BOARD CHARACTERISTICS AND FINANCIAL DISTRESS OF DEPOSIT TAKING SAVINGS AND CREDIT COOPERATIVES IN KENYA

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DECLARATION

This Thesis is my own unique work and has not been submitted for award of a degree in any other University.

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DEDICATION

I dedicate this work to my husband Mwenda Kirera, my son Brian Mutwiri and Hadassah Makena my daughter.

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ABSTRACT

Savings and Credit Cooperatives (SACCOs) have evolved over time from mobilizing savings and granting loans to become established entities that provide banking services to their customers. According SASRA, SACCOs have experienced financial distress and some of them have been shut down or issued with operating licenses to operate under stringent measures. This aimed at establishing influence of board characteristics in the financial distress suffered by Deposit Taking SACCOs in Nairobi County. The influence of related party transactions and intervening influence of firm revenue on this relationship was established as well as the control influence of external borrowing. The study is anchored on Stewardship theory with a view of managers as stewards of members' funds, Agency Theory, Stakeholder theory, and Upper echelons theory. Longitudinal Descriptive research design was adopted on a sample size of 43 SACCOs from a population of 174 SACCOs licensed to operate in Kenya for the year 2019. Nairobi County was purposively chosen and a census was carried out on deposit taking SACCOs in the county. Secondary data was collected from SASRA using a data collection sheet and a panel data analysis performed using STATA software and findings were presented using tables. The study came to a conclusion that an association exists between board characteristics and financial distress of Deposit Taking SACCOs where board composition, board education and board tenure have statistically significant and negative influence on financial distress while RPTs and the size of the board statistically significant and positive impact on financial distress. Firm revenue does not significantly intervene the relationship between board characteristics and financial distress and external borrowing has no control influence on this relationship. The study made recommendations to this effect as follows: SACCOs need to have lean boards, Board composition should also be improved by including more women on boards, there should be more inclusion of members with high and relevant education credentials, and SACCOs should have term limits for their members. Related party transactions should be kept at a bare minimum since it is significant, when it is jointly considered with board characteristics. External borrowing may be relied upon to ease financial distress in SACCOs since it has no significant control influence on SACCO's level of financial distress. The regulator may come up with a tool based on Altman's Z score models to establish financial distress in SACCOs in order to offer timely advice to alleviate more distress and consequent bankruptcy which may lead to closure of SACCOs. Another research may be carried out to establish other factors causing financial distress and how to turn around the SACCOs already in distress.

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ABBREVIATIONS AND ACRONYMS

ACCOSSCA -Africa Confederation of Cooperative Society Savings and Credit Associations

AGM -Annual General Meeting

BOD - Board of Directors

BOSA -Back Office Savings Activities

CBK -Central Bank of Kenya

CEO -Chief Executive Officer

CFI -Cooperative Financial Institutions

CG -Corporate Governance

COSO -Committee of Sponsoring Organizations

CRD -Credit Recovery Department

CSR -Corporate Social Responsibility

DFID -Department for International Development

DTS -Deposit Taking SACCOs

EMH -Efficient Market Hypothesis

EPS -Earnings per share

FOSA -Front Office Services Activities

GCC -Gulf Corporation Council

GDP -Gross Domestic Product

GOK -Government of Kenya

ICDC -Industrial and Commercial Development Corporation

ICT -Information Communication Technologies

IFAC -International Federation of Accountants

KUSCCO -Kenya Union of Savings and Credit Cooperatives

M&E -Monitoring and Evaluation

MDA	**-**Multivariate Discriminant Analysis
NSE	**-**Nairobi Securities Exchange
OCDC	**-**Oversees Cooperative Development Council
OECD	**-**Organization for Economic Co-operation and Development
ROA	**-**Return on Assets
ROE	**-**Return on Equity
RPT	-Related Party Transactions
SACCOs	**-**Savings and Credit Cooperatives
SASRA	**-**SACCOs Societies Regulatory Authority
TMT	-Top Management Team
US	**-**United States of America
WOCCU	**-**World Council of Credit Unions

