low-cost financing makes it cumbersome to purchase a house. In the meantime, individuals who are sensitive to the concept of interest, either for religious belief or other reasons, seek alternative solutions to the problem. Law No. 5582 partially resolved some issues by enabling the long-term housing acquisition for certain income levels people in 2007. However, interest-sensitive individuals and low-income people struggled to acquire real property (e.g. housing). For this reason, this comparatively new and unique SBF system immediately attracted Turkish consumers to acquire real properties, which ultimately boosted the number of companies across Turkey.

However, only 15% of companies survived due to the regulations—i.e. Eminevim, Fuzulev, Birevim, Katilimevim, Imece, and Sinpaş YTS—and the rest went for forced liquidation. One of the significant requirements of the law that mainly reduced the number of companies to six is the minimum paid-up capital during the incorporation—i.e. at least 100 million Turkish Lira. Though the law has curtailed the number of companies dramatically, this reform is projected to enhance the market to a more considerable extent by increasing consumer trust, appreciating financial inclusion, and complementing the existing financial infrastructure.

Now, due to this remarkable inclusion of the SBF companies in the mainstream financial sector in Turkey, a few questions arise in the first place regarding the model itself—i.e. (1) Is the SBF model entirely new?, (2) Is there any operational existence of this model outside of Turkey?, and (3) If there is a presence of this model, then how has this model been evolved and transformed to SBF?

Evidently, the answers to the first two questions are available in the literature. After thorough research, it is ascertained that the concept of the SBF model is not entirely new but rather a centuries-old model and was known to the people of various societies or countries by different names, forms, and natures. In the 12th century, the concept was familiar as *Kou* (pronounced as “*Ko-u*”) among Japanese people. Later, Geertz introduced it in the academic arena as a “rotating credit association” in 1962, also known as the rotating savings and credit association (ROSCA). He described this concept as “a lump sum fund composed of fixed contributions from each member of the association is distributed, at fixed intervals and as a whole, to each member in turn” (Geertz, 1962, p. 243). Though there is no universally recognized definition or formation of ROSCA in literature, various scholars have defined it differently over time. For instance, Ardener (1964) defined the concept as: “[A]n association formed upon a core of participants who agree to make regular contributions to a fund which is



**Figure 1.**  
Penetration of  
companies in the SBF  
sector (%)

**Source(s):** Authors [Dinç *et al.*, (2021)]

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given, in whole or in part, to each contributor in rotation” (p. 201). Yu (2013) defined ROSCA as “financial self-help groups that collect multiple contributions from their members across time and allocate merged funds back generally in rotation” (p. 2).

Basically, the root of the ROSCA system can be traced back to 200 BC, when a small group of people in Chinese communities were practising this concept as an informal financing method to satisfy their micro demands (Ardener, 1964; Mushuku and Mayisa, 2014). Later, based on the earliest Japanese source, a documentation of the fundamental ROSCA framework, known as the *Kou* system, was found in the twelfth or thirteenth century. Noticeably, *Kou*'s structure was similar to the current ROSCA system with slight modifications (Ginkou, 1967). By the end of the nineteenth century, significant development of rotating credit associations or ROSCAs was noticed in China. Despite having a small number of members in a group, the time interval between each entire rotation for fund allocation would take long because of the meeting period – i.e. once or twice a year. The fund was distributed in a variety of ways, e.g. by throwing dice and auctioning a discount (Ardener, 1964). According to Yu (2013), ROSCA can be classified into different types, such as random, premium bidding, discount bidding, and fixed. Following Second World War, this concept grew in popularity and gained significant acceptance. Different European countries, such as Austria, Bulgaria, Czechoslovakia, Greece, Holland, Romania, and Switzerland, began to follow similar methods (Erguven, 2021).

The rise and acceptance of retail financing among individuals garnered attention in the financial industry after the 1970s, bolstering the popularity of ROSCA throughout the world, which later transformed into a new form in 1990, known as SBF system or model—i.e. a means of acquisition of real properties [1] or assets. In this process, ROSCA penetrated a new era through this paradigm shift, from micro to macro, household durables to real properties, and informal to formal financial systems (Dinç *et al.*, 2021).

This paradigm shift of the ROSCA concept into SBF [2] leads this research to focus on the third and primary research question—i.e. how has this ROSCA model evolved and transformed into SBF? Although a few studies were conducted by focusing on rotating savings and credit associations' bibliography and history (Bouman, 1995a, b; Low, 1995; Tankou and Adams, 1995; Seibel and Schrader, 1999; Tchuindjo, 1999; Dekle and Hamada, 2000; Verhoef, 2001), no study was conducted to investigate the evolvement of the model from ROSCA to SBF; in fact, no conspicuous academic study is found regarding systematic review on ROSCA in the literature archive. This absence and unavailability of research in the academic arena show the importance and significance of this study in the literature regarding the concept. Furthermore, the inclusion and acceptance of the SBF model in the mainstream financial sector deserve scholarly attention to comprehend its transformation and strengthen the theoretical framework. Though some smattering literature concentrated on the SBF concept (Erguven and Kaya, 2016; Ersin and Duran, 2017; Dinç, 2019; Dinç *et al.*, 2019; Erguven and Ferudun, 2020; Erguven, 2021; Dinç *et al.*, 2021), these are primarily general discussions and mainly in the Turkish language except Erguven (2021) and Dinç *et al.* (2021) [which limits a significant number of readers from taking advantage of the literature]. The studies focused on the economics and operational aspect as well as the brief history of ROSCA; however, the evolvement of SBF was not broadly discussed.

For these reasons, the main objective of this study is to investigate the evolvement of the concept and practice of ROSCA from informal fund collection for indivisible durables to real property acquisition under the interest-free SBF concept by analyzing the previously conducted research that focused on the concept in terms of names, forms, and natures. Furthermore, the study also analyzes the concentration of academia on this topic as well as the contribution of the topic to the literature.

As a new regulated sector (SBF) in the Turkish mainstream financial ecosystem, the study has significant importance both in academia as well as at the industry level for the

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development of the sector. It also has a substantial contribution to the SBF literature due to its collaborative attitude, rotating and regularity nature (Ardener, 1964) and cost advantage feature (Erguven, 2021).

This study maps the literature to comprehend past practices, discuss the current procedures, assume possible future focus areas, and provide future agendas. The remainder of the paper is organized as follows. Section 2 reviews the previously conducted literature on the ROSCA concept. Section 3 explains the step-by-step method of systematic literature review. Section 4 illustrates and analyzes the results. Section 5 critically discusses the ascertained findings. Finally, section 6 concludes and provides recommendations and future agendas. It is worth mentioning that the study interchangeably uses the following terms: the ROSCA model, ROSCA concept, SBF system, SBF model, and SBF concept.

## 2. Literature review

Voluminous studies on the ROSCA concept were conducted by focusing on diverse aspects. Most of the studies are conceptual, fundamental, qualitative, and exploratory analyses of the model and its operations; however, some theoretical research are also done. To ensure clarity and comprehensibility of the concept, this study categorizes them into different groups to create a panorama of the concept and ascertain points to meet the study's objective. The categorizations of these papers are as follows: history, benefits, characteristics, contributions, economic aspect, digitalization, institutional aspect, law, membership, operational aspects, purpose-centric, risk management, savings behaviour, social aspect, and source of funds. It is worth mentioning that several studies are also available out of this customized spectrum because of their non-compliance nature with this paper's purpose.

Studies related to characteristics of ROSCA are comprised of trust and reputation (Ntamazeze, 2014; Imami *et al.*, 2020), sustainability of ROSCA (Guha and Gupta, 2005; Basu, 2011; Azman and Kassim, 2019), time preferences and commitment devices, success factors of stokvels or ROSCA (Bonan *et al.*, 2019), characteristics of formal and informal ROSCA (Callier, 1990; Besley and Levenson, 1996; Schreiner and Nagarajan, 1997; Reito and Spagano, 2014), characteristics and role of ROSCA (Cope and Kurtz, 1980; Fernando, 1986; Jerome, 1991; Aredo, 2004; Kedir *et al.*, 2011; Ngcobo and Chisasa, 2018; Amankwah *et al.*, 2019), reasons of joining ROSCAs (Peterlechner, 2009; Kahyaoglu *et al.*, 2016), individual self-commitment (Gugerty, 2007), and preference between ROSCAs and ASCRAs (Buijs, 1998; Hoque and Khalily, 2002).

On the other hand, some studies describe the participation of members in the ROSCA system (Levenson and Besley, 1996; Kimuyu, 1999; Al-Ajlouni, 2019; Shoaib and Siddiqui, 2020), unbanked participants of ROSCA (Kamran, 2017), individual motives to participate in ROSCA (Anderson and Baland, 2002), savings behaviour (Egbide, 2020; Lappeman *et al.*, 2020; Ryu and Suzuki, 2021), household accumulation of durables and participation in an informal financial institution (Besley and Levenson, 1996), social contribution of ROSCA (Biggart, 2001; Anderson *et al.*, 2009; Benda, 2013), source of fund for ROSCA members (Besley *et al.*, 1994; Akoten *et al.*, 2006; Ebrahim, 2009), and legal regulation for ROSCA (Satkunasingam and Shanmugam, 2006; Wei and Lijuan, 2011; Yimer *et al.*, 2018).

Furthermore, several other research were conducted by focusing on the economics of SBF or ROSCA (Aliber, 2001; Kedir, 2005; Dinç *et al.*, 2021), interest-based and interest-free ROSCA model (Sadr, 2017; Le Polain *et al.*, 2018; Ke and Ye, 2019), institutional aspect of ROSCA (Schirmeister and Nadler, 1996; Van den Brink and Chavas, 1997; Ibrahim, 2019), the practice of ROSCA (Ardener, 1964; Anderson, 1966; Adams and de Sahonero, 1989), the operational behaviour of ROSCA (Laguerre, 1998; Osei-Assibey, 2015), risk management (Baland *et al.*, 2019; Han *et al.*, 2020; Reito, 2020), and digitalization of ROSCA (Bouman, 1979; Abdul-Yakeen, 2012; Mehmood *et al.*, 2019; Francois and Squires, 2021).

Finally, there are some studies that primarily bolster the objective of this research, i.e. the evolution of ROSCA, including the evolution of ROSCA (Tankou and Adams, 1995; Tchuindjo, 1999), the transformation of Dhikuti (Seibel and Schrader, 1999), history of Stokvel (Verhoef, 2001), and development of mujin-kō or tanomoshi-ko or ROSCA (Dekle and Hamada, 2000; Abdul-Yakeen, 2012). Interestingly, none of the studies from this spectrum systematically analyzed the evolution of ROSCA; in fact, it is absent among the researchers who studied the recent development of ROSCA or SBF system in Turkey (Erguven and Kaya, 2016; Ersin and Duran, 2017) except Dinç *et al.* (2021), which briefly discussed the history of SBF and showed significant turnover and delivery of housing and automobile through the model. For this reason, the objective of this study is to systematically analyze the evolution or transformation of ROSCA from an informal fund collection to an interest-free SBF model by employing the PRISMA-centric systematic review technique.

### 3. Methodology

The study adopted the widely preferred PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses), a robust protocol for conducting a systematic literature review (PRISMA; Liberati *et al.*, 2009). Systematic review strives to compile data that meets pre-specified eligibility criteria to address a research topic. It seeks to reduce bias by employing systematic approaches recorded in advance and adhering to a protocol. This systematic literature review was introduced by Moher *et al.* in 2009. Basically, the PRISMA framework follows four stages for reviewing the literature: identification, screening, eligibility, and inclusion. In order to document the extracted data and inclusion criteria, this study developed a protocol that was reviewed and examined by three independent experts in the respective field.

