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Abstract

The DT-SACCOs are very crucial in financial intermediation, and they encourage savings, organization of credit facilities and creation of wealth both in the developed and emerging economies. There have been debates as far as the conceptual relationship between financial distress, firm size, and financial performance. This paper examined how financial distress affects financial performance of Kenyan domiciled DT-SACCOs with the moderator role of firm size being incorporated. The objective of the paper was to identify the moderating effect of the firm size on the financial distress-financial performance relationship. The theoretical model was resource-based theory. The study philosophy inclined towards positivism, and explanatory research design informed the research. Secondary panel data were used to carry out the study by taking audited financial statement and census of all 175 licensed DT-SACCOs in Kenya between 2016 and 2023. Analysis of data included descriptive statistics, correlation analysis, and pooled and panel regression analysis with hierarchical analysis and mediation analysis. Diagnostic tests, normality, multicollinearity, heteroscedasticity, autocorrelation, stationarity, model specification, tests were performed to ensure that the data and model assumptions were appropriate. The study finding indicated firm size had a significant moderating effect of the relationship between financial distress and financial performance of DT savings and credit cooperatives societies in Kenya. Recommendation was that SASRA should be well guided by the multivariate model the current study has developed where size of the firm has been utilized as a conditional variable other than a pure predictor and develop Key Performance Indicators suitable for both the large and small DT-SACCOs in Kenya. The moderating effect of firm size provides an empirical insight to the owners of the DT-SACCOs to advocate for engaging qualified management team whereby management efficiency is assured to guarantee increase in financial performance of the DT-SACCOs.

Keywords: *Financial Distress, Firm Size, Financial Performance, Deposit-Taking SACCOs, Moderating Effect*

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1.0 Introduction

Savings Credit and Cooperative Societies (SACCOS) are not universally named in some instances such as in the developing economies such as Kenya, they are also described as aforementioned and in other developed economies such as the United States of America (USA), the United Kingdom (UK) and the Latin America, the same organizations are widely known as Credit Unions (Barus et al., 2018). Such financial institutions within the same localities are legally empowered to receive deposits of their members. The same case is true in other destinations like South Africa, India, and continental Europe (Ngui & Jagongo 2017). The topic of the discussion of SACCOS derived its existence through the co-operative movement that exists throughout the world that are institutions that provide the benefit of synergy by pooling together to ensure that they alleviate the common problems they are encountering in their lives (Daniel and Abdul, 2018). These kinds of financial institutions are distinguished by ten (10) persons membership without limit level of membership. The saving culture is adopted through the commercial fraternity (Boloupremo, 2020). These SACCOS are as of today dominated by distinct principles that regulate the way the organization is run. It is the membership establishment based on open and voluntary approach, democratic rule of law, inclusion of members on economic development of the SACCO, consideration of independence and autonomous operations of the SACCO (International Co-operative Alliance, 2021).

In Kenya, SACCOS form 5.7 percent of the assets to GDP formation in comparison to other African countries therefore taking the lead. Rwanda and Ethiopia are first and second runners-up in terms of asset/GDP ratio of 3 percent and 0.7 percent in that order (Ntoiti & Jagongo, 2021). The Kenya Financial Sector Stability Report Regulators, (2021), stated that, two things have increased DT-SACCO expansion and they are, one; information communication and technology incorporation in its operations and introduction of new innovative products with the introduction of the rules that governed entry of individuals into the membership being relaxed and by this means the open approach has been adopted as a result of which anybody willing to join may join. Moreover, the DT-SACCO rules and regulation has been adapted to be user friendly which has led to the increase of membership of this sub-sector to upscale by approximately a quarter of 28.4 percent of adult population towards the end of December of 2019 compared to the rest of SACCOS in Africa (Regulators, 2021).

As Mwende (2023) noted, the critical issue of credit facilitation and the encouragement of savings habits by the concerned parties by these DT-SACCOS was that this measure encouraged economic development by increasing GDP reflecting in the mobilization of money assets by the low income earning population and enhanced the liquidity and liquid functionality of those firm systems. As described by Tieno et al. (2019), the sub-sector of SACCOS in Kenya has been categorized in twofold terms that is; those that have a banking hall, known as deposit-taking and those that do not consider offering deposit taking facilities and therefore have no banking hall, thus the name non-deposit taking DT-SACCO Societies. The above firms of DT character of the sub-sector is made up of the financial institutions that have banking halls such as the normal commercial banks. In the case of the DT-SACCOS where the banking hall affiliated services, they offer both withdrawable and non- withdrawable products where the latter is pledged as security when lending to the members is only available to the owner when he or she is no longer a member. Otherwise, the member is not able to withdraw such a portion of his or her investment in the SACCO (Ngui & Jagongo, 2017).