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

This research sought to examine the manner in which the characteristics of an entity's board influence financial distress experienced by deposit taking credit unions within Nairobi County. A study carried out in the United Kingdom on shared leadership process in decision making teams concluded that financial distress is majorly caused by corporate governance and especially board characteristics in many institutions in the world (Bergman et al., 2012). In a study by Garlappi and Yan in America reiterated that bankruptcy materializes for an organisation where an illiquidity situation persists (Garlappi & Yan, 2011). Nevertheless, (Wang & Shiu, 2014) while studying firms trading in Chinese capital market resolved that taking suitable managerial decisions and effectively applying financial distress factors, the company may turn around experiencing renaissance. According to Gikuri and Paulo (2016), who carried a study in Tanzania based SACCOs should desist from relying on excessive donor funding since this reliance pushes SACCOs into financial distress. SACCO's are very instrumental in developing the economy of any country since they help to mobilize money assets from low income earners, nurture liquidity and uphold proper functioning of the SACCO's financial system (Kamau, 2016). At the same time, the SACCO sector faces several challenges among them being financial distress (Kariuki, 2013). If a SACCO is faced with financial distress, the working environment of that SACCO deteriorates, inability to meet financial obligations becomes common as well as renegotiation for reduced remuneration.

Ooko et al., (2013) established that SACCOs on average suffer financial distress consistently while Odhiambo (2011) and Otieno et al., (2015) contend that SACCOs suffer financial distress due to existence of opportunities to mismanage such entities. Mwaura (2005)

indicated that some actions of managerial board may distress organizational performance especially of SACCOs. In this thesis, the investigator endeavored to understand the kind of association existing between board characteristics and the liquidity problems experienced by credit cooperatives based in Nairobi County. The research also sought to establish whether the said relationship is moderated by related party transactions, the revenue collected by the firm and the effect of external borrowing on this relationship. This will save SACCOs from closure as they are vital in the growth of the country's economy.

1.1.1 Financial Distress

Financial distress has been defined to encompass circumstances whereby a business organization experiences impediments in paying off its financial contracts, and in particular, those of its creditors (Outecheva, 2007). This was concluded in a study carried out in Switzerland. A very low level of liquidity and negative cash flows as well as a high level of leverage causes financial distress (Outecheva, 2007). It portrays a situation where an entity has a serious problem with liquidity (insolvency) which may occasion bankruptcy and a company may end up being liquidated. Financial distress may not necessarily force a firm into bankruptcy and liquidation. It could just mean that the firm is experiencing an unfavorable and risky position financially (Aasen, 2011). In Malaysia, a study concluded that Corporate financial distress can also be taken to mean a situation where a corporate organization experiences ill financial health that cannot possibly be cured without serious entity reorganization of both capital structure and other tasks of such an entity (Jaafar et al.,, 2018). In the words of Alias et al., (2017) monetary distress as that point in time when the business has insufficient flows of cash which are inadequate to meet its current obligations hence being forced into taking corrective actions. Financial Distress can also be described as that defining moment which gives a picture of economic difficulties in the operations of a firm. If successful turnaround strategies are not employed in a timely manner then the

monetary situation grows up to events of default, corporate failure, actions of restructuring, inefficiencies in firm operations, experiencing distress costs and finally liquidation may happen (Carmassi & Patti, 2015; Muller et al., 2012).

A study carried out on Tanzanian SACCOs (Gikuri & Paulo, 2016) came to a conclusion that SACCOs are highly dependent on donor funding, a challenge which makes the fall into serious liquidity problems. This is an indicator that SACCOs are increasingly experiencing poor financial health.

Studies carried out by Karugu et al.,, (2018); Kariuki (2013); Muriithi (2016) observed that world over financial institutions have suffered financial distress owing to management strategies which are not carefully thought out, poor internal control systems, creative accounting with failure to disclose financial information as well as non-recognition of the rights of stakeholders. Lack of strategic risk management coupled with deficient employee training in organizations may be a lead cause to financial distress. Wanderi (2016) suggests that financial distress experienced by organizations' may be evidenced through increased number of corporate loan which are being serviced, difficulties in dividend payouts as well as altercations by managerial staff.

In addition, research done by Makori et al., (2013) established different obstacles or problems facing conformity in SACCOs; non-distinction of clients' deposits from their shares, the over-reliance on provisionary external borrowing, failure to adopt liquidity monitoring structures and approaches, excessive investment in non-earning assets, insufficient Information Communication Technologies (ICT) network, incompetent managerial capabilities and interference from the political class. Considering the challenge of high dependence on short term external borrowing, it can be established that SACCOs have a

challenge of financial distress; it is only under such a condition that a firm can highly depend on short term external borrowing.