#### 3.1 Model for systematic literature review

Before delving into the explanation of each phase of PRISMA-compliant systematic literature review (SLR), the aggregate and its sub formulas are mathematically formulated and applied as follows:

##### **The aggregate formula**

$$Inc(SLR_n) = \sum I - \sum S_1\{(dup)C_1\} - \sum S_2\{(title \& abst)C_2\} - \sum E\{(Fulltext)C_3\}$$

where,

$Inc(SLR_n)$ : Total number of studies selected and included for systematic literature review

$\sum I$ : Number of studies recorded after the Identification process

$\sum S_1\{(dup)C_1\}$ : Number of studies recorded after removing duplicated ones from  $\sum I$  along with conditions [1st screening]

$\sum S_2\{(title \& abst)C_2\}$ : Number of studies recorded after removing studies from  $\sum S_1\{(dup)C_1\}$  considering the title and abstract along with conditions [2nd screening]

$\sum E\{(Fulltext)C_3\}$ : Number of studies recorded as eligible after removing studies from  $\sum S_2\{(title \& abst)C_2\}$  based on specified conditions

##### **Sub formulas in the identification phase**

$$\sum I = \sum Ind(BscS_n) - \sum Ind(AdvS_n) - \sum Ind(FfiS_n)$$

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PM

(1) *Basic search:*

General formula

$$\begin{aligned} Ind(BscS_n) = & \sum DB_1\{C_1\} + \sum DB_2\{C_2\} + \sum DB_3\{C_3\} \\ & + \dots\dots\dots \sum DB_n\{C_n\} \end{aligned}$$

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Applied formula

$$\begin{aligned} Ind(BscS_n) = & \sum SCP\{C_1\} + \sum WoS\{C_2\} + \sum T\&F\{C_3\} + \sum ERL\{C_4\} \\ & + \sum SCD\{C_5\} + \sum JTR\{C_6\} + \sum GS\{C_7\} \end{aligned}$$

(2) *Advanced search:*

General formula

$$\begin{aligned} Ind(AdvS_n) = & \sum DB_1\{C_1\} + \sum DB_2\{C_2\} + \sum DB_3\{C_3\} \\ & + \dots\dots\dots \sum DB_n\{C_n\} \end{aligned}$$

Applied formula

$$\begin{aligned} Ind(AdvS_n) = & \sum SCP\{C_1\} + \sum WoS\{C_2\} + \sum T\&F\{C_3\} + \sum ERL\{C_4\} \\ & + \sum SCD\{C_5\} + \sum JTR\{C_6\} + \sum GS\{C_7\} \end{aligned}$$

(3) *Full-filtered search:*

General formula

$$\begin{aligned} Ind(FfiS_n) = & \sum DB_1\{C_1\} + \sum DB_2\{C_2\} + \sum DB_3\{C_3\} \\ & + \dots\dots\dots \sum DB_n\{C_n\} \end{aligned}$$

Applied formula

$$\begin{aligned} Ind(FfiS_n) = & \sum SCP\{C_1\} + \sum WoS\{C_2\} + \sum T\&F\{C_3\} + \sum ERL\{C_4\} \\ & + \sum SCD\{C_5\} + \sum JTR\{C_6\} + \sum GS\{C_7\} \end{aligned}$$

where,

$\sum DB_n\{C_n\}+$ : Number of databases used for data identification with applied conditions

$\sum Ind(BscS_n)$ : Total number of identified studies after basic search including conditions

$\sum Ind(AdvS_n)$ : Total number of identified studies after running an advanced search on studies found through basic search [including conditions]

$\sum Ind(FfiS_n)$ : Total number of identified studies after running a full-filtered search on studies found through advanced search [including conditions]

$\sum SCP\{C_1\}$  = Number of studies identified in Scopus with conditions;  $\sum WoS\{C_2\}$  = Number of studies identified in Web of Science with conditions;  $\sum T\&F\{C_3\}$  = Number of studies identified in Taylor & Francis with conditions;  $\sum ERL\{C_4\}$  = Number of studies identified in Emerald Insights with conditions;  $\sum SCD\{C_5\}$  = Number of studies identified in ScienceDirect with conditions;  $\sum JTR\{C_6\}$  = Number of studies identified in JSTOR with conditions;  $\sum GS\{C_7\}$  = Number of studies identified in Google Scholar with conditions.

**3.1.1 Search strategy.** The study employed a scientific search method to find the relevant research on the selected topic. To cover the scope of the research and ascertain the most relevant and appropriate studies, six (06) world-renowned academic databases and one (01) scholarly literature search engine are mainly considered— i.e. Scopus, Web of Science, Taylor & Francis, Emerald Insights, Science Direct, JSTOR, and Google Scholar. Missing studies during the automatic search were basically retrieved through Google Scholar. The study used three search criteria in the identification process: (1) Basic search, (2) Advanced search, and (3) Full-filtered search.

The basic search was employed based on the following keywords: “rotating saving credit association” OR “rotating saving and credit associations” OR “ROSCA” OR “ROSCAs” OR “Savings-based finance” OR “SBF”. Through this search, 82,945 studies were identified and recorded, which was significantly reduced to 2,580 after the advanced search. This advanced search was carried out based on the following various selective keywords and criteria (Tables 1 and 2):

At the end of the identification process, a full-filtered technique was applied [based on the presence of the related information of each article, i.e. author’s name, title, year, and document type] in order to minimize the number of literature, resulting in 2,044 of the total number of articles. In the meantime, a backward and forward snowball search [3] was employed to find the additional relevant articles on Google Scholar from the reference lists of the included studies and reviews. The search was conducted on 21 November 2021. Later, the snowball search was performed on Google Search several times to download and collect the entire data

Database	Search query
Scopus	“rotating saving credit association” OR “rotating saving and credit associations” OR “ROSCA” OR “ROSCAs” OR “Savings-based finance” OR “SBF” AND ( LIMIT-TO ( DOCTYPE, “ar” ) ) AND ( LIMIT-TO ( SUBJAREA, “ECON” ) OR LIMIT-TO ( SUBJAREA, “BUSI” ) ) AND ( LIMIT-TO ( LANGUAGE , “English” ) )
Web of Science	“rotating saving credit association” (All Fields) or “rotating saving and credit associations” (All Fields) or “ROSCA” (All Fields) or “ROSCAs” (All Fields) or “Savings-based finance” (All Fields) or “SBF” (All Fields)
Taylor & Francis	[All: “rotating saving credit association”] OR [All: “rotating saving and credit associations”] OR [All: “roscas”] OR [All: “rosca”] OR [All: “savings-based finance”] OR [All: “sbf”] AND [All Subjects: Economics, Finance, Business and Industry] AND [Publication Date: (01/01/1961 TO 12/31/2021)]
Emerald	“rotating saving credit association” OR (“rotating saving and credit associations”) OR (“ROSCA”) OR (“ROSCAs”) OR (“Savings-based finance”) OR (“SBF”)
ScienceDirect	“rotating saving credit association” OR “rotating saving and credit associations” OR “ROSCA” OR “ROSCAs” OR “Savings-based finance” OR “SBF”
JSTOR	“rotating saving credit association” OR “rotating saving and credit associations” OR “ROSCA” OR “ROSCAs” OR “Savings-based finance” OR “SBF”

Source(s): Authors

**Table 1.** Search query for advanced search

**Table 2.**  
Advanced criteria for  
refining scholarly  
literature

Database	Subject area	Refined by Document type	Source type	Language	Year
Scopus	Economics, Econometrics, and Finance; Business, Management, and Accounting	Article	Journal	English	1961–2021
Web of Science	Business or Business Finance or Management	Article	Journal	English	1961–2021
Taylor & Francis	Economics, Finance, Business and Industry	Article	Journal	English	1961–2021
Emerald	N/A	Article	Journal	English	1961–2021
Science Direct	Economics, Econometrics, and Finance	Article	Journal	English	1961–2021
JSTOR	Economics, Businesses	Article	Journal	English	1961–2021

**Source(s):** Authors

of additional articles. Finally, the study executed the last search on 16 December 2021 for a specific article [title: “*Economics of savings-based finance: an interest-free model of rotating savings and credit association in Turkey*” (Dinç *et al.*, 2021)] which explains the full concept of savings-based finance and its economics and applications.

**3.1.2 Inclusion and exclusion criteria.** The selection of literature was based on the concept of rotating saving and credit association in the field of economics, econometrics, finance, business, management, and accounting. The timeframe of the search was between 1962 and 2021. The reason for this search was mostly the search term—i.e. rotating credit association—that was first introduced by Geertz in 1962 in his academic paper: “*The Rotating Credit Association: a ‘Middle Rung’ in Development*”. As mentioned in Table 2, this study only included articles published primarily in a journal; however, there were five (05) conference proceedings (Kedir, 2005; Wei and Lijuan, 2011; Ntamazeze, 2014; Al-Ajlouni, 2019; Azman and Kassim, 2019) and four (04) working papers (Klonner, 2003; Kedir *et al.*, 2011; Yu, 2013; Bousalam and Hamzaoui, 2015) included in the dataset. Books or book chapters or reviews were excluded from this study. The inclusion and exclusion criteria of the articles are as follows (Table 2):

**3.1.3 Selection, quality assessment, and data extraction.** As mentioned earlier, the study only considered journal articles, along with a few selected conference and working papers written in the English language. To maintain the selection and quality spectrum of the papers intact, it employed a duplication technique in excel worksheet in order to remove reiterated papers; the method is as follows:

*Click Home > Conditional Formatting > Highlight Cells Rules > Duplicate Values*

In that process, 158 articles were removed, and 1886 articles were recorded for further screening. Later, the study critically read and reviewed the title and abstract of each selected article to ascertain the papers that fall within the scope of the study. After reviewing, 1,761 articles were removed, and 125 full papers were selected for the next stage. Under this stage, papers related to ROSCA but only as an example, not full-length articles, e.g. Books and reviews, SBF acronym but not related to the sector, and general savings, were excluded. The selected 125 full articles under this screening process were then reserved for the eligibility stage.

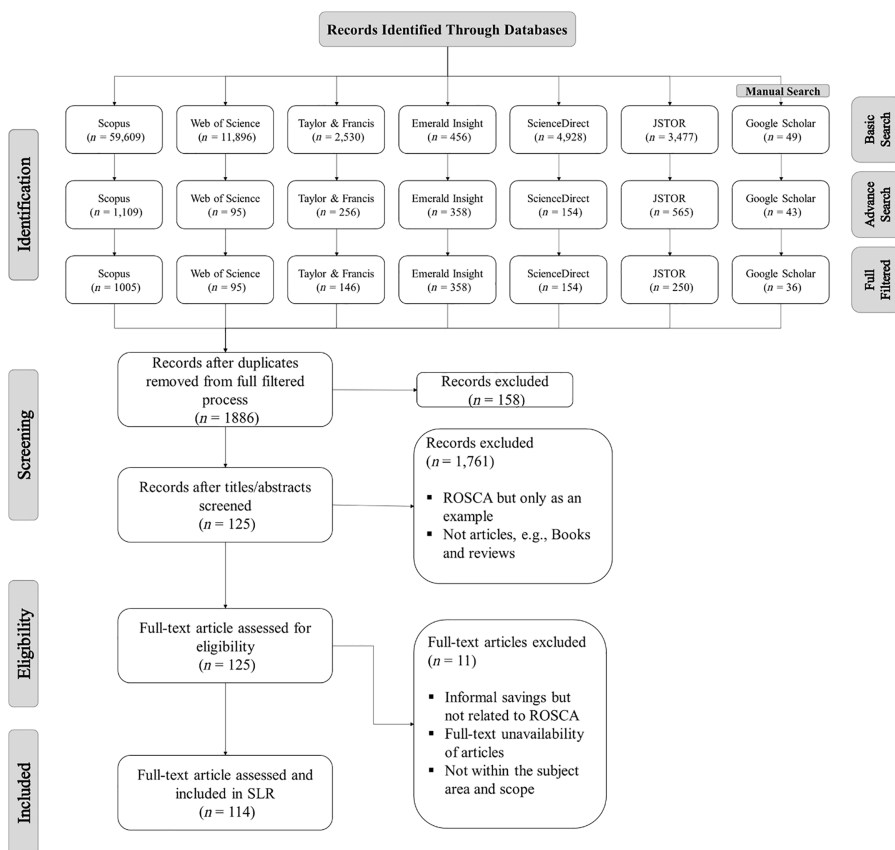
Under the eligibility stage, 11 papers were removed based on the following criteria: (1) informal savings but not related to ROSCA, (2) unavailability of full-text and, (3) not within

the subject area and scope. Finally, the study selected 114 papers for data extraction and principal analysis under the included phase (see Figure 2).