A huge percentage of the DT-SACCOs asset is issued loans to members (SASRA supervisory report, 2019). It can be noted that some of these SACCOs are negatively affected in terms of financial losses that arise as a result of bad debts that are written off in relation to Non-Performing Loans (NPL). The reality in the past has always seen such SACCOs, land in a situation of financial instability. At the global, regional and local perspective, non-performing loans (NPL) is becoming a growing issue that is endangering the sustainability and non-productivity through deteriorating financial performance of DT-SACCOs. According to statistics, out of the 300 overall best cooperatives that were selected according to financial performance had US 2.5 trillion (International Co-operative Alliance (2017) in returns. The economic performance of credit unions (also local abbreviated as DT-SACCOs). Central Bank of Ireland, (2021) indicates that, up to the year 2021 there was positive trend. The result indicates that there was a rise in outstanding loan to asset ratio at 27.1 percent that was among the lowest ever. The other side of savings on the other hand remained at an upward trend to the end of the period at Euros 16.79 billion but at a slower pace as compared to period 2020.

Kenya DT-SACCOs contribute the highest GDP among the other African nations with the US\$ 12.909 billion in Savings and Shares, US\$ 8.696 billion loans and US\$ 13.638 billion in Assets (World Council of Credit Union Statistical Report, 2020). Kenya DT-SACCOs continued to expand. In 2016 Kes 393.49 billion was given as the asset base and a total of 3.6 million as members of the society 500,000 of which was reportedly inactive. The 15.3 per cent increase in loans and assets reduced to Kes 288.92 billion. Nevertheless, even with the tremendous move towards the expansion of DT-SACCOs, the financial sectors and the financial intermediaries in Kenya, they are confronted with myriads of problems. Among them are financial distress, which are faced by these DT-SACCOs that are financial intermediaries.

The firm prosperity aspect in terms of performance or productivity is measured by the per annum information which serves as a signal that is concerned with the areas of concern that need to be boosted to make the most out of the resource allocations. Laurens and Mulyani, (2022) believed that the consideration of when financial performance is to be treated as a subjective one, as there exists the subjective opinion of the managers in assessing the productivity of an organization, which on the other hand is anchored on the statement of financial status of such an organization. This according to the account on scientific literature. Corporate Finance historically, authors have observed that there are two overall accounting affiliated methods of making indications about productivity of a business, which are in twofold (ROA, ROE) and Gross Profit Margin (GPM). They, however, observed that the above indicators have been already over utilized. Likewise, the Q, price to earnings, and the market to book value quotient are biased to measure the performance of the market and are also paramount (Barus et al., 2018).

According to the reasoning introduced by Klapper and Love, (2002), the so called accounting based indicators are formulated using past data and thus, they do not contribute much to making future decisions as far as the top management is concerned and once again, their implications on financial performance are in the short term. The indicators mentioned above are regulated by professional rules and guidelines that are also of accounting origin and standards. It should be noted, though, that there are also some accounting based tools which are not necessarily impacted by the above limitations like cash flows (Ahmed & Javid, 2009).

In this study, returns on asset which is largely an accounting related concept was used to evaluate the extent of DT-SACCO productivity based on financial performance. The other criteria of financial performance measures are the market-based instruments. The indicators, in this case, are

varied as we have the tools of Tobin Q, market to book (MTB) and price earnings (PE) quotient. One merit is that such tools are long term in nature and project the changes of the corresponding variables of concern because they are futuristic and useful in decision making by the management. It is an indicator that is responsive to the interest of the shareholders who would like to know their future in terms of earnings growth (Omran & Pointon, 2004).

According to the view held by Rosli and Sidek, (2013), ROA, as a financial performance measure is better positioned to determine the level of productivity of a firm in terms of financial performance compared to other indicators. The reason is that the methodology is ranked higher notch in the description of the degree of efficiency with which the management is creating earnings (Rosli and Sidek, 2013). Moreover, ROA aligns with the profit-maximization objective of companies and is a standard indicator in the banking industry and other financial intermediation industries that DT SACCOS is a member of (Muigai, 2018).