According to Ooko et al., (2013), SACCOs do not comply with their by-laws as expected and revenues realized from investments did not sufficiently fund their expenses. This also indicates the presence of financial distress. Kivuvo and Olweny (2014) studied the monetary performance of 215 SACCOs by means of Altman Z score model of predicting financial distress established the presence of financial distress in SACCOs. While various other studies have been carried out in this area such as Kivuvo and Olweny (2014) who established the presence of distress in SACCOs have established financial distress among SACCOs in Kenya, Murirthi (2016) and Wanderi (2016) linked the presence of financial distress to corporate governance, Gikuri and Paulo (2016) cited excessive donor dependency and short term financing as causes financial distress for SACCOs in Tanzania, Makori et al., (2013) indicated insufficient information communication network and Ooko et al., (2014) concluded that the presence of mismanagement opportunities and management incompetency are the cause of Financial Distress among SACCOs. However all the research carried never addressed the association of board characteristics with financial distress of SACCOs. Since Financial Distress as a major challenge to credit cooperatives in Kenya, this investigation sought towards establishing the role played by board characteristics while pushing SACCOs into financial distress and to make recommendations from these findings which will alleviate the suffering and consequent bankruptcy and closure of these financial very essential financial institutions.

1.1.2 Board Characteristics

Corporate governance of which board characteristics is part of has been of great concern hence becoming a frequent feature in various corporate meetings, often featured in the media as well as other stakeholder groups (Subramanian, 2015). The Recent financial crunches,

corporate failure, fraudulent financial reporting, as well as failure to report have been a point of discussion in such corporate meetings (Brown & Caylor, 2006). Giant corporations such as Worldcom, Enron, as well as many other organizations have also not been spared. These corporate failures have had hostile outcome towards prices of shares, money markets and as well as the confidence of investors considering that stakeholders have lost sums of money in relation to their investments. The repercussions of the said organizational crises encouraged investors insisting on improved methods of improving on transparency and accountability of corporate executives. This has resulted in substantial attention and pressure being exerted on role played by management boards in regard to strengthening organizational administrative practices. Management boards play a very important role which enhances monitoring and hence improving on efficiency in corporate governance of various entities. The board also assists members and other stakeholders to instigate measures of ensuring that the concerns of members as well as that of other stakeholders are addressed. This is achieved through treating distinctive handling controlling and ownership functions as well as the agency problem requiring managerial boards' intervention into effectively and competently carry out oversight routines entrusted to them (Elad et al., 2018).

Elad et al., (2018) also pointed out that the management board discharges an essential role in organizational administration particularly associated with board characteristics including board composition, number of board members, board diversity, among others. Jan and Sangmi (2016) have reiterated that managerial roles of the board incorporating, control and supervisory actions of management, and formulating strategies which are supportive to the management as well offering advisory support during execution of such strategies. This ensures that the organizational goals are met and also offers a platform for evaluation of the board, managerial as well as organizational performance.

In a study carried out by Ingley and Van der Walt (2005) it was concluded that failure of co-operatives in Limpopo province was caused by mismanagement, dismal training or none at all, conflict in the midst of members mainly caused by poor service delivery, and liquidity problems. It was further argued that insufficient capital, poor support structures including monitoring and evaluation (M&E) and the absence of policies further contributed to failure of co-operatives (Lyne & Collins, 2008). Kyriakopoulos et al., (2004) also noted that property rights which are inappropriately defined constitute another factor which according to agency theory, has contributed to the upsurge of some glitches which challenge the efficacy or effectiveness of SACCOs in uncertain and differentiated markets (Lyne & Collins, 2008).

Over regulation by government is another bottleneck for co-operatives (Department for International Development [DFID], 2011). Independence from government control complemented by government support is positively associated with success. Technical assistance by the US in Ethiopia has helped overcome excessive regulation with limited government support (Assef, 2007). And while co-operatives can be successful with minimum institutional support depending on factors such as economic opportunity, the total absence of such backing can leave co-operatives susceptible and inaccessible by the wider co-operative market there by encumbering the growth of such an entity. (Theron, 2005).

In Africa, amidst the colonial emphasis of particular activities upon co-operatives, the sturdy government regulation of SACCOs after colonization and the appropriation of cooperatives by neo-liberal reorganization, credit unions were revived and thrived even though unequally with their survival stemming from the desire and resolve of the members to soar through (Satgar, 2007).