This study extracted the data based on the following 25 items: *Authors; Article Title; Journal Name; Volume; Issue; Year or Year of publication; Abstract; Reference; Database; Citation; Type of Concept; Country; Objective; Method; Data type; Study Nature; Method of ROSCA; Focus Group; Focus area; Outcomes; Research type; ROSCA; ROSCAs; Rotating savings and credit association; Rotating savings and credit associations*). It is worth mentioning that the last four terms were extracted based on their frequency of use in each article (Table 3); these are consolidated forms of alternative names used in different countries and regions across the globe. The study considered all these names under the name of ROSCA and its other alternatives to maintain the paper's consistency. Noticeably, there are no fundamental and structural disparities among the alternative names of ROSCA.

### 3.2 Techniques and justification for applied method

**3.2.1 Bibliometric analysis and visualization tools.** The study used an Excel spreadsheet for documenting, screening, cleaning, formulating, and analyzing the dataset. However, VOSviewer and SCImago Graphica were employed for bibliometric network analysis and data visualization. VOSviewer is an application for creating and visualizing bibliometric



**Figure 2.** The PRISMA flow diagram (systematic review stages)

ROSCA	ROSCAs	Rotating savings and credit association	Rotating savings and credit associations
B&L	Banker Ladies	- Building and loan association	- Building and loan associations
Banker Lady	Cheetus	- Rotating credit association	- Rotating credit associations
Bausparkassen	Cheetus	- Rotating credit fund	- Rotating credit funds
Cheetu	Partners	- Rotating savings and credit scheme	- Informal Credit and Savings organizations
Cheetu	Huis	- Savings-based finance	- Rotating savings and credit schemes
Dhikuti	Tontines		
Esusu	Stokvels		
Hui			
Partner			
SBF			
Stokvel			
Tanda			
Tontine			

**Source(s):** Authors

**Table 3.**  
Alternative names  
used for data  
frequency collection

networks. Citation, bibliographic coupling, co-occurrence, co-citation, and co-authorship interactions may be used to build these networks, which can include journals, researchers, and individual articles (Van Eck and Waltman, 2017). The software also has text mining functionality that allows a user or researcher to develop term maps from a corpus of texts (Van Eck and Waltman, 2011). On the other hand, SCImago Graphica is a simple-to-use application that allows users or researchers to build sophisticated graphics without requiring to have programming or coding knowledge.

**3.2.2 Thematic and statistical analysis.** The study applied a thematic technique to analyze certain extracted data—e.g. objectives, focus groups, and focus area—from the articles that were collected through the PRISMA method. The analysis is an effective qualitative method and is widely used for analyzing huge qualitative data sets (Braun and Clarke, 2006). It compels the researchers to handle a clear and well-organized systematic paper. In other words, to assure credible and meaningful results, thematic analysis entails the process of identifying, analyzing, structuring, characterizing, and reporting concepts obtained from qualitative data (Nowell et al., 2017). Noticeably, the method is not a distinct approach but rather a tool to aid researchers in analyzing qualitative data (Boyatzis, 1998; Ryan and Bernard, 2000; Holloway and Todres, 2003).

Besides, this paper also adopted a statistical approach to primarily analyze the extracted items for the literature classification. Through this method, descriptive statistics, correlation, and regression were applied to ascertain the relationship between selected variables, especially to observe the impact of independent variables (database, citation, types of concept, method, data type, study nature, method of ROSCA, and ROSCA terminologies) on the dependent variable (year of publication or year).

**3.2.3 Why systematic review.** Systematic reviews and narrative literature reviews both summarize the existing literature on a topic with some distinguishing characteristics. Systematic review questions are narrow and focused, while a narrative review question can be broad or non-specific. Systematic reviews have a protocol with clear objectives and pre-defined criteria to select studies. In contrast, a narrative review usually is not required to have any of these. All possible information sources are searched for systematic reviews, whereas only a few documents are searched for a narrative review. Search strategy must be reported

for a systematic review, whereas this is not required in a narrative review. All included studies must be critically examined for quality in a systematic review. In contrast, there is no assessment of studies in a narrative review. And finally, conclusions in a systematic review attempt to minimize bias using explicit methods, whereas, in a narrative review, the conclusion is at risk of bias as the authors can select studies to support a position.

#### 4. Findings and analysis

This part of the study illustrates and discusses the results from extracted data from selected databases in accordance with the objectives of the study. The results are represented in four ways: (1) descriptive analysis, (2) literature classification, (3) bibliometric network analysis, and (4) statistical analysis.

##### (1) Descriptive analysis

The general description of the data extracted from selected 114 articles is illustrated in the following figures (Figure 3–6) based on the number of articles in terms of country, year, database, and the number of aggregated citations regarding the databases.

Among 114 articles, the majority of the papers were conducted in the context of the African countries, focusing on various methods of ROSCA; in fact, apart from the global category, first, second, third, and fourth places for the number of publications were taken by South Africa, Ethiopia, Cameroon, and Nigeria, respectively (Figure 3). Regarding the year of publication, an upward trend is observed. The frequency of publication got high momentum in the twenty-first century, especially in 2019 (Figure 4); the highest number of ROSCA-oriented papers were published based on the African and Asian continents.

In terms of database, the highest number of articles were extracted from JSTOR (36), followed by Google Scholar (24), Web of Science (16), Scopus (13), ScienceDirect (9), Taylor & Francis (7), and Emerald Insight (6), whereas the lowest ones from Elsevier (2) and DergiPark (1). A similar pattern is also observed in Figure 6; JSTOR archived the highest cited articles (5725).

Noticeably, despite publishing only two papers, Elsevier has a significant number of citations, even higher than the highest number of published articles found in databases. More information regarding articles—e.g. number of articles based on journal, top 30 latest published articles, top 30 most cited articles, and top 30 oldest articles since 1962—is available in Appendix section (Tables A1–A4).

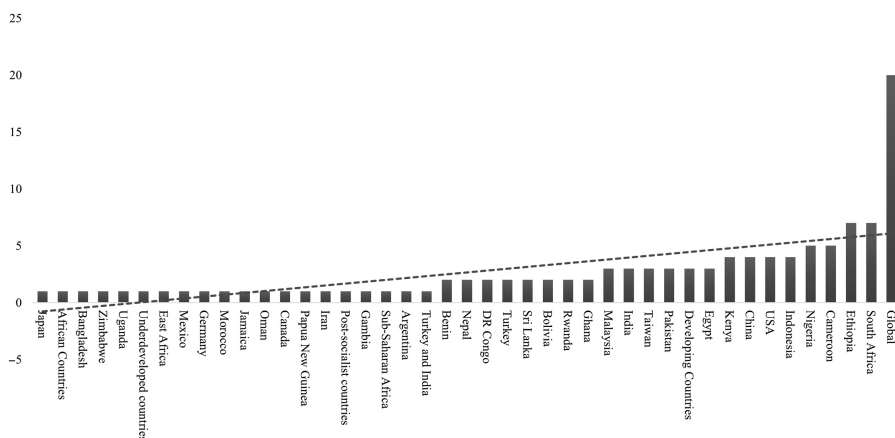
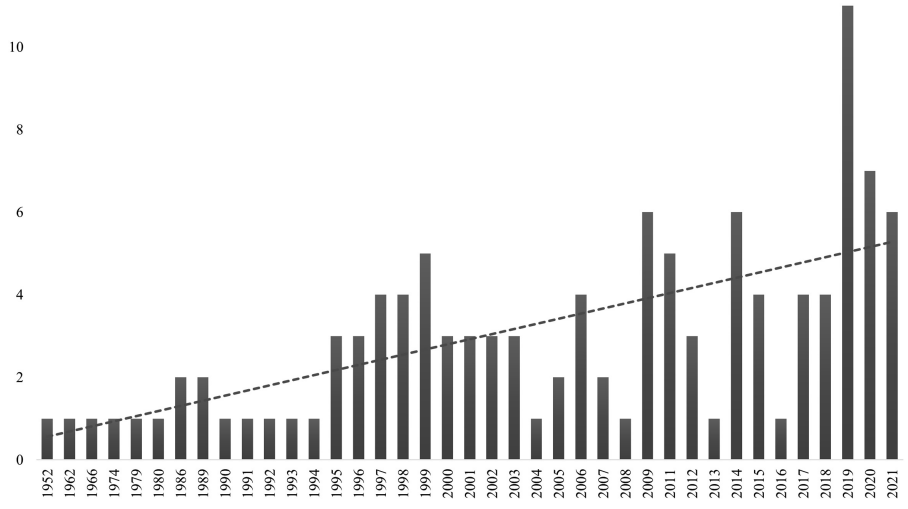


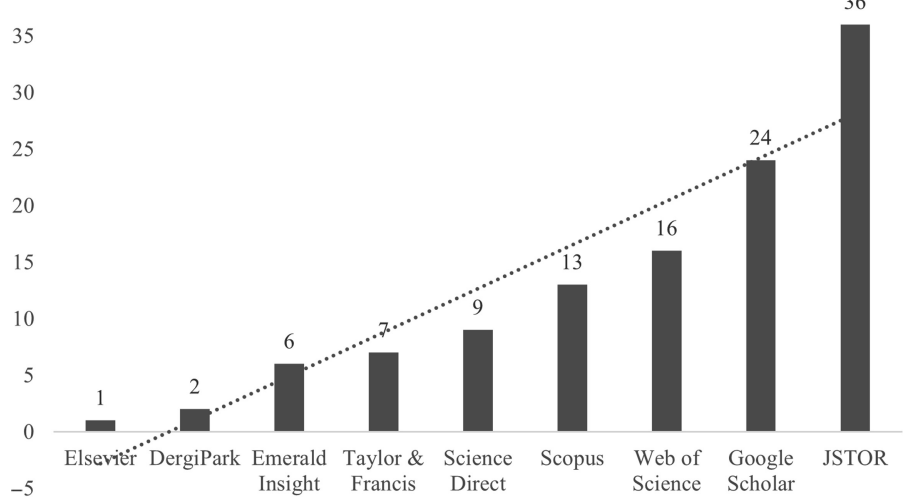
Figure 3. Number of articles based on country



**Figure 4.**  
Number of articles  
based on year



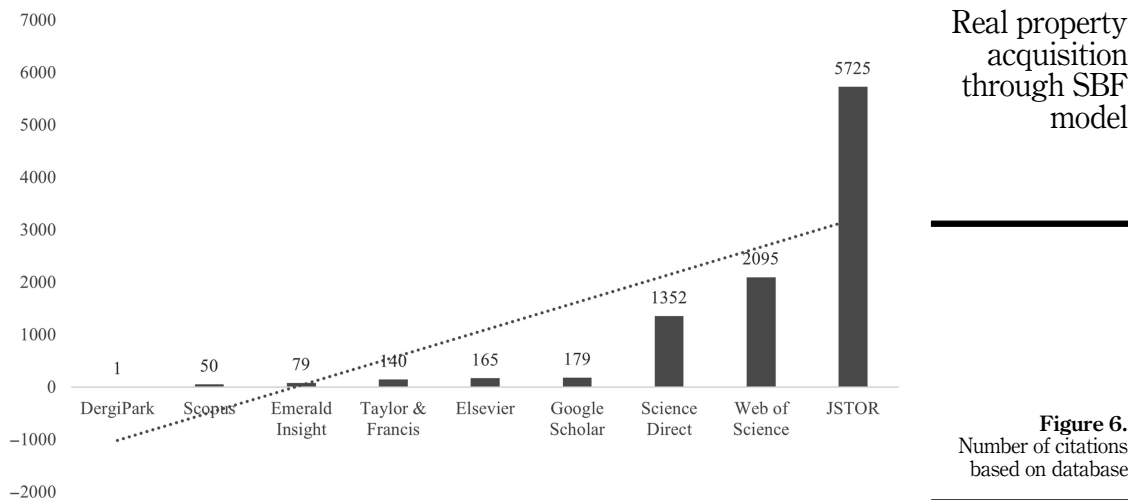
**Figure 5.**  
Number of articles  
based on database



**Source(s):** Authors [SCImago Graphica]

(2) Literature classification

As mentioned earlier, the study mined 25 items from each article, of which few have already been explained in the previous section under descriptive analysis. In this section, a total of fifteen (15) pairs from eleven (11) selected items—i.e. database, method, citation, year or year of publication, data type, study nature, type of concept, method of ROSCA, country, focus area, and ROSCA terminologies—are explained.