This aspect represents the aggregate properties the company possesses and the degree of cash flows that also defines the status or the downfall of the financial accounts of a business (Sayari & Mugan, 2017). The idea of firm size is established in various ways depending on the established target to be attained. Gichaiya et al. (2019) defined firm size as the amount of assets a firm possesses. Ahmed et al. (2014) and Muriithi and Muigai (2017) also described firm size as natural logarithm in the control of large value scale diversity in the firms. Transformation of broad-based values into natural logarithms gives a perfect scale to be analyzed. A firm size is a scale that is applied in categorizing corporations in terms of size and can be applied to portray activities and income (Nugraha & Meiranto, 2015). As Suharti et al. (2021) support firm size is divided into three, namely large corporations (large firms), medium corporations (medium firms) and small corporations (small firms). Dewinta and Setiawan (2016) suggest that firm size may be the assets size, the stock market value, total sales, and the average sales degree.

Companies who are marked by big assets are difficult to confront bankruptcy and are not readily identified. Moreover, the firm size may be estimated with the help of non-similar (although one of the most important) methodologies but one of the most important is total net turnover which indicates the rising sales volumes is a consequence the firm is large in its size and, therefore, the likelihood of the company getting into a trap of financial distress is low. Any organization can be rated based on its firm size in different ways. As an example, Suharti et al. (2021) applied natural log of total revenue and Gichaiya et al. (2019); Oktaria et al. (2021); Dewinta and Setiawan (2016) applied natural log of Total Assets (*TA*). Moreover, this element is calculated in terms of total revenue, total asset value, book value, and market value of common stock (Atiase, 1985). Because in Kenya, DT-SACCOs are categorized into large, medium and small organizations, the present study took into consideration natural log of all the properties to gauge magnitude of the organization being utilized as the moderating construct.