A study by Dunn and Arbuckle (2001) concluded that shareholder-directors often times premise choices founded on internal politics as opposed to efficient economic considerations

including making decisions which benefit them in their individual capacities and at the expense of the co-operative; a feat in part highlighting the dominant governance challenges at co-operatives compared to corporations.

Research done by Odhiambo (2011) established that there exists chances of ill organizational management such as; inadequacy in stakeholder commitment, insufficient clarity of roles and responsibilities by stakeholders, lack of professional ethics, poor leadership internally, inadequate operational systems, bangled elections that lack fairness, scanty managerial skills by committee members and the presence of creative accounting. Effective co-operatives should be focused on outcome and innovation of products which are market oriented. On the other hand a study carried out by Reen (2014) on SACCOs in Nairobi alludes that the performance of credit cooperatives is affected by size, growth and age as opposed to practices of corporate governance. With financial distress being an aspect of performance it is inevitably affected by size, growth and age. The overall conclusion of a study by Otieno et al., (2015) while establishing corporate governance influence on the growth of credit unions in the county of is that Corporate Governance has no impact on growth of SACCOs.

Mudibo (2005) pointed out that since SACCOs are voluntary organizations, they should elect directors who have substantial stake in the organization such that when they mismanage the SACCOs then they also have stake to loose. This can hopefully help to deter fraudulent decision making and deter a high appetite for risk thereby improving the performance of SACCOs. This concern was also voiced out by Mwaura (2005) who pointed out that some actions of the board may distress the performance of SACCOs and further recommended that trustworthy persons should be elected to offices in the capacity of board members and delegates since the success and subsequent performance depends on them.

Ooko et al., (2013) also found that crucial decisions in some co-operatives such as sharing surpluses were taken by coordinators or the presidents that wrought the credit unions as if they are privately owned by them.

The Co-operative Societies Act No. 12 of 1997 of Kenyan laws envisaged reducing regulation and instead promote the liberalization of co-operatives. While abusing office power, the managerial teams mismanaged the comparatives leading to misappropriation of resources and corruption in cooperatives which was also coupled with breaking up cooperatives which were large and productive into smaller units which were not efficient and dogged with serious financial problems. Makori (2013) in reiteration pointed to political interference being an obstacle to the performance of Kenyan credit unions. Of all the studies reviewed above none addressed the influence of Board Characteristics to economic distress experienced by SACCOs. This current study therefore endeavored to fill gap by envisioning that board characteristics have a role to play in distressing SACCOs financially. Thus Board size, Board Diversity, Board Independence, Board Education, and Board Tenure are the board characteristics that were investigated in this study. The study also endeavored to examine whether related party transactions significantly moderated the association of board characteristics with monetary distress of credit unions in Nairobi County while the intervening effect of firm revenue and the control effect of external borrowing on the said relationship were also established.

1.1.3 Overview of Savings and credit co-operatives in Kenya

In the words of International Cooperative Alliance, savings and credit cooperative has been described as an independent conglomeration of individuals voluntarily amalgamated for fulfilment mutual societal, social as well as monetary objectives by use of cooperatively possessed besides representatively organized entities (ICA, 2017).

The modern cooperatives draw their origins to 1844 when the Rochdale Society of Equitable Pioneers, was established as the cooperative to be formed. It was consumer based and was the first to pay an investment dividend and thus forming the basis of the current cooperative movement. Even though other co-operatives had come before them, the Rochdale Pioneers' co-operative became the model for societies in Great Britain. It is credited with formulation of the Rochdale Principles constituting codes of co-operation that form the cornerstone principles upon which the present day cooperatives operate. Their model has remained a focus area within co-operative economics. The Rochdale Society had a membership of 28 individuals; about half of the members were weavers in Rochdale, Lancashire, England. It is worth noting that the mechanization forced more skilled employees into paucity prompting the tradesmen in this group to join effort in opening stores and sell foodstuff they could not otherwise afford (Ministry of Indistrialization and Enterprise Development, 2014).