Real property acquisition through SBF model

**Figure 6.** Number of citations based on database

Figure 7a shows that almost two-thirds (69.30%) of the published articles on the selected topic applied the qualitative method, followed by quantitative (27.19%) and mixed-method (3.51%).

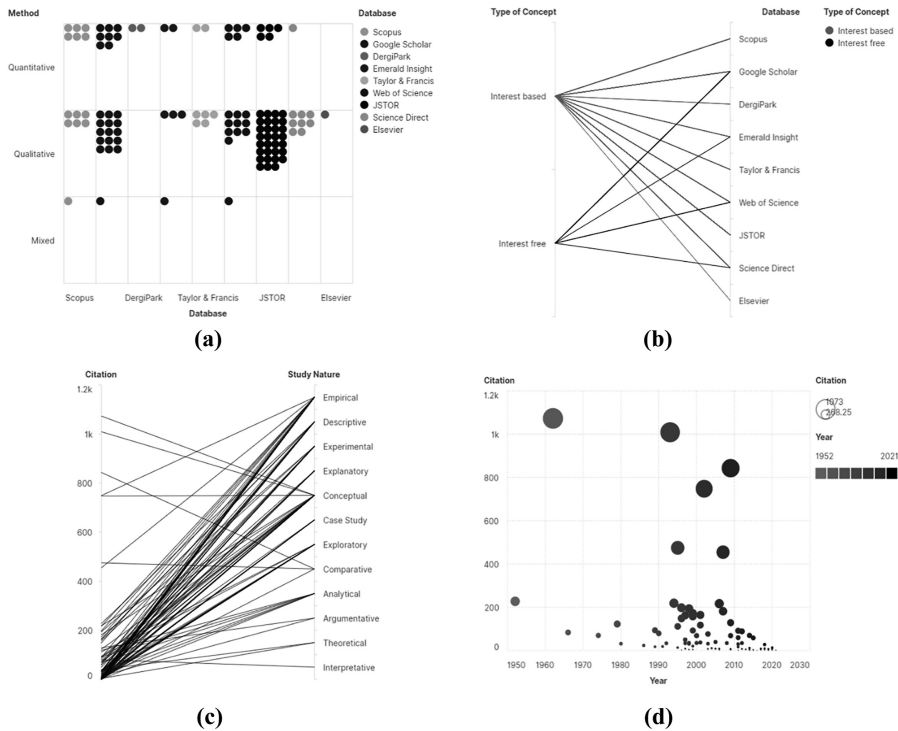
These studies primarily analyzed the interest-based aspect of the ROSCA model (92.11%); however, a few papers focused on the interest-free concept of ROSCA (Figure 7b). Regarding the citation, the highest cited papers are conceptual ones, whereas the lowest ones are from the rest, e.g. empirical, descriptive, and exploratory (Figure 7c). Papers published in the last decade obtained almost 50% of total citations since 1962. Interestingly, the highest aggregated cited papers were published in 2019, accounting for almost 10% of the total citations (Figure 7d).

Based on the data type, these published papers can also be classified into primary, secondary, and mixed. According to Figure 8a, studies related to ROSCA were mostly theoretical or comparative, or interpretive before the 1990s; from then on, the researchers started using the data—the primary (60.64%) and secondary (38.47%)—for diverse nature of studies (Figure 8b).

Almost nine out of ten studies focus on the interest-based [4] ROSCA concept, accounting for 92.11%, whereas interest-free ROSCA is considered by only 7.89%. Interest-free oriented studies are concentrated on five major nature of the study: empirical, experimental, conceptual, exploratory, and analytical (Figure 8c). Besides, these studies are conducted focusing on the following methods of ROSCA, namely random, bidding, fixed, and general [5].

Reportedly, similar results are also observed considering the country-wise method of ROSCA. As seen in Figure 9a, almost all of the countries found through this research are prone to two major methods of ROSCA: 1) random and 2) bidding. However, it does not mean that other methods were not being used; instead, there are many countries deemed to practice other forms of ROSCA— i.e. fixed, decision, throwing dice, secret bidding, premium bidding, and consumer durable. These practices were condensed to the twenty-first century (Figure 9c).

In addition, over the years, the focus area of the research has also changed. Before 1990, the central focus areas of the studies were concentrated on describing the model or



**Figure 7.** Illustration of database and citation based on method, type of concept, study nature, and year

**Source(s):** Authors [SCImago Graphica]

concept or explaining the theoretical aspect of the model. However, the research pattern shifted to behavioural, risk management, and operational centric in the twenty-first century (Figure 9). It is also observed that the focus areas of research were mostly qualitative (69.30%), whereas 27.19% of studies were quantitative, followed by 3.51% being mixed.

Considering the country-wise publication of studies over the years, the majority of the selected papers were published during the 2000–2020 timespan, focusing on the Africa-centric ROSCA model (Figure 10a).

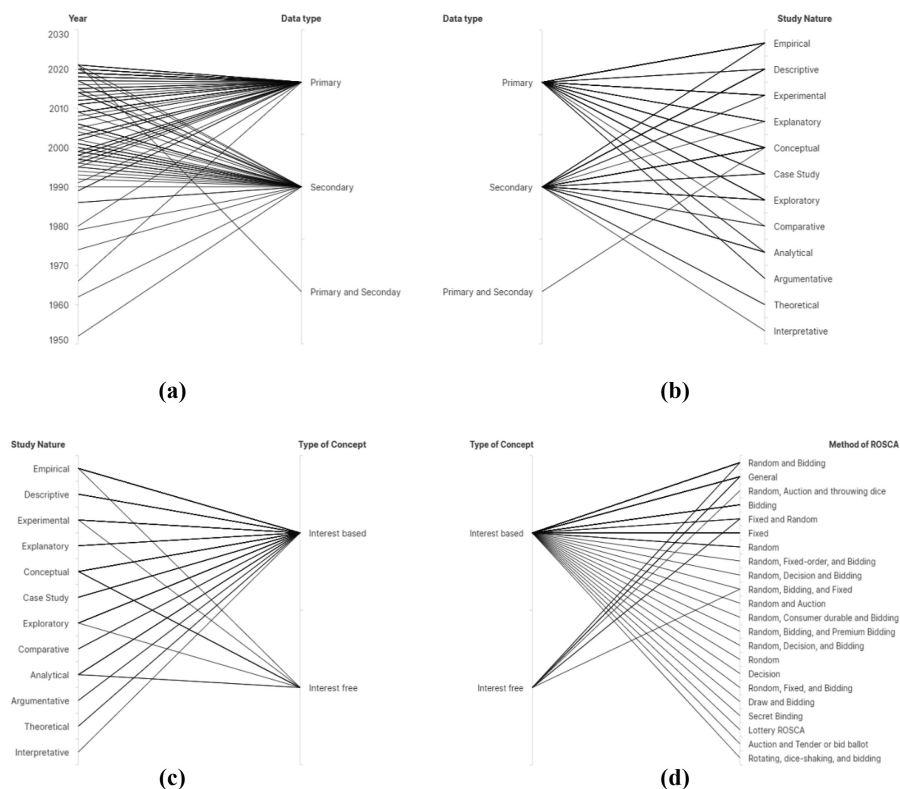
### (3) Bibliometric network analysis

This part of the study analyzes the bibliometric network based on the extracted data from 114 selected articles. We follow two methods—e.g. binary counting and full counting—for analyzing the data to ascertain the connection between the terms or focus areas among the studies and develop a bibliometric network (Figure 11).

#### Binary counting method

**First treatment:** The study selected ten (10) terms in the first Treatment to be the minimum number of occurrences. Among 2,550 terms, 35 met the threshold for analysis. A relevance score was produced for each of the 35 keywords. The most relevant terms were chosen based on this score, with the default setting being the 60% most relevant terms. Among them, 21 terms are selected. During the verification process of the terms, four (04)

# Real property acquisition through SBF model

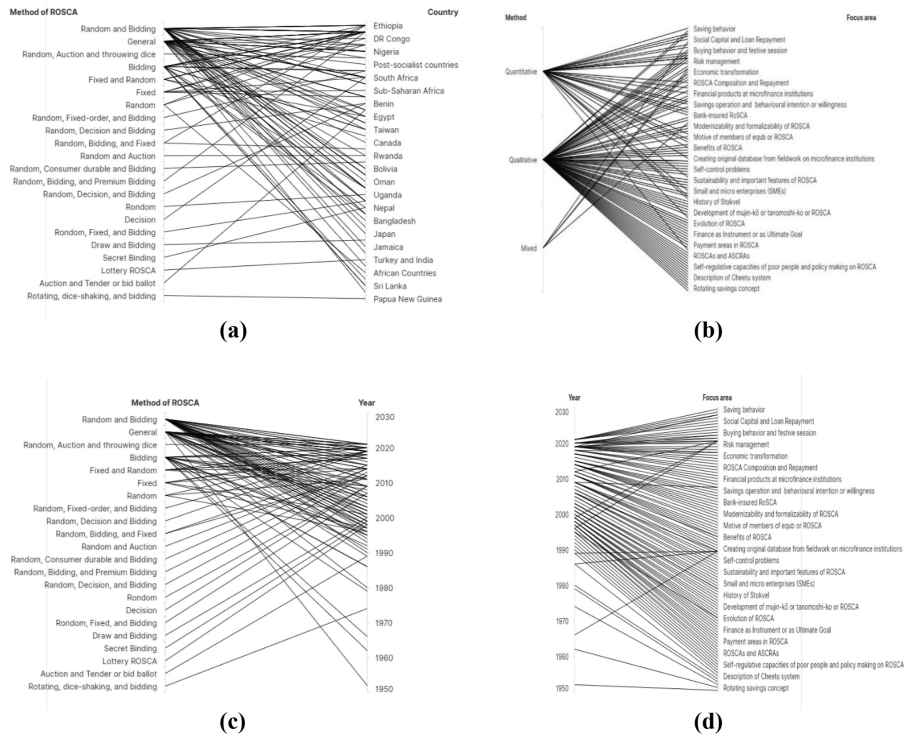


**Figure 8.**  
Illustration of items (year, data type, study nature, type of concept, and method of ROSCA)

**Source(s):** Authors [SCImago Graphical]

irrelevant items were removed. After analyzing the data under the association strength method, three clusters [red, blue, and green], 123 links, and 715 total link strength were ascertained. Each cluster had a specific number of terms selected— e.g. cluster 1, seven terms; cluster 2, six terms; cluster 3, four terms. Credit association and saving are the most robust terms among the clusters, meaning they have a maximum and robust connection with other terms in the inter and intra cluster(s). Terms that are close to each other have a stronger link than terms in the distance (Figure 11a).