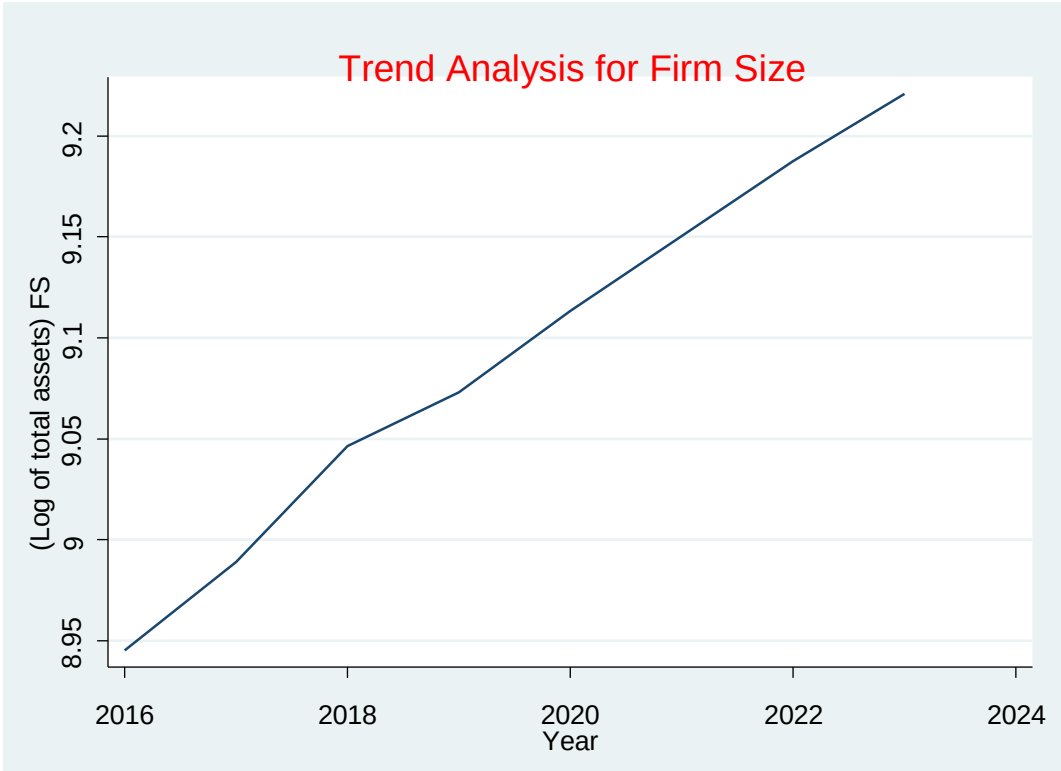


Figure 1: Trend Analysis for Firm Size

Firm size, quantified by the natural logarithm of total assets, reflects the scale and market presence of DT SACCOs. The knowledge of its development throughout history can give an idea of the growth trends, the structural increase and what it may imply in terms of financial stability and risk management. In most of the developed countries there is no universally accepted name to SACCOs, these institutions are called credit unions, in Kenya one of the developing economies is called DT-SACCOs. In their case, they are the licensed constitutionally registered organizations that are regulated and supervised by SASRA, a government agency (SASRA, 2016). The DT-SACCOs are autonomous entities comprised of members with the discretion to attain certain social economic affiliated needs as a group where we use joint and democratic approach in running the organization (SACCO & Regulatory Report, 2016). DT-SACCOs are intermediaries since they perform a similar role as commercial banks since they are deposited by the members and once again offer them credit facilities at user friendly interest which ultimately develops a saving and investment habit among the members. The nature of businesses that are under DT-SACCO nature can be said to be legally established organization that are accompanied with state originating laws and regulations that are employed to govern them. They are democratically organized groups with an objective of collectively addressing their social-economic plights that they go through on a daily basis as members of the same. They also democratically control their day to day activities. (Sacco & Regulatory, 2016).

The Kenya economy has been highly affected by DT-SACCOs (Mudibo, 2015). Although DT-SACCOs have not been established in the financial system, they are part of the approximately 45 percent of the GDP of Kenya. As SASRA report, (2021) indicates, as at the end of 2020, the DT-SACCOs had increased to 175 who have been licensed as compared to 110 in 2011 with a growth rate of 59 percent. The growth of DT-SACOs in Kenya is very exciting in terms of asset base and

income, there are myriads of challenges that are associated with them as a result of financial distress. The rewards are the reoccurrence on savings of any business owned by the business owners who have taken risks. Productive management of financial distress can travel long distances to guarantee improved shareholder returns on investment of DT-SACCOs (Odhiambo, 2019).

1.1 Statement of the Problem

The SACCOs, and more so withdrawable ones, are at the forefront of creating job opportunities, as well as eliminating poverty among people either in the eyes of the developed or the emerging economies. (Otwoko et al., 2021). But financially strained and financial performance, performance levels have not been found to be satisfied conceptually. Furthermore, the empirical evidence of the sizes of SACCOs has presented a controversial debate in the past few decades (Ndonye & Ambrose, 2023). Besides, financial performance of those DT-SACCOs particularly in Kenya have represented varied outcome in the past eight years between 2016 and 2023. ROA of DT-SACCOs over the past eight years showed returns in 2016 were 2.45 percent and rose to 2.69 percent in 2017. However, DT-SACCOs recorded a decrease to 2.40 percent compared to the previous year in 2018 (SASRA, 2017 and SASRA, 2018). In 2019 it went up once more to 2.60 percent and in 2020 it went up to 2.65 percent. From the face value, this seemed to be a fortune to these firms. But in 2021, a decrease occurred where ROA was 1.59 percent (SASRA, 2021). In 2022, the ROA value was at 2.61percent (SASRA Report, 2022).

The ROA trend shows a sharp peak in 2017 (0.06878), which represents a time of outstanding asset usage and profitability (ROA) in the industry. Such spike can be suggestive of short-lived operational efficiencies, strategic financial intervention or of good macroeconomic conditions that momentarily helped improve DT SACCOs FP. The following drastic drop from 0.06878 in 2017 to 0.01901 in 2018 to 0.01901 highlights the instability of DT Sacco’s profitability in terms of ROA, indicating that one-off improvement in FP could be unsustainable without fundamental changes in the governance and operation management. The ROA shows a small but steady upward trend in the period of 2018 to 2023, with the value increasing by 0.01989 in 2019 and 0.02315 in 2023. This slow recovery and stabilization indicate that the sector adapted to the previous volatility, probably through the implementation of sound financial management policies, better risk management policies, and operational restructuring designed to increase efficiency and resilience. It is worth noting that the relative stability experienced in this time could also capture the ability of DT SACCOs to overcome exogenous shocks such as economic disruptions and still experience incremental enhancement in the performance of assets.