Additionally, Kenyan cooperatives trace their root to 1908 when the first society, dairy cooperative, was formed and the cooperatives continue to grow since while Kenya's regulatory system for SACCOs begun in 1945 with the enactment of the Co-operative Ordinance Act that legally empowered the Government to monitor the activities of the co-operatives. In 1973, Kenya Union of savings and credit cooperatives (KUSCCO) came into existence to oversee or govern SACCO operations in Kenya. It took several decades before this act was amended, in 1997, doing away with government control implemented by the Commissioner under the Co-operative Societies Act, 1997 leaving these institutions to operate under free market economy.

The SACCOs are financial institutions which are part of the cooperative movement of Kenya which can further be divided into two major categories or subdivisions. The deposit taking cooperatives which are also known as savings and credit cooperative societies (SACCOs) and cooperatives which are not deposit taking dealing with produce marketing, provision of

housing, transportation, investments and so on. It has been noted that recently, the credit cooperatives have experienced exponential growth as compared to other sectors of the economy. This invoked very close supervision prompting the formation of a regulatory authority to govern important monetary institutions. It is at this point that the SACCO Societies Regulatory Authority (SASRA) was formed. This body has established policies and frameworks that legally guide the registration, development and growth of these financial institutions. (Llorent-Martínez et al., 2012). This financial sector has SACCOs which are deposit taking and the other which are not deposit taking. SASRA is mandated to license and govern SACCOs which are deposit taking in nature while the ones which do not take deposits are monitored and guided by the cooperative department (SASRA, 2012).

These financial institutions have been very instrumental to the growth of the economy with WOCCU (2009) observing a 31.9 per cent growth rate in the SACCO savings in Africa. For the year 2008, which was similar to the average growth rate of savings in preceding years although this was not the case for loans which grew at a lower rate of 12 percent in the same period. It can be noted particularly that that loans issued in 2007 indicated a growth rate of 35.3 per cent; while a membership growth rate of 21.2 per cent as observed for the year 2006. WOCCU notes a steady growth in membership as opposed to loans and concludes that SACCOs across Africa could have handled loans with cautiousness and in risk avoidance while administering requests of loans from members. Certainly, the conclusion is that SACCOs have reduced loan amounts associated with various businesses affiliated to goods and services in an effort to cushion the financial entities from probable losses (WOCCU, 2009).

More outstandingly SACCOs in Kenya have progressively reacted to the quickly changing economic environment as well as embracing innovative strategies of SACCO model. This is portrayed in embracing the FOSA model as well innovation of new products with a

substantial departure from the old fashion SACCO model which is based on share deposits. In another view SACCOs should be abreast with the dynamic requirements of stake holders which may include a desire by the members for swift access to financial services which are easy to use. A SACCO with inability to provide a loan product as desired falls short of meeting the services as envisioned by the members. For this purpose, SACCOs should envisage delivery of proficient services thus liquidity should be envisioned by the board always (WOCCU & FSD, 2007).

Since SACCOs operate in the financial industry as banks it is important to point out that, banks are well regulated with stringent guidelines on who to appoint to their boards to avoid mismanagement and prevalence of opportunistic behaviour. This notwithstanding, the banking industry has witnessed some of the Banking Institutions placed on receivership or under statutory management or placed under the management of the Central Bank of Kenya substantially owing to financial distress triggered by severe liquidity problems. This increases the risk by management who may have taken unwarranted risk with members' funds. Undercapitalization and poor availability of public sector deposits by use of political networks of bank owners are other risk factors that may be facing these financial institutions (Kariuki, 2013). Since banks have more stringent regulation and yet face the challenge of financial distress the SACCOs are at a higher risk of facing financial distress. In view of this, efficient regulation and supervision of credit unions is of great importance to alleviate risky loan administration and other maladministration practices which may increase loan losses and even cause a financial institution to fail. Management of loans is a very major factor in causing ill financial health to Kenyan financial institutions and as such should be handled prudentially due to related party transactions. The board should be able to handle loans without attracting high levels of risks on such financial institutions (Muigai, 2016). The fact that there are costs which arise from financial distress should be kept in mind. These costs

may be overwhelmingly huge to the institution and the financial sector as a whole. In Kenya financial distress is a sad reality owing to the fact that various institutions countrywide have experienced this unbearable and devastating state. Institutions in the financial sectors have also not gone without this nasty experience which has caused failure of some institutions in the sector thus impacted very negatively on the country's economic development in that carries a spread of market disturbances which could lead to could lead to panic withdrawals, cash crunches as well as global financial crisis and economic suffering. This leads to Kiaritha (2015) to conclude that SACCOs all over Africa could be employing extra caution in handling members loan applications where protection measures are adopted by some SACCOs that have informed the decision to scale down loans related to export businesses as a strategy of minimizing risks from potential loss to avoid falling into financial distress (Kiaritha, 2015). Olando (2012) further notes that SACCOs in Africa have insignificant market shares compared to other players in the financial industry. This limits the generation of total revenue which is very essential in helping to salvage the SACCOs. According to Olando (2012), the SACCOs have a small share in providing financial services.