**Second treatment:** A similar process is adopted; however, we used five terms to be the minimum number of occurrences instead of 10. Among 2,550 terms, 112 met the threshold for analysis. A relevancy score was measured for each of the 112 terms. The most relevant terms were chosen based on this score, with the 60% most relevant terms being the default selection. Among them, 67 terms were selected. During the verification of the terms, 4 of them were removed. After analyzing the terms under the association strength method, the study found four clusters [red, blue, yellow, and green], 1,012 links, and 1,668 total link strength. Each cluster had a specific number of terms designated, e.g. clusters 1, 2, 3, and 4 have 24, 15, 14, and 10 terms. Financial institution, fund, individual, and system are the robust terms among the clusters, meaning they have a strong and maximum connection with other inter and intra cluster(s). Terms that are close to each other have a stronger link than terms in the distance (Figure 11b).



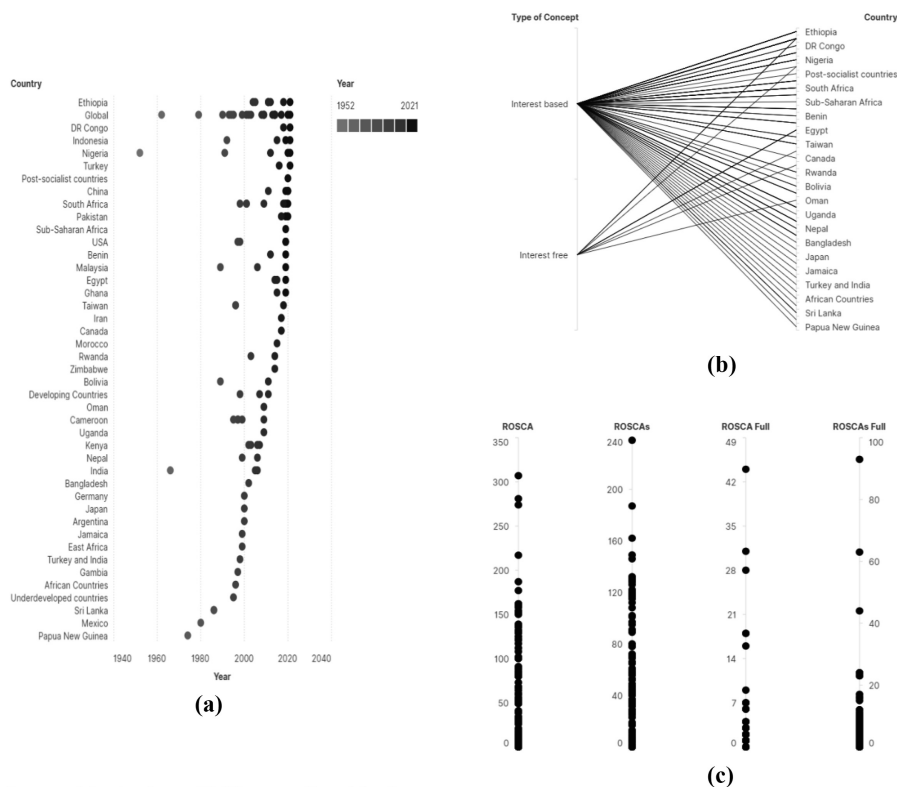
**Figure 9.**  
 Illustration of items  
 (method of ROSCA,  
 country, focus area,  
 and year)

Source(s): Authors [SCImago Graphica]

Full counting method

**First experiment:** The study chose ten (10) items as a minimum number of occurrences. Among 2,550 terms, 46 met the threshold for analysis. A relevance score was computed for each of the 46 words. The most relevant terms were chosen based on this score, with the 60% most relevant terms being the default selection. Among them, 28 terms were selected. During the verification of the terms, five irrelevant terms were removed. After analyzing the data under the association strength method, the study discovered four clusters [red, blue, yellow, and green], 200 links, and 3,296 total link strength. Each cluster has a specific number of terms selected, e.g. clusters 1, 2, 3, and 4 have 7, 7, 7, and 2 terms. ROSCA and association are the strong terms among the clusters. They have a maximum and robust connection with other inter and intra cluster(s). Items close to each other have a stronger link than terms with distance (Figure 11c).

**Second experiment:** A similar process is adopted; however, this study used five terms as the minimum number of occurrences instead of 10. Among 2,550 terms, 147 meet the threshold for analysis. The relevance score was determined for each of the 147 words. The most relevant terms were chosen based on this score, with the 60% most relevant terms being the default selection. Among them, 88 terms were selected. During the verification of the terms, six irrelevant terms were removed. After analyzing the data under the association strength method, the study ascertained six clusters [red, blue, yellow, aqua, purple, and green], 1,321 links, and 6,789 total link strength. Each cluster has a specific number of terms selected, e.g. clusters 1, 2, 3, 4, 5, and 6 have 19, 17, 14, 13, 12, and 7 terms, respectively. Association, savings, household, characteristics, loan, and ROSCA participants are the most



# Real property acquisition through SBF model

**Figure 10.** Illustration of items (country, year, type of concept, ROSCA terminologies)

Source(s): Authors [SCImago Graphica]

strong terms among the clusters, meaning they have a robust and maximum connection with other terms in the inter and intra cluster(s). Terms that are close to each other have a stronger link than items with distance (Figure 11d).

## (4) Statistical analysis

This section analyzed nine items that were extracted from 114 articles such as year or year of publication, database, citation, type of concept, method, data type, study nature, method of ROSCA, and aggregate terminology [ROSCA, ROSCAs, rotating savings, and credits association, and rotating savings and credit associations]. Descriptive statistics, correlation, and multiple linear regression were employed.

Descriptive statistics provide a meaningful representation of data and summarize data characteristics based on various particulars or variables. Considering mean value, it is noticed that each article was cited on average 86 times, interest-based as considered as a major concept, each article used the word ROSCA 68.32 times, ROSCAs 55.25 times, ROSASS 2.57 times, and ROSASSs 7.70 times. However, when the study compared the central tendency with standard deviation, a different scenario is observed; a high standard deviation, especially for citation, ROSASS, and ROSASSs, meaning the data is greatly spread out from their mean value. Regarding the mode, the value for the year is vital to notice because it denotes that the highest number of articles were published in 2019. In addition, the sum of each variable is also substantial because it provides the overall general scenario of the research (Table 4).

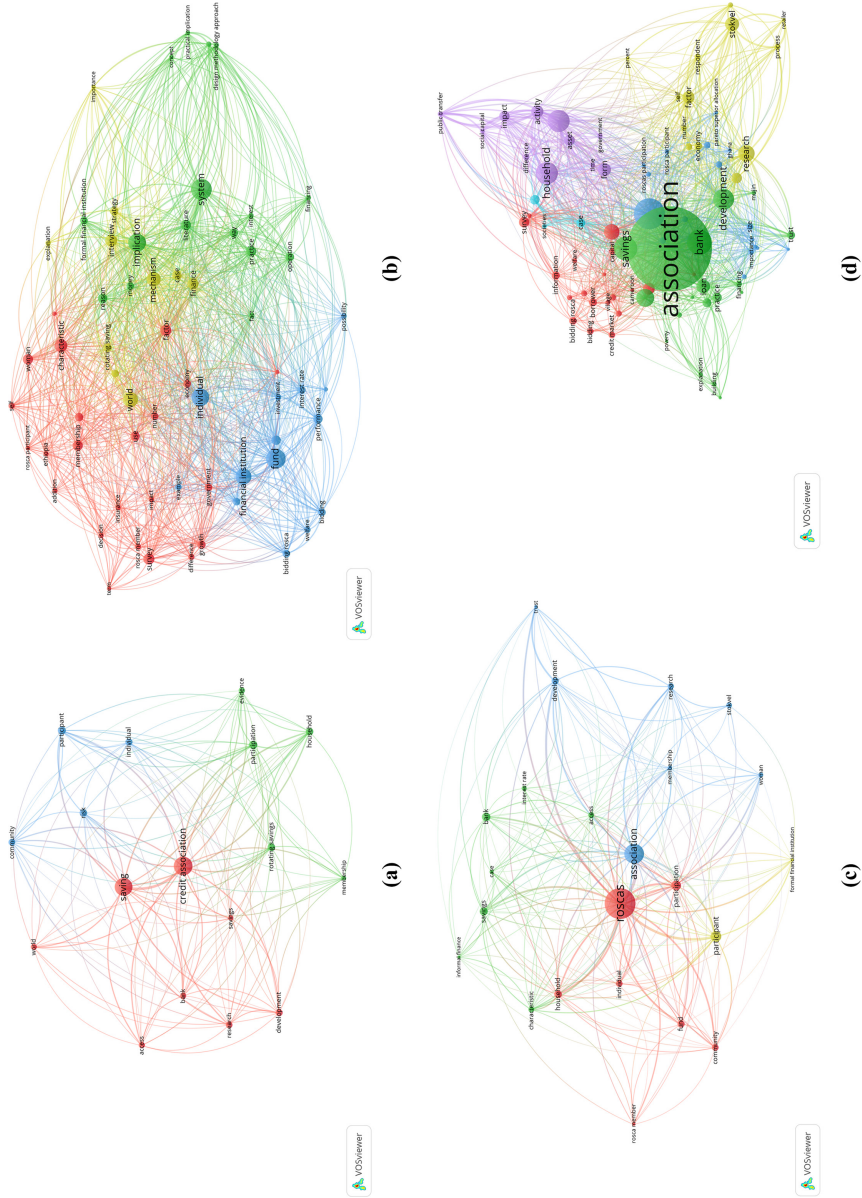


Figure 11. Illustration of bibliometric networks among selected articles

Source(s): Authors [VOSviewer]

Particulars	Year	DB	Citation	TC	Method	DT	SN	MROSCA	ROSCA	ROSCAs	ROSASS	ROSASSs	Total
Mean	2005,98	5,61	85,84	1,92	1,34	1,40	6,61	7,94	68,32	55,25	2,57	7,70	133,84
Mode	2019	7	0	2	1	1	7	6	0	0	0	5	112
St.D	13,23	2,87	191,43	0,27	0,55	0,51	2,52	5,36	65,47	48,74	6,22	11,46	89,23
Skewness	-1,34	-0,39	3,66	-3,16	1,32	0,60	-0,16	0,66	1,22	0,96	4,49	5,05	0,67
Minimum	1952	1	0	1	1	1	1	1	0	0	0	0	0
Maximum	2021	9	1,073	2	3	3	12	16	307	238	44	93	407
Sum	228682	639	9,786	219	153	160	753	905	7,788	6,299	293	878	15258
Year	1,00												
DB	-0,25	1,00											
Citation	-0,38	0,02	1,00										
TC	-0,21	-0,10	0,11	1,00									
Method	0,38	-0,14	-0,12	-0,17	1,00								
DT	-0,33	0,10	0,09	-0,09	-0,28	1,00							
SN	0,04	0,03	0,02	0,16	0,07	-0,08	1,00						
MROSCA	-0,16	-0,06	0,11	-0,03	-0,06	0,14	-0,13	1,00					
ROSCA	0,07	-0,27	0,17	0,12	0,03	-0,06	-0,14	0,15	1,00				
ROSCAs	0,25	-0,07	-0,02	0,15	0,03	-0,11	-0,08	-0,07	0,19	1,00			
ROSASS	-0,34	0,08	0,36	-0,08	0,00	0,19	-0,05	0,32	0,04	-0,23	1,00		
ROSASSs	-0,01	0,07	0,13	-0,02	-0,08	-0,05	0,04	0,20	-0,03	-0,01	0,28	1,00	
Total	0,16	-0,22	0,16	0,16	0,03	-0,10	-0,14	0,12	0,84	0,67	0,01	0,12	1,00

**Note(s):** SE= Standard Error, St.D, = Standard Deviation, SV = Sample Variance, DB = Database, DT = Type of Concept, DT = Data type, SN = Study Nature, MROSCA = Method of ROSCA, ROSASS = Rotating savings and creditn association, and ROSASSs = Rotating savings and credit association

**Source(s):** Authors [Excel]

**Table 4.**  
Descriptive and correlation analysis of selected major items

In terms of correlation analysis, there is no statistically significant correlation found between variables. However, observing the relationship between variables without considering the significance level provides some interesting findings—e.g. majority of cases, the correlation of year or published articles is negatively correlated (weak) with other variables. For example, the correlation value between year and citation is negative 0.38, meaning that increasing citation decreases the number of year-wise publications; however, this relationship is weak and not statistically significant (Table 4).