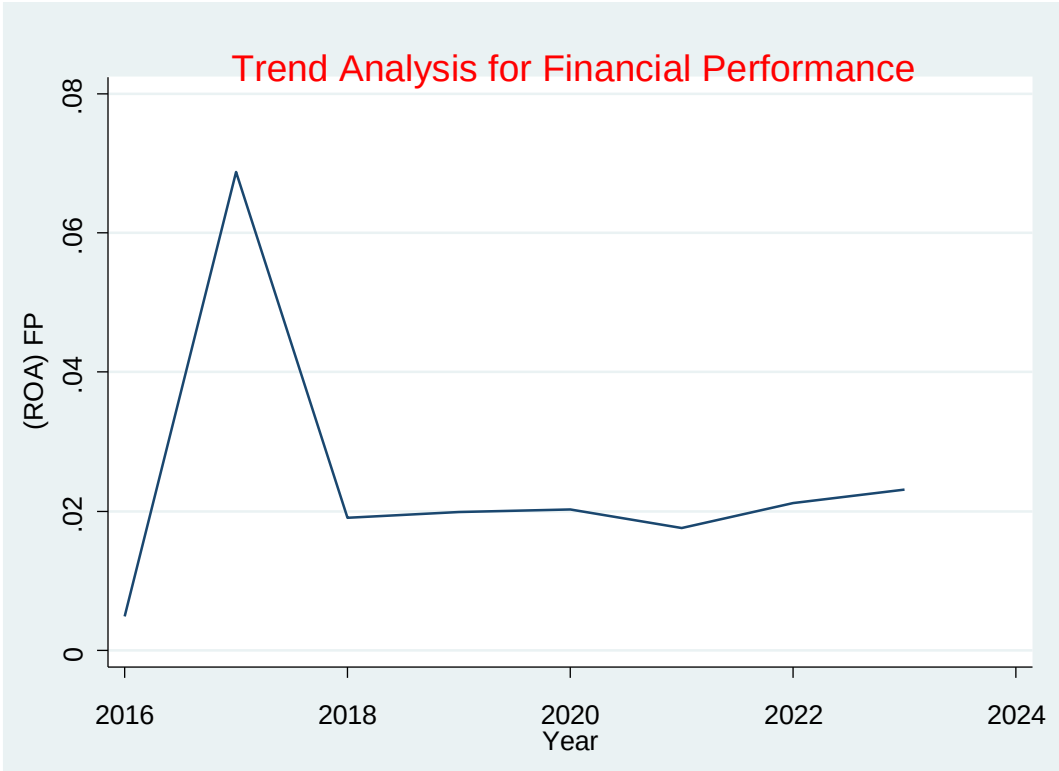


Figure 2: Trend Analysis for Financial Performance

Source: (SASRA Report, 2022).

The methodological issues depicted in regional studies conducted by Sewpersadh, (2022); Saputri and Asrori, (2019) had a difference in each of the researches. As an example, some of the data analysis techniques differed, with some employing simple regression, logit regression, and multiple regression just to mention a few. The conceptual point of view was similar, but due to the different methodologies, different research findings were obtained. In Kenya, most studies exploring the contextual factors had concentrated on commercial banks and micro financial institutions, where there was an attempt to establish a financial distress and financial performance conceptual relationship (Kanyugi, 2016; Wesa & Otinga, 2019). These research depicted contextual, conceptual and methodological issues. It is on this ground that this study hope to determine the conceptual relationship between financial distress and the level of productivity of DT-SACCOs in Kenya with respect to financial performance in the presence of firm size and management efficiency as moderating and intervening variables respectively. Considering that the methodology adopted in the earlier studies to measure financial distress had produced controversial results, this current study broke leverage, liquidity, capital adequacy and asset quality down to determine the predictive power of each separately on the productivity level of the DT-SACCOs in Kenya with regard to financial performance in the interest of making top management decisions.

Based on the composite score of the above elements of financial distress, the study considered the degree of effect of the above independent variable on the productivity aspect of the above DT-SACCOs in Kenya regarding financial performance with ROA being the dependent variable.

Because size of the organization has been used as a pure estimator variable of varied firm productivity factors in the past, the current study assumed it as a conditional variable and estimate the moderating effect through a Hierarchy panel regression model to the size varying DT-SACCOs. The relationship between the financial distress (composite score) and the productivity aspect of a firm in terms of financial performance seems to be straight forward. Nevertheless, the process of that relationship could be due to something unrelated in the principal model. Thus, the current research also explored whether the aforementioned relationship has any intervening effect of management efficiency.