As at 31st December 2012, 124 of 215 SACCOs were in receipt of operating licenses while 91 of remaining credit unions stood at diverse stages in trying to comply with legal requirements. It has been noted that deposit taking credit unions operated even prior to the enactment of SASRA laws in 2009 and were subsequently considered for licensing to carry out the business of taking deposits for the SACCOs. As at 31st December 2018, only 174 deposits taking SACCOs had been licensed to operate in the year 2019 out of which 12 were issued with a full year license to operate conditionally and was issued with half year license to operate conditionally as well.

A study by Wanjohi (2016) revealed that the Kenyan SACCO sector boasts of a remarkable market share in terms investments, assets and loan portfolio, total assets in the SACCOs sector increased from 216 billion in 2010 to 248 billion in Kenya shillings in 2016. It is however noted that SACCOs undergo severe liquidity difficulties and most of them are incapable of satisfying their clients' needs in terms of loans and withdrawal of savings (WOCCU, 2008).

Further, it is argued that prior to the SACCO regulatory reforms of 2008 that came into force in 2011, there existed no purposeful and deliberate efforts carried out to regulate the SACCOs subsector astutely because these financial institutions had not been considered as an imminent risk to the financial system of the country. However, these financial institutions have grown over the years to the extent of offering services similar to banking which were called Front Office Services Activities (FOSA) driven by their desire of improving efficiency in the delivery of services but rather caused liquidity problems, inadequacy of capital, dismal management of credit and lack of confidence to various stakeholders (Kahuthu, 2016).

Muriithi (2016) reported that the raising numbers of non-performing loans indicated growth in credit risk at the time mainly ascribable to the costly interest rates experienced during the first quarter in the 2012 as well economic slowdown emanating from the activities of the March 2013 general elections. Additionally, financial organizations undergoing a slump in their asset quality were also under close monitoring by the (CBK). During this period, capital adequacy in this branch of the economy also suffered a decline from 23% as of December 2012 to 21% as of December 2013.

Kiptoo (2015) carried out an investigation in Eldama Ravine Sub County, Kenya and came to a conclusion that SACCOs have been with grave liquidity glitches with a majority incapable of satisfying client requirements for loaning and also savings withdrawal. According to

Kirimi (2017), SACCOs are continuously facing liquidity problems due to high external financing hence the risk of financial distress and eminent closure. SACCOs account for 63 per cent of the country's wealth (Wanjohi, 2016) which makes them very essential financial institutions for financial inclusion and wealth mobilization. Olando (2012) points out that SACCOs command an insignificant market share while Kiaritha (2015) cites political influence during decision making and an electoral system that is not transparent as some of the problems affecting the liquidity of SACCOs. This has pushed the SACCOs into severe liquidity problems making them incapable of satisfying the needs of their members. Hence, this research was designed in a bid to unearth what kind of association exists between Board Characteristics and financial health of Deposit taking SACCOs in Nairobi County and to understand how board Characteristics can be used to improve corporate Governance of SACCOs in order to assist them to avoid experiencing financial distress leading to a stable financial sector which will help in delivering the objectives of Vision 2030, attainment of millennium development goals, achieving the big four agenda of the Government and above all achieving the financial sector goals. Considering the current condition, members are uncertain about continuity of credit unions prompting the current research in an effort of addressing this knowledge deficiency by carrying out this current study which entails finding out the moderating influence of related party transactions, the intervening effect of firm revenue as well as the control influence of external borrowing on the association of characteristics of the board with financial distress and to advise on aspects of SACCO management that will help such institutions to remain financially stable.