Unlike correlation, regression provides some remarkable and statistically significant ( $p < 0.05$ ) findings. Table 5 summarizes different measurements to explain the regression for selected variables. Regarding the coefficient value of independent variables, most of them are statistically significant, except “study nature” and “method of ROSCA”. As with correlation, the majority of the variables negatively impact the year of publication. For example, the coefficient value of citation is negative 0.023 indicates that one unit change in citation leads to a decrease in the year of publication by 0.023 units holding other variables constant. It can be derived that the articles were not cited as frequently as the publication of papers. A similar pattern is also observed regarding other variables, e.g. database, type of concept, and data type. Most of the coefficient values of the variables are negative because they have a low effect compared to the other factors, and the relationship between the parameters of the variables is inverse. However, two variables are found to have an opposite impact on the year of publication—i.e. method and study nature.

Interestingly, these findings are bolstered by the correlation results between the variables. In terms of the overall model’s statistical validity, the independent variables have a mutually and statistically significant impact on the dependent variable, “year or year of publication”. Finally, the *R*-square value, 41.41%, denotes that the independent variables can explain the 41.41% variation in the dependent variable.

\* Database (Scopus = 1, Web of Science = 2, Taylor & Francis = 3, Emerald Insight = 4, Elsevier = 5, Science Direct = 6, JSTOR = 7, Google Scholar = 8, and DergiPark = 9), Type of Concept (Interest free = 1, and Interest based = 2), Method (Qualitative = 1, Quantitative = 2, and Mixed = 3), Data type (Primary = 1, Secondary = 2, Both = 3), Study nature (Analytical = 1, Argumentative = 2, Case Study = 3, Comparative = 4, Conceptual = 5, Descriptive = 6, Empirical = 7, Experimental = 8, Explanatory = 9, Exploratory = 10, Interpretative = 11, Comparative = 12), Methods of ROSCA (Fixed = 1, Fixed and Random = 2, General = 3, Lottery ROSCA = 4, Random = 5 = Random and Bidding = 6, Random, Auction, and Throwing dice = 7, Random, Bidding, and Fixed = 8, Random, Bidding, and Premium Bidding = 9, Random, Consumer Durable, and

Particulars	Coefficients	SE	<i>t</i> -stat	<i>p</i> -value
Intercept	2030.348	10.063	201.754	0.000
Database	-0.835	0.360	-2.317	0.022
Citation	-0.023	0.005	-4.255	0.000
TC	-10.941	3.900	-2.805	0.006
Method	4.791	1.965	2.438	0.016
DT	-5.323	2.069	-2.573	0.011
SN	0.387	0.409	0.945	0.347
MROSCA	-0.300	0.190	-1.575	0.118
Terminology	0.031	0.012	2.598	0.011
<i>Particulars</i>	<i>df</i>	<i>SS</i>	<i>F</i>	<i>Significance F</i>
Regression	8	8196.425	9.278	1.33892801477576E-09
Residual	105	11595.540		
Total	113	19791.965		
			<i>Regression Statistics</i>	
			<i>R</i> Square	0.41413
			Adj. <i>R</i> Square	0.36949

**Table 5.**  
Regression analysis of  
selected items

**Source(s):** Authors [Excel]

*Bidding = 10, Random, Decision and Bidding = 11, Random, Decision, and Bidding = 12, Random, Fixed-order, and Bidding = 13, Random, Fixed, and Bidding = 14, Rotating, Throwing Dice, and Didding = 15, and Bidding = 16.*

## 5. Discussion

After testing and analyzing the extracted data, several findings have emerged, of which some of them fully comply with the objective of the study, and others bolster the prime findings. It is worth mentioning that one of the novel aspects of this study is to ascertain how has the concept of ROSCA evolved over the years. In this process, the study observed that the majority number of published articles' focused area were the concept, practice, and method of ROSCA in terms of the African Continent as well as Asia (Figure 3) within the timeframe of 1994–2003 and 2017–2021 (Figure 4). During that time span, the ROSCA concept got significant attention from academia because of its vast application in Africa and Asian Continents. Noticeably, the regained attention of researchers in 2017–2021 shows an emergence and acceptance of the ROSCA concept in the market once again. This scenario becomes explicit by looking at the year-wise publication in terms of the country—i.e. the majority of the selected papers were published during the 2000–2020 timespan, focusing on the primarily Africa-centric ROSCA model (Figure 10a).

Verily, the objective of this study can be fulfilled in various ways based on the analyzed data; however, the answer to the following question—“what are the focus areas that have been considered in the articles since 1962?”—provides the most convenient understanding of the evolution of ROSCA concept throughout the years. During these years, the researchers considered certain focused areas for analyzing the ROSCA concept in different countries. Among them, the major considered areas are as follows:

benefits member	characteristic operation	contribution purpose	digital risk	economics savings behaviour	history savings behaviour	institution social	law source of fund
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Interestingly, from 1962 until the first decade of the twenty-first century, most studies were primarily based on five major areas: characteristics, operation, economics, institution, and member. Although the law, history, source of funds, and contribution were also focused on, those were not as frequent as the first five. There are only four (04) studies that concentrated on the digital aspect of ROSCA; among them, one article is spectacularly eye-catching because of its content with the year of publication—i.e. financial technology in 1979 (Bouman, 1979). Later on, various aspects were introduced by researchers in their academic papers. However, after the Financial Crisis in 2009, the focus area was on risk and savings behaviour (Figure 9d).

Figures 8a, 9a, c, and 10a also provide information related to the objective of the study by focusing on the year-wise data type, country-wise method of ROSCA, year-wise method of ROSCA, and country-wise year and number of publications. Therefore, it can be summarized that the academia's attention related to ROSCA focused on the following topics over the years:

1962–1990	Characteristics, operation, economics, institution, and members
1991–2000	Law, source of fund, and history
2001–2012	Social, benefits, and contribution
2013–2021	Purpose, digital, risk, and savings behavior aspect

It is worth mentioning that the researcher has never avoided the first five focus areas in their research since 1962.

Along with the aforementioned findings, the results from bibliometric network analysis through VOSviewer also provide several robust connections between the most co-occurrence terms based on text mining functionality in the selected articles. For example, [Figure 11a and c](#) show that the most co-occurrence (considering 10 co-occurrence of each term) terms used in the articles are credit association or association, ROSCA, savings, and participation since 1962. They are strongly interlinked with each other. The finding implies their frequent use in the articles; in other words, researchers' focus mainly was based on these concepts, which complies with the findings of the previous section. After reducing the minimum co-occurrence terms to 5 from 10, the following terms are found: association, development, loan, operation, fund, financial institution, member, system, implication, and rotating savings, which bolsters the aforementioned findings of the study.

Regarding statistical analysis, the findings indicate that majority of the articles were published in 2019; each article got cited on an average 86 times as well as used ROSCA-related words (i.e. ROSCAs, rotating savings and credit association, rotating savings and credit associations) 133 times. Under regression analysis, the results play a supportive role in the main findings of the study. It revealed that the selected items for data exaction have a significant mutual impact on the year of publication, despite having some negative relationship between the variables in terms of coefficient. These results collectively signify that the research on ROSCA has obtained significant attention in recent years among academic scholars; in other words, the model reemerged in the market as a tool for acquiring indivisible durable goods or savings mechanism for a source of funds.

Finally, a recently published article ([Dinç \*et al.\*, 2021](#)) bolsters the findings of this research significantly. The study ascertained various alternative names of ROSCA from 105 countries. Based on the maximum number of alternative names used in each country, the top 4 among the first 25 countries are from the African continent— i.e. Ivory Coast, Nigeria, Cameroon, and Republic of the Congo ([Table A5 \[Appendix\]](#)). This may justify the reason for the highest number of Africa-centric published articles ([Figure 3](#)). Besides, [Dinç \*et al.\* \(2021\)](#) classified the evolution of the ROSCA concept based on five (05) phases: “(1) before the emergence of the banking system, (2) from the emergence of the banking system to the Second World War, (3) from Second World War to the 1970s, (4) 1970s–1990s and (5) 1990s to present” (p. 6). Based on the analysis, the following years and countries are significantly important for the evolution of ROSCA:

200 BC	China
12th century	Japan
1775	United Kingdom
1855	South Africa
1858	Australia
After Second World War	Austria, Bulgaria, Czechoslovakia, Greece, Holland, Romania and Switzerland
1951	Germany
1970 and 1980s	Global
1990	Turkey

After the 1990s, a paradigm shift was observed in the ROSCA sector because of its cooperative structure, which was predominantly introduced in Turkey to purchase automobiles. This approach was later dubbed “Savings-based Finance” (Tassaruf Finansman in Turkish). Through this move, ROSCA entered into a new age—from micro

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to macro demand, from home durables or household items to real properties—and gained rapid customers’ interest, resulting in a considerable growth in the number of SBF companies – about 40 registered companies by 2020.

## 6. Conclusion

A literature review has always been the tool for ascertaining a possible gap(s) for researchers; the systemic literature review has added a layer to it by following a scientific way of extracting data from the available studies and bolstering to accomplish the objective of respective research in a systematic way. The main objective of this study is to ascertain how the concept of ROSCA has evolved over the years since 1962. The study adopted several strategies and applied various selective techniques to reach the objective. PRISMA is the primary technique, whereas bibliometric network analysis, thematic analysis, and statistical analysis are the supportive methods.

After extracting data through the PRISMA-compliant process, the study included 114 articles for full-fledged analysis. In this process, the mined data from each article were documented based on the predeveloped protocol, which was reviewed and examined by three experts from the respective field. After analyzing the selected data, this study found various descriptive, literature classification, bibliometric network, and statistical findings that assist in fulfilling the objective of the study. Verily, there is no single-sentence answer for the research question of this study because of its nature, which is “How”; instead, a series of findings collectively provide the answer of it. Among them, year-wise and country-wise published articles, year-wise and country-wise method of ROSCA, year-wise focus area of articles, co-occurrence of terms and their networking among each other, and impact of selected terms on the year of publications are the major findings that satisfy the answer (see the discussion section).

As discussed several times in earlier sections, this research’s scope is confined to investigating the evolvement of ROSCA from an informal fund collection to real asset acquisition as a form of SBF. In order to ensure the objective, several constraints were considered to extract the most relevant articles from various databases. In this process, the study only assessed English-language-only articles instead of books, book chapters, reviews, and any other forms of documents. It also restricted the year of publications, from 1962 to 2021[except 1952], and the number of data collection sources to only seven. Though the applied strategies restricted many articles, books, book chapters, and reviews from being part of this study, the research facilitates future researchers to comprehend the overall sector and its possible research areas and topics. Notably, this study encountered various points which led the study to provide some essential future agendas. Like the purpose of any literature review, i.e. to find out the gap in the selected literature arena, it also found many potential areas to be concentrated on to comprehend and explore the ROSCA or savings-based finance model. Social orientation, liquidity management, fintech ecosystem, blockchain-centric application, risk management mechanism, and working capital management are the major focus areas that future researchers may contribute to the development and sustainability of this century-old fund collection concept, ROSCA or SBF.