2.1 Theoretical Literature Review

2.1.1 Resource-Based Theory

Resource-Based theory was developed by (Penrose, 2009) who proclaimed that good and effective management of firm resources is pegged on the adopted strategies that can involve and not restricted to; diversification strategy, and productive opportunities. He also suggested that conceptualization issue is critical in that it is the firm that assembles resources to make a final product to attain the goal set as per the strategic plan (Penrose, 2009). The assumption identifies that to ensure that a firm gains competitive advantage over others in the industry then it must be able to depict superiority of ownership, cost control implication of physical and intangible properties that other players in the market cannot obtain (Barney, 1991). The rationale behind this supposition by its proponents is the explanation of the sustainability levels of profitability in some firms in the same line of business and the lack of the same in others (Peteraf, 1993). The argument continues this way, the heterogeneity in resources and the capacity of the firm to obtain the resources puts various shareholders in the industry at various competence levels. Even though the Prahalad and Hamel (1990) thought the core competencies were significant, other followers of RBV theory believed that the situation above should be anchored on the criteria of problematic curtailing, offering actual welfares to clienteles, offering access to dissimilar marketplaces and ensuring a spirit of learning speed that should be applied before the competitors do it. The argument by Prahalad and Hamel (2000), is that core qualifications are through the learning, which is collective particularly in terms of assembly of various chains of technology, organization of work and value-adding to the customer. This is one of the main aspects of RBV: Customers will have to be able to perceive these core competencies as something unique. To these authors, the real source of economic advantage lie in the ability to bring together know how and production capacity in the capabilities that enable quick adaption of change and/or new opportunities.

In this work, the theory of concern recommends that a company should concentrate on internal capabilities of the organization against the external ones in the interest of finding out why a company can either succeed in delivering its intended-based objectives in a prompt way or why it has failed despite being leveraged (Kozlenkova, Samaha & Palmatier, 2014). The firm-based resources theory tries to provide twofold explanations as to how the organization can succeed to maintain its competitive advantage over time. This is as per (Helfat & Peteraf, 2003). One of them, then, is that of variations of resources possessed by firms within the same industry. In other words, two or more companies can be in the same industry and none of them is performing poorly because there is distinction on the resources that each of them has been using in production. That is the part of heterogeneity that makes that firm talented in doing a particular task. Then there are two, resource immobility that is occasioned by the fact that resources owned by a firm are complex when seen through the perspective of the other firms.

The second core construct of RBT, which is capabilities, is a subset of the non-transferable company specific resources of the company that is designed to enhance the productivity of acquiring the others (Makadok, 2001). Capabilities may take different forms and are usually marked by processes of tangibility with corresponding information that help to enhance efficiency of production scale to an organization (Kozlenkova, Samaha & Palmatier, 2014). But, a further contribution to the knowledge was posed by (Teece, Pisano & Shuen, 1997) who contended that the capabilities of a firm of a dynamic nature may aid in the continuous product creation, expansion of the firm operations, enhancement of the levels of protection and the preservation of the uniqueness of the asset base of the firm in spite of the varying environment in which the firm is situated (Kozlenkova, Samaha & Palmatier, 2014; Peteraf & Barney, 2003). The more recent contributions made by dynamic capabilities to the research of RBT are the study of the modifications of the capabilities of responding to the swift changes in the organization environments (both internal and external). The definition of capabilities has been furthered by introducing dynamic capabilities, which is any resources that can be utilized not only in terms of altering other resources, but also in terms of value creation (Kozlenkova, Samaha & Palmatier, 2014; Peteraf & Barney, 2003).

Examples of such resources include, among others, deployment of big data, product development practices, and alliance capabilities. The capabilities of alliance seem to play a key role in firm strategies through co-operating and pooling resources in the most effective and efficient way (Nickerson & Zenger, 2004). Another possible example of dynamic capabilities was the product development practices, which involved the elaboration of capabilities to specialize and routine exercises to enhance the performance of the company (Adner & Helfat, 2003). The researcher adopted RST as it gives an essential sketch to clarify and forecast the fundamentals of enactment and cost-effective advantage of a business.

2.2 Empirical Literature Review

Gichaiya and Macharia (2019) used all the non-financial firms that were registered members of NSE to conduct investigation on the presence of a strong causation effect relationship between the independent variable that consisted of corporate risk, avoidable risk, market risk and financial sigma and financial distress. The moderating effect was also experimented in which firm size was taken as the moderator. The authors employed quantitative research design and also helped to test the strength of relationship with the help of correlational model. The study included 10 years of period that was spanning between 2006 and 2015. The data was of secondary nature that was obtained in books of accounts (audited) on daily stock prices and stock market indices. The authors used the hierarchical panel regression model in order to interpret the data. It was disclosed that corporate risk had a direct and substantial impact on FD. Whereas the avoidable risk that were measured in terms of both the business and financial sigma have direct conceptual implication that was meaningful on FD. But to the unavoidable it did not have significant direct impact gauged in terms of market risk. Therefore, big companies are able to absorb higher market risk without FD as compared to unsystematic risk which is catastrophic.