1.1.4 The Altman's Z score model

The Z-score function of forecasting corporate failure was familiarized in 1968 by Edward I. Altman. The model is useful in predicting the probability that an entity will fall into bankruptcy in a couple of years. Z-scores are applied in the prediction of corporate defaults

and a suitable tool of predicting financial distress position of firms for academic purposes. According to Altman (2000), the following Z score model which is derived from the original Altman Z score model (1968), and considered applicable in prediction of financial distress probability of corporate failure for firms which are not of manufacturing nature. The model applied to establish the financial distress state of the SACCOs is outlined:

$Z'' = 6.56 (X1) + 3.26 (X2) + 6.72 (X3) + 1.05 (X4)$.

The ratios are first calculated and applied in the model and it is generally agreed that the greater the ratios, the healthier the SACCO and vice versa. The decision criteria is as outlined in the following zones. Discrimination Zones $Z > 2.6$ -"Safe" Zone, $1.1 < Z < 2.6$ -"Grey" Zone and < 1.1 -"Distress" Zone.

Therefore in conclusion Altman (2000) reiterated that Z'' Function of corporate failure prediction was reasonably precise and accurate for five years and above preceding the distress exhibiting over 90% success in classification of sampled institutions for up to five years.

Of late variations by Altman were designed which are appropriate for private firms (the Altman Z'-Score) as well as firms in the non-manufacturing industry (the Altman Z"-Score). Thus, the initial Z, Z' and Z"-Score models maintain a great level of accuracy for distress forecasting, even for some firms left out in the initial tests. Altman regrets that the model could not be generalized to all firms as yet and particularly service firms (Altman, 2019).

1.1.5 Costs of Financial Distress

Entities under financial distress may suffer costs resulting from costly financing, projects and unproductive workforce that may necessitate indebtedness aimed at obtaining more capital to meet the firms' obligations in the short run at the expense of long term projects which may be more profitable than the short term projects. The drive and optimism amongst a distressed

entity's workforce is usually low as the uncertainties over their jobs affect them. When the firm's productivity is low there is loss of market share and consequently loss of profits accruing from lost sales. It is estimated that financial distress costs between ten to twenty percent of an entity's value (Njogo, 2011).

Financial distress results from a number of factors, which cause weak cash position. These factors may accumulate for many years and this makes it difficult to determine the real cause of the failure (Njogo, 2011). The most important single cause of failure of most business enterprises is incompetent and inefficient management. During the same period, a number of companies may be operating under similar circumstances but some will fail and others will survive depending on the management decisions to change the direction of the firm. Njogo (2011) also notes that the causes of failure are usually classified as external and internal depending on whether they arise outside or inside the business. These causes include overextension of credit; meaning that many companies fail because of their inability to collect what is owed in time to meet their own obligations. Another cause is unwise dividend policy**;** many companies do not reduce their divided rate in the wake of declining profits. Some pay dividends out of accumulated surplus even when difficulties for the particular period exist. He also noted that there are other causes of failure, and pointed out that many failed ventures are as a result of several elements which collectively make the business unsustainable. Economic factors such as industry weakness and poor location, fiscal factors for instance excessively huge debt as well as inadequate capital are some of those factors which result into failed ventures. The study reveals that economic problems are largely results of strings of errors and oversights that can be explicitly or impliedly ascribed to management. A study carried out in Pakistan contends that firms decrease leverage when earnings volatility increases (Omar, 2008). Bokpin (2010) agrees with this view by examining panel data of firms which are listed in Ghana Stock Exchange which were in

operation from the year 2002 to 2007 and established that unsystematic risk in terms of business and financial risks significantly impacts on the financial stability of a firm. In a dissimilar, Cassar and Holmes (2003) found out that the risk surrounding a business entity is a weak factor in influencing Financial Distress. Comparatively, Waqas and Md-Rus (2018) established that unsystematic risk was not a significant predictor of Financial Distress this was achieved while sampling on 290 companies which are listed in Pakistan Stock Exchange. It has been established that a negative correlation existed among financial risk and financial distress of the firms involved in this study. In line with this view specific risk aspects are established as having varied influence on financial performance. The risk of failure faced by the firm, the costly refinancing and the loss of firm value are all costs faced by firm which is financially distressed (Chee-Wooi & Brooks, 2015).