In summary, the findings from each analysis— i.e. descriptive, literature classification, bibliometric network, statistical—collectively provide direct and indirect points to develop the structure for the evolvement of ROSCA. After carefully screening and analyzing the study’s findings, a tentative linear evolution or transformation line is drawn where the concept of ROSCA is evolved from informal to formal, micro to macro, individual to institutional, social to business, and informal fund collection to real property acquisition.

## Notes

1. Real property has comprehensive understating across the academia and economy. However, this study defines housing and automobile as real property to comply with the practice SBF model in Turkey.
2. SBF is a cooperative-centric model that focuses on solidarity and mutual accomplishment of individuals in a group for common demands (Erguven and Kaya, 2016). "The model is similar to contractual savings concept, with the main motive of fulfilling the positive savings with the negative savings for the total targeted amount on [agency] basis" (Dinç et al., 2019, p. 35). In some research, the concept is simply referred to as an interest-free home financing model (Kumbasar, 2016; Ersin and Duran, 2017). Overall, this model is similar to the ROSCA concept both technically and operationally.
3. According to Claes Wohlin (2014), "[Snowball search] refers to using the reference list of a paper or the citations to the paper to identify additional papers" (p. 01)
4. The study considers a ROSCA model as interest based unless it is not directly mentioned as interest-free in the respective study. The reason behind is that ROSCA has both interest-based and interest-free models, practicing across the globe. Therefore, the study adopts this strategy to create distinction among the studies.
5. It is called "general" because there is no specific model mentioned in the respective study. Therefore, the "general" denotes all the possible models of ROSCA.

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(The Appendix follows overleaf)

Name of journals	Number of articles
Savings and Development	12
African Review of Money Finance and Banking	08
Journal of Development Economics	07
Economic Development and Cultural Change	06
The Journal of Developing Areas	03
World Development	03
Emerging Markets Finance and Trade	02
The Journal of Development Studies	02
The Journal of the Royal Anthropological Institute of Great Britain and Ireland	02
Developing Economies	02
Journal of Developmental Entrepreneurship	02
Journal of Economic Behavior and Organization	02
ISRA International Journal of Islamic Finance	02
Journal of Money Laundering Control	01
Bangladesh e-Journal of Sociology	01
Quarterly Journal of Economics	01
Decision	01
Journal of Enterprising Communities	01
International Journal of Humanities and Management Sciences	01
Oxford Development Studies	01
Development in Practice	01
Anthropos	01
Development Southern Africa	01
Chinese Economy	01
Economic and Political Weekly	01
Journal of Evolutionary Economics	01
Economica	01
Economic Journal	01
Procedia Economics and Finance	01
Electronic Journal of Business Ethics and Organization Studies	01
Review of Economic Studies	01
Advances in Qualitative Organization Research	01
The Economic Journal	01
Engineering Economist	01
BILTÜRK Journal of Economics and Related Studies	01
Enterprise and Society	01
Zeitschrift für die gesamte Versicherungswissenschaft	01
Ethnology	01
Journal of Enterprising Communities: People and Places in the Global Economy	01
European Scientific Journal	01
Journal of Islamic Economics, Banking and Finance	01
Kyklos	01
International Economic Review	01
Oxford Bulletin of Economics and Statistics	01
International Journal of Development Issues	01
Problems and Perspectives in Management	01
International Journal of Social Economics	01
Proceedings of the ACM on Human-Computer Interaction	01
International Review of Retail, Distribution and Consumer Research	01
Research in Economics	01
American Ethnologist	01

**Table A1.**  
Number of articles  
collected from each  
journal

(continued)

Name of journals	Number of articles	Real property acquisition through SBF model
Review of Social Economy	01	
Journal for New Generation Sciences	01	
Science advances	01	
Journal of Business Economics and Finance	01	
Asian Economic and Financial Review	01	
Journal of Comparative Economics	01	
The Journal of Legal Pluralism and Unofficial Law	01	
Journal of Islamic Accounting and Business Research	01	
The Quarterly Journal of Economics	01	
American Economic Journal: Microeconomics	01	
Community Development Journal	01	
American Economic Review	01	
Canadian journal of nonprofit and social economy research	01	
Journal of Economics Library	01	
Others (Working paper and Conference proceeding)	09	
Total	114	
<b>Source(s):</b> Authors [Databases]		<b>Table A1.</b>

**Table A2.**  
Top 30 latest studies  
related to ROSCA  
or SBF

Authors	Article title	Focus group	Focus area
Diñç <i>et al.</i> (2021)	Economics of savings-based finance: an interest-free model of rotating savings and credit association in Turkey	SBF institutions in Turkey	Economics of SBF or ROSCA
Ryu and Suzuki (2021)	ROSCAs as Insurance: Comparing Formal and Informal Methods of Saving among the Unskilled Workers in the Ethiopian Cut-Flower Industry	Low-income production workers	Saving behavior
Light (2021)	Exiting Poverty Through Self-Employment: The Grameen Model And Rotating Credit Associations As Alternative Strategies	Poor people	Self-employment
Francois and Squires (2021)	Linking mobile money networks to "e-ROSCAs": An experimental study	Business that use mobile money networks to run ROSCAs	Digitization of ROSCA
Ajija and Siddiqui (2021)	Impact of Joining Rotating Savings and Credit Association (Rosca) on Household Assets in Indonesia	Participants of Arisan or ROSCA	Household assets
Okezie <i>et al.</i> (2021)	Social Capital and Loan Repayment Capacity of Agripreneurial Groups' in Abia State, Nigeria	Agripreneurial groups	Social Capital and Loan Repayment
Imanni <i>et al.</i> (2020)	Informality and access to finance during socialism and transition – the case of the rotating savings and credit schemes	Individual who have lack of access to loans	Trust and reputation
Han <i>et al.</i> (2020)	The Risk Management Mechanism of China's Bidding Rotating Savings and Credit Association: A Case Study of Chengnan Village in Wenzhou	Rural residents	Internal and external risk management mechanisms
Lappeman <i>et al.</i> (2020)	Exploring retail orientated rotating savings and credit associations: festive season "stokvels" in South Africa	Retailers	Buying behavior and festive session
Egbide (2020)	Rotating and savings credit association (ROSCAS): A veritable tool for enhancing the performance of micro and small enterprises in Nigeria	Micro and small enterprises	Savings Mobilization
Reito (2020)	ROSCAs without sanctions	Two-individual model	Risk and Insurance
Shoaib and Siddiqui (2020)	Why do people participate in ROSCA saving schemes? Findings from a qualitative empirical study	ROSCA participants of rural areas of Pakistan	Participation in ROSCA
Han <i>et al.</i> (2020)	The Risk Management Mechanism of China's Bidding Rotating Savings and Credit Association: A Case Study of Chengnan Village in Wenzhou	ROSCA's participants from Chengnan Village in Wenzhou	Risk management
Baland <i>et al.</i> (2019)	Now or later? The allocation of the pot and the insurance motive in fixed ROSCAs	Sub-Saharan African	Risk and Insurance
Altuntas <i>et al.</i> (2019)	The effect of ROSCA participation on microinsurance purchase: Evidence from Indonesia	Household	Risk and Microinsurance
Ibrahim (2019)	Do institutions matter?: The persistence of ROSCAs among immigrants in developed economies	African immigrant communities	Institutional elements of ROSCA

(continued)

Authors	Article title	Focus group	Focus area
Ke and Ye (2019)	The Practice of Rotating Saving and Credit Associations and Interest Rate Liberalization—A Case Study of Wenzhou	Wenzhou City Rural Finance	Interest rate
Bophela and Khumalo (2019)	The role of stokvels in South Africa: A case of economic transformation of a municipality	Stokvel group members and policymakers	Economic transformation
Ibrahim (2019)	Do institutions matter? The persistence of ROSCAs among immigrants in developed economies	ROSCA group team leaders from African immigrant communities	Savings Mobilization
Bonan <i>et al.</i> (2019)	Time preferences and commitment devices: evidence from ROSCAs and funeral groups in Benin	Poor individuals in two urban districts of Cotonou, Benin	Time preferences and commitment devices
Mehmood <i>et al.</i> (2019)	Towards digitization of collaborative savings among low-income groups	ROSCA organizers, members, and non-members	Digitization of ROSCA
Azman and Kassim (2019)	Sustainable Development of Women Micro-Entrepreneurs in Malaysia: Factors Affecting Adoption of Rotating Savings and Credit Association (ROSCA)	Women micro-entrepreneurs	Sustainability and adoption factors for ROSCA
Al-Ajlouni (2019)	ROSCAs As an Islamic Micro Finance Vehicle: The Concept, Key Drivers and Valuation	ROSCA members in Helwan, a large metropolitan area in Cairo city/Egypt	Participation in ROSCA
Amankwah <i>et al.</i> (2019)	Pareto superior dimension of rotating savings and credit associations (ROSCAs) in Ghana: Evidence from Asunafo North Municipality of Ghana	ROSCA participants from Asunafo North Municipality of Ghana	Characteristics of ROSCA participants
Le Polain <i>et al.</i> (2018)	Interest Rates in Savings Groups: Thrift or Threat?	Savings group participants and practitioners	Interest rate
Bauchet and Larsen (2018)	ROSCA Composition and Repayment: Evidence from Taiwanese Bidding ROSCAs	Taiwanese bidding ROSCAs	ROSCA Composition and Repayment
Yimer <i>et al.</i> (2018)	The interplay between official and unofficial laws in rotating savings and credit associations (Eqqub) in Tigray, Ethiopia	Eqqub leaders and their members	Official and unofficial laws in ROSCA
Ngcobo and Chisasa (2018)	Success Factors and Gender Participation of Stokvels in South Africa	Participants of Rosca	Success factors of stokvels or rosca
Sadr (2017)	The optimum size of rotating qard hasan savings and credit associations	Universal	Interest-free ROSCA or Qard Hasan
Ahn <i>et al.</i> (2017)	Analysis and design of microfinance services: A case of ROSCA	Universal	Financial products at microfinance institutions

**Note(s):** Universal means no specific group was mentioned in the study, simply put, it was an overall general study

**Source(s):** Authors

**Table A3.**  
Top 30 most cited  
studies related to  
ROSCA or SBF

Authors	Article title	Citation	Focus group	Focus area
Geertz (1962)	The Rotating Credit Association: A "Middle Rung" in Development	1,073	Universal	Rotating savings concept
Besley <i>et al.</i> (1993)	The Economics of Rotating Savings and Credit Associations	1,009	Individuals	Economic role and performance
Ardener (1964)	The Comparative Study of Rotating Credit Associations	843	Participants of Rosca	Practice of ROSCA
Anderson and Baland (2002)	The Economics of ROSCAs and Intrahousehold Resource Allocation	749	Inhabitants in Kenyan slum (Nairobi)	Individual motives to participate in ROSCA
Anderson and Baland (2002)	The Economics of ROSCAs and Intrahousehold Resource Allocation	747	Informal saving groups in the slum of Kibera (Kenya)	Individual motives to participate in ROSCA
Bouman (1995a, b)	Rotating and accumulating savings and credit associations: A development perspective	475	Financial self-help groups	ROSCAs and ASCRAs
Gugerty (2007)	You can't save alone: Commitment in rotating savings and credit associations in Kenya	455	Local women's self-help groups	Individual self-commitment
Bascom (1952)	The Esusu: A Credit Institution of the Yoruba	228	Participant of ROSCA or esusu in Yuroba, Nigeria	Application and operation of esusu or ROSCA
Besley <i>et al.</i> (1994)	Rotating savings and credit associations, credit markets and efficiency	219	Universal	Allocations of funds
Akoten <i>et al.</i> (2006)	The Determinants of Credit Access and Its Impacts on Micro and Small Enterprises: The Case of Garment Producers in Kenya	217	Three garment-producing marketplaces or clusters	Determinants of access to different credit sources
Besley and Levenson (1996)	The Role of Informal Finance in Household Capital Accumulation: Evidence from Taiwan	198	Households	Household accumulation of durables and participation in informal financial institution
Calomiris and Rajaraman (1998)	The Role of ROSCAs: Lumpy Durables or event Insurance?	194		Lumpy durables and event insurance
Ambec and Treich (2007)	ROSCAs as Financial Agreements To Cope With Self-Control Problems	182	Universal	Self-control problems
Handa and Kirton (1999)	The economics of rotating savings and credit associations: Evidence from the Jamaican "Partner"	173	Household heads	Economic theory of ROSCAs
Biggart (2001)	Banking on each other: the situational logic of rotating savings and credit associations	165	Universal	Poverty alleviation tool and ROSCA
Van den Brink and Chavas (1997)	The microeconomics of an indigenous African institution: The rotating savings and credit association	163	Microeconomics of ROSCA	Indigenous African institution