In their study, Oktaria et al. (2021) integrated the liquidity, business size and leverage to describe the level of financial distress that registered organizations in Indonesia Exchange market were undergoing during the period 2017-2019, a span of three years. The 22 mining companies were used to extract data based on information that is contained in the financial statements obtained on the IDX (Indonesia Stock Exchange) internet. Data was analyzed using inferential statistics and the result was extrapolated (inferred) to the entire population, as the defined property of Parametric

and non-parametric inferential statistics were broken down into two classes. Parametric statistics were used to analyze data on the population that exhibits normal distribution including intervals and ratios. Instead, non-parametric statistics were applied to assess data of a distribution-free population. In this study, parametric statistics was used. As a quantitative method of the study, multiple regression analysis was conducted. The results of the research described that the above predictor variables did not exert statistically significant impact of the model under test. The firm size was the only one that did but on the financial distress aspect.

EL Deeb and Ramadan (2020) were able to choose earning management as the outcome construct in which they wanted to include three variables of the study such as; financial distress, firm size, and audit quality with the aim of determining whether it could significantly explain the variances thereof on the selected dependent variable. To attain this objective, the researcher sampled 42 organizations that were listed in Egyptian Stock Exchange in the years 2015-2017. The researcher considered the multiple regression analysis to test the underlying null hypotheses. The research findings were used to determine that only financial distress and audit quality significantly predicted the variances in the earnings management of the firm, but not the firm size.

Kurniawati and Panggabean (2020) also carried out another study on bank affiliated firms that were domiciled in Indonesia but were also members of the IDX. It constituted an identical interrogation as that conducted by EL Deeb and Ramadan, (2020) of firms in Egypt. The sample of the study was based on a population representative of a sample of 12 firms. The research was once again qualitative in nature since secondary data has proved to be reliable in analysis. The period was 5 years during which the above secondary data was gathered through audited annual books of accounts of the 12 banks in their site at the IDX web site in their web site www.idx.co.id. This investigation was done using panel data. In order to determine the validity of the claim made by the researcher in the form of hypothesis, the research had depended on two analytical models, that is, descriptive and panel data regression analysis methods. It was determined that firm size and financial distress were both of negative and positive impact on earnings management respectively, which was significant. Once again, the quality of audit failed to present any significant effects on the earnings management.

The past research (Gichaiya & Macharia, 2019; EL Deeb & Ramadan, 2020; Kurniawati & Panggabean, 2020) was multivariate with firm size as the moderating factor that depicted a dissimilar moderating effect. Conversely, the testing of moderation in one study and another differed (Gichaiya & Macharia, 2019 & Oktaria, et al., 2021) which led to a wide range of conclusions. Though firm size was applied in some studies (EL Deeb & Ramadan, 2020; Oktaria, et al. 2021 & Kurniawati & Panggabean, 2020) as independent and other cases as moderating variable, the results depicts that the empirical implication was different with some cases firm size as insignificant, or significant to different dependent variables. Furthermore, a positive correlation, as well as negative correlation was also observed. This demands further interrogation to determine whether firm size is always a moderator of the financial distress to financial performance model of DT-SACCO firms that conduct operations in the County of Nairobi City.

3.0 Methodology

The target population in this study was the 175 licensed DT-Saccos at the end of 2023 financial year. Asiamah et al. (2017) observe that population may be used to determine the credibility of a research based on the understanding, definition, and selection of research. It is therefore essential that target and accessible population be carefully selected. It is not a large population and therefore

the entire population of the DT-SACCOs was researched. This makes a holistic study approach and study result more credible. The 175 DT-SACCOs was evaluated on various behaviour of concern that is symbolized by the various factors that incorporate availability of data on the time that is being evaluated. The census approach was adopted in the study because the number of licensed DT-Saccos is relatively low. A census is a procedure that involves gathering of data of an extensive dispersed element of the population (Saunders, Lewis and Thornhill (2009). It is a data gathering approach that enhances rationality of the data gathered by the researcher. In addition, there is no sampling error (Watson, 2001). Thus, a sample of the 175 DT-Saccos that are licensed was selected in the study. Data collected was of secondary nature relying on balanced panel model which included only DT-SACCOs with full data which was accessed through the respective DT-SACCO websites and SASRA reports. The panel data obtained was in a span of eight years; January 2016 to December 2023. The particular sources were the audited DT-SACCO financial statements which were available at the end of financial year. The study leaned towards positivism philosophy and adopted explanatory research design. Research diagnostic test carried out included normality test, heteroscedasticity, multicollinearity, stationarity, autocorrelation and model specification test.

4.0 Findings and Discussion

The relationship between FP and firm size is positive ($r = 0.398, p < 0.05$), indicating that larger DT SACCOs can potentially enjoy scale benefits and diverse sources of revenues, which would cushion them against financial crisis. The findings offer empirical support to subsequent multivariate and moderation analysis to identify the interaction of financial distress, management efficiency and firm characteristics to ascertain profitability, hence this gives an overall account of DT SACCOs resilience and performance in Kenya. Moderation analysis was also performed to test the hypothesis that the relationship between financial distress and FP of DT SACCOs in Kenya is significantly moderated by the size of the firm. The aim of this analysis was to test the fifth hypothesis of the study and to supplement the direct effects reported in the previous section.

The moderation examination was a multi-step process. To begin with, the hierarchical multiple regression was conducted by introducing the main effects of financial distress and firm size in the first block, and the interaction term (Financial Distress * Firm Size) in the second block. To determine the existence of the moderating effect, the statistical significance of the interaction term was then evaluated. Moreover, the change in R^2 (ΔR^2) between the main effects model and the interaction model was examined to determine the additional explanatory power contributed by firm size. The simple slope analysis was conducted in order to further interpret the interaction effect. This method estimated the conditional effects of financial distress on FP at three levels of firm size: low (-1 standard deviation), average (mean), and high ($+1$ standard deviation). Interaction plots were also generated to visually depict the moderation pattern and to substantiate the influence of firm size on the FD–FP relationship. The hierarchical regression analysis was conducted to examine whether firm size moderates the relationship between financial distress and FP of DT SACCOs in Kenya. The significance of the interaction term, change in R^2 (ΔR^2), F-change statistics, and simple slope considerations were used to interpret the moderation effect. Findings indicate that the positive relationship between financial distress and financial performance is enhanced by the firm size in accordance to the buffering moderation. Both the simple slope analysis and the significant interaction term in the hierarchical regression indicate that the larger DT SACCOs are able to cushion the negative effect of financial distress than the smaller ones, which explains the protective nature of organizational scale.

To further discuss the moderating effect of firm size on the relationship between financial distress and financial performance a simple slope-plot analysis was done. When the firm size is large (yellow line), the slope is the steepest which proves that bigger DT SACCOs are the most intense in their positive effect on FP through financial distress. The fact that the steepness of slope varies among the three levels of FS proves that the relationship between financial distress and FP is reinforced by firm size. This trend is in line with the buffering moderation effect, which implies that the bigger an organization the more it can contain or counter the adverse effect of financial distress which will lead to improvement in FP. Thus, the results confirm that the firm size is a critical element in influencing the financial performance of the DT SACCOs in the state of financial distress.

5.0 Conclusion

The research indicates that organizational variables, namely firm size, are of significant use in moderating the relationship between financial distress and performance. The bigger DT SACCOs are more resilient to distress because their portfolios are diversified, they have greater managerial capacity and better operational buffers. This means that the sizes of operations give the benefits of strategic absorption of financial shocks and performance maintenance in unfavorable conditions. The conclusion on this is that an organization size is a protective variable: not only does it enhance the ability to endure financial stress, but it also increases the advantages of excellent financial management behavior, so that larger DT SACCOs can continue to be stable and perform better than smaller ones. This study corrected try to correct past empirical controversy by demonstrating that firm size is a conditional variable and not a pure predictor of financial performance. Therefore, the management of any DT-SACCO need to consider the size of the SACCO they are managing for the positive interaction term from the findings gotten implies that bigger DT-SACCOs can reduce or absorb the adverse effects of financial distress on financial performance, but smaller firms are adversely by the negative effects.

6.0 Recommendations

The relationship between financial distress and financial performance provides important understanding on DT-SACCO management on the need to formulate policies and strategies that enhance profitability and long-term financial sustainability. However, the direct relationship between financial distress and financial performance does not in itself guarantee the survival of a DT-SACCO. Consequently, regulatory and oversight bodies such as SASRA should be guided by the multivariate model developed in the current study, in which firm size was treated as a conditional variable rather than merely as a direct predictor. This is important because financial distress may not affect large and small DT-SACCOs with the same magnitude. SASRA should therefore develop differentiated Key Performance Indicators that appropriately reflect the operational and financial characteristics of the two categories, thereby enabling more meaningful assessment and comparison of their financial performance. In addition, larger DT-SACCOs are generally better positioned to attract and retain qualified management personnel, which may enhance managerial efficiency and strengthen financial performance. In contrast, smaller DT-SACCOs may face resource limitations that constrain their ability to engage highly qualified management teams, potentially resulting in lower managerial efficiency and weaker financial performance.

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