(continued)

Authors	Article title	Citation	Focus group	Focus area
Kimuyu (1999)	Rotating saving and credit associations in Rural East Africa	158	Two rural communities in Kenya and Tanzania	Participation in ROSCA
Levenson and Besley (1996)	The anatomy of an informal financial market: Rosca participation in Taiwan	149	National household	Participation in ROSCA
Anderson <i>et al.</i> (2009)	Enforcement in informal saving groups	129	Universal	Social Enforcement or sanction
Bouman (1979)	The Rosca: Financial Technology Of An Informal Savings And Credit Institution In Developing Economies	123	Universal	Financial technology of informal savings
Verhoef (2001)	Informal Financial Service Institutions for Survival: African Women and Stokvels in Urban South Africa, 1930–1998	118	African women	History of Stokvel
Bouman (1995a, b)	Rosca: On The Origin Of The Species	112	Universal	Evolution of ROSCA
Adams and de Sahonero (1989)	Rotating Savings And Credit Associations in Bolivia	94	RoSCAS in five of the largest cities in Bolivia	Practice of ROSCA
Kovsted and Lyk-Jensen (1999)	Rotating savings and credit associations: The choice between random and bidding allocation of funds	93		Random and a bidding rosca
Basu (2011)	Hyperbolic Discounting and the Sustainability of Rotational Savings Arrangements	92	Universal	Sustainability of ROSCA
Dagnelie and Lemay-Boucher (2012)	Rosca Participation in Benin: A Commitment Issue	89	Beninese urban household	Participation in ROSCA
Anderson (1966)	Rotating Credit Associations in India	84	Individuals in city of Hyderabad (Andhra Pradesh) and a village approximately twenty miles from the city	Practice of ROSCA
Callier (1990)	Informal Finance: The Rotating Saving and Credit Association — An Interpretation	80	Associations	Informal finance
Klonner (2003)	Rotating savings and credit associations when participants are risk averse	77	Risk-averse participants	Function of Bidding ROSCA
El-Gamal <i>et al.</i> (2014)	Bank-insured RoSCA for microfinance: Experimental evidence in poor Egyptian villages	70	Poor Egyptian	Bank-insured RoSCA

**Note(s):** Universal means no specific group was mentioned in the study, simply put, it was an overall general study

**Source(s):** Authors

Real property  
acquisition  
through SBF  
model

Table A3.

**Table A4.**  
Top 30 oldest studies  
related to ROSCA or  
SBF since 1952

Authors	Article title	Focus group	Focus area
Bascom (1952)	The Esusu: A Credit Institution of the Yoruba	Participant of ROSCA or esusu in Yuroba, Nigeria	Application and operation of esusu or ROSCA
Geertz (1962)	The Rotating Credit Association: A "Middle-Rung" in Development	Universal	Rotating savings concept
Anderson (1966)	Rotating Credit Associations in India	Individuals in city of Hyderabad (Andhra Pradesh) and a village approximately twenty miles from the city	Practice of ROSCA
Wu (1974)	To kill three birds with one stone: the rotating credit associations of the Papua New Guinea Chinese	Overseas Chinese community in Papua New Guinea	Process of economic development
Bouman (1979)	The Rosca: Financial Technology Of An Informal Savings And Credit Institution In Developing Economies	Universal	Financial technology of informal savings
Cope and Kiurtz (1980)	Default and the Tandara: A Model regarding Recruitment for Rotating Credit Associations	Participants of Rosca or tanda	Recruitment for ROSCA or tanda
Fernando (1986)	Informal Credit And Savings Organizations In Sri Lanka: The Cheetu System	Poor people	Description of Cheetu system
Fernando (1986)	Informal Credit and Savings Organizations in Sri Lanka: the Cheetu System	Cheetu System organizations	Practice of ROSCA
Adams and de Sahonero (1989)	Rotating Savings and Credit Associations in Bolivia	RoSCAS in five of the largest cities in Bolivia	Practice of ROSCA
Shammugam (1989)	Development Strategy and Mobilising Savings Through ROSCAs: the Case of Malaysia	ROSCA participants	Development strategy and mobilising savings
Callier (1990)	Informal Finance: the Rotating Saving and Credit Association — An Interpretation	Associations related to ROSCA	Informal finance
Jerome (1991)	The Role of Rotating Savings and Credit Associations in Mobilizing Domestic Savings in Nigeria	Households	Role of Rotating Savings and Credit Associations in mobilizing domestic savings
Hospes (1992)	People that Count: the Forgotten Faces Of Rotating Savings and Credit Associations in Indonesia	Poor: people	Self-regulative capacities of poor people and policy making on ROSCA
Besley <i>et al.</i> (1993)	The Economics of Rotating Savings and Credit Associations	Participants of ROSCA	Economic role and performance
Besley <i>et al.</i> (1994)	Rotating Savings and credit associations, credit markets and efficiency	Universal	Allocations of funds

(continued)

Authors	Article title	Focus group	Focus area
Bouman (1995a, b)	Rotating and accumulating savings and credit associations: A development perspective	Financial self-help groups	ROSCAs and ASCRAs
Bouman (1995a, b)	Rosca: On The Origin Of The Species	Universal	Evolution of ROSCA
Tankou and Adams (1995)	Sophisticated Rotating Saving And Credit Associations In Cameroon	A sophisticated self-help financial group	Evolution and operation of ROSCA
Besley and Levenson (1996)	The Role of Informal Finance in Household Capital Accumulation: Evidence from Taiwan	Households	Household accumulation of durables and participation in informal financial institution
Levenson and Besley (1996)	The anatomy of an informal financial market: Rosca participation in Taiwan	National household	Participation in ROSCA
Schirmeister and Nadler (1996)	Promoting Linkages Between Formal And Informal Finance In An African Country: A Case Study	Individuals	Formal institution and ROSCA practice
Van den Brnk and Chavas (1997)	The microeconomics of an indigenous African institution: The rotating savings and credit association	Microeconomics of ROSCA	Indigenous African institution
Snowden (1997)	Building and loan associations in the U.S., 1880–1893: The origins of localization in the residential mortgage market	Building and loan association	Building and loan associations
Schreiner and Nagarajan (1997)	Predicting Creditworthiness With Publicly Observable Payment Arrears In Rotating Savings And ROSCAs in the Gambia	People in Sub-Saharan Africa	and residential mortgage market
Ndjunga and Winter-Nelson (1997)	Empirical Analysis Of Cameroonian ROSCAs	RoSCAs operating in urban Cameroon	Creditworthiness and Publicly observable characteristics
Calomiris and Rajaraman (1998)	The Role of ROSCAs: Lumpy Durables or Event Insurance?		Payment areas in ROSCA
Laguette (1998)	Rotating Credit Associations and the Diasporic Economic	ROSCA participants of Haitian community in New York	Lumpy durables and event insurance
Buijs (1998)	Savings and loan Clubs: Risky Ventures or good Business Practice? A Study of the Importance of Rotating Savings and Credit Associations For poor Women	Participants of ROSCA	Mode of operation and the risks involved
Smets (1998)	Money-Go-Rounds for Women: Finance as Instrument or as Ultimate Goal in Lottery ROSCAs	Turkish and Indian lottery ROSCA	Importance of ROSCA
Handa and Kirton (1999)	The Economics of Rotating Savings and Credit Associations: Evidence from the Jamaican "Partner"	Household heads	Finance as Instrument or as Ultimate Goal

**Note(s):** Universal means no specific group was mentioned in the study, simply put, it was an overall general study

**Source(s):** Authors

Table A4.

Country	Alternative names of ROSCA	Count
Ivory Coast	Diaou Monai, Safina mam, Wari monai, Tonton, Tontine, Moni, Diaou Moni, War Moni, Djigi Moni, Safina, Akpole wule, Susu, Aposumbo, Kukule, A tche le sezu, Komite, N'detie, M'bgli sika, Monu, mone	20
Nigeria	Ofa, Esusu, Osusu, Enusu, Ajo (Yoruba), Cha (Ibo), Oha, Oja, Adashi (Hausa, Tiv), Bam (Tiv), Isusu (Ot), Utu (Ibo), Dashi (Nupe), Efe (Ibibios), Oku (Kalabari Ijawas), Mitiri, Compiri, Club (Ibo)	17
Cameroon	Djanggis, Ngwa, Njangi, Jangi, Ujangi, Djana, Mandjon, Djapa, Tontine, Njanggi, Ntchwa	11
Republic of the Congo	Temo, Kitemo, Ikilemba, Kikedimba, Kikirimbahu, Likilimba, Efongo Eambongo, Otabaka, Ekori, Otabi	11
Japan	Kou, Tanomoshiko, Mujin, Donen ko, Kate, Ke, Miyin, Musin, Tanamoshi	9
South Africa	Gooi-gooi, Kuholisana, Chita, Chitu, Stokfel, Stockfair, Mahodisana, Motshelo, Umangelo	9
Zaire	Temo, Ikelemba, Osassa, Bandoi, Kitemo, Kitwadi, Adashi, Tontine, Bandal	9
India	Kameti, Kuri, Chitty, Chit funds, Vishi, Bishi, Nidhi, Committee	8
Malaysia	Paluwagan, Kutu, Kootu, Kongsu, Tontine, Hui, Main, Kut	8
England	Diddlums, Djiji, Knick-knack clubs, Susu, Nanamei akpee, Onitsha, Nnobia	7
Papua New Guinea	Akpee, Kampani, Mekim sande, Pati, Sundaying, Hui, Sande	7
Thailand	Len Share, Bia Huey, Chaer, Hui, Hue, Pia Huey, Len Chaer	7
China	Lun-hui, Yao-hui, Piao-hui, Hui, Ho-hui, Foei-Tsjing	6
Indonesia	Arisan, Paketan Daging, Paketan Kawinan, Mapalus, Bajulo julo, Jula-jula, Mengandelek	6
Sudan	Mahodisana, Stokfel, Sandukem khattu, Khatta, Sanduk, Sandook Box	6
Togo	Tontin, Abo'o, Soo, Tonton, Sodzodzo, Sodyodyo	6
Benin	Ndjonu, Asusu, Yissirou, Ndjonu, Tontine	5
Burkina Faso	Pari, Tontine, Tibissiligbi, Pari, Song-taaba	5
Gambia	Asusu, Osusu, Susu, Esusu, Compin	5
Ghana	Susu, Eso dzodzo, Nanamei akpee, Onitsha, Nnobia	5
Korea	Wichin gye, Keyes, Kyes, Mujin, Ke	5
Singapore	Kootu, Paluwagan, Tontine, Shaloongo, Aiuto	5
Sri Lanka	Chit Funds, Cheetu/Sheetu, Sittu Danawa, Sittu Mudal, Sittu Wendesiya	5
Uganda	Cheetu, Chilemba, Kiremba, Upato, Kwagatta	5
Vietnam	Hui, Hui Thao, Hui hue hong, Hui bac (ho), Yi hui	5

**Table A5.**  
Top 25 country-wise  
alternative names of  
ROSCA across  
the globe

**Note(s):** \*For full list of country-wise alternative ROSCA name, see [Dinc et al. \(2021\)](#)  
**Source(s):** Authors

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