1.2 Statement of the Problem

A bill Financial Services established 2016 aimed at promoting and enhancing the safety and soundness of prudentially-regulated financial institutions, enhancing and supporting the efficiency and integrity of financial markets, promoting public confidence in and encouraging development of the financial sector, and protecting financial clients through promotion of fair handling of financial clients by economic entities (Government of Kenya [GOK], 2016). The objective of the financial services bill 2016 has not been achieved considering that SACCOs are faced with a problem of financial distress. A study carried out by Kiaritha (2015) has shown a high failure rate (51 percent) of SACCOs with three (3) in every seven (7) of the licensed Deposit Taking SACCOS (DTS) having their deposit-taking licenses revoked due to perpetual negligence in addressing non-conformity matters which both exposed members' interest earned on their deposits as well as financial endurance of the deposit-taking enterprise. Due to the persistent financial misery experienced by SACCOs, the regulator withdrew licenses of Ntiminyakiru, OgemboIsiolo Teachers and Jijenge SACCOs in 2014,

while Maono Daima, Transcom, Ufundi, Green Hills and Nest SACCOs had their licenses revoked in 2015, in 2016 Banana Hill and Stegro could not retain their licenses. Miliki, Uchongaji, Ainabkoi and Nandi hekima SACCOs faced the wrath of the regulator in 2017 and 2018 witnessed the withdrawal of operating licenses of Nitunze and Moi university SACCOs. A report by the regulator of Deposit Taking SACCOs has attributed the high rate of failure to severe undercapitalization (negative), incapability to fulfill obligations to depositors and other stakeholders, unsustainably excessive external borrowing and severe illiquidity (SASRA, 2018).

This study was aimed at establishing the influence of board characteristics on financial distress experienced by Kenyan credit cooperatives. The study further established the moderating influence of related party transaction and the intervening influence of firm revenue on this relationship. The influence of external borrowing on the relationship between board characteristics and financial distress was also established.

1.3 Purpose of the study

The research purposed to establish the effect of Board Characteristics, Related party Transaction and firm revenue on monetary distress of credit cooperatives in Nairobi County. The research also envisioned establishing the control influence of external borrowing on this relationship. In particular, the research aimed at achieving the specific objectives listed in section 1.4.

1.4 Research Objectives

Majorly the research aimed at establishing the influence board characteristics on financial distress of deposit taking SACCOs in Nairobi County of Kenya. The research aimed at achieving the following specific objectives:

i. To examine the influence of board characteristics on financial distress of deposit taking SACCOs in Nairobi County.
ii. To establish the presence of a moderating influence of related party transactions on the relationship between board characteristics and financial distress of deposit taking SACCOs in Nairobi County.
iii. To assess the intervening influence of firm revenue on the relationship between board characteristics and financial distress of deposit taking SACCOs in Nairobi County.
iv. To establish the joint influence of board characteristics, related party transactions, firm revenue and financial distress of deposit taking SACCOs in Nairobi County

1.5 Research Hypotheses

To accomplish its objective, the research was guided by the stated hypothesis as follows;

H_{01}; the influence of board characteristics and financial distress of deposit taking SACCOs in Nairobi County is not statistically significant.

H_{02}; Related Party Transactions do not significantly moderate the relationship between board characteristics and financial distress of deposit taking SACCOs in Nairobi County.

H_{03}; Firm Revenue does not significantly intervene the relationship between board characteristics and financial distress of deposit taking SACCOs in Nairobi County.

H_{04};Board characteristics, Related Party Transactions and Firm Revenue do not jointly and significantly influence Financial Distress of deposit taking SACCOs in Nairobi County.

1.6 Significance of the Study

The research pursued the moderating effect of Related Party Transactions, Firm Revenue and external Borrowing on the association between Board Characteristics and monetary distress of Kenyan SACCOs. This research was informed by the government decision to withdraw operating licenses of some SACCOs with some also receiving stringent measures on which to

operate so as to avoid eminent closure. It is therefore expected that this research is important to SACCO management because it will act as a standard or a bench mark for upholding required Board Characteristics and the resultant influence on financial distress of the SACCOs which would motivate management to embrace the best required Board Characteristics in order to improve on their liquidity. All stakeholders including owners, customers, SACCO members, the Government and the general public would benefit from this study because management will be helped to put in place strategies to ensure boards of SACCOs are constituted in such a way that they are of optimum size, embrace gender equality, observe independence, correct board tenure and board education. These are qualities which will assist the boards to make decisions which do not encourage opportunistic situations in SACCOs forcing them into undesirable situation of financial distress. SACCO boards should be constituted in such a manner that will ensure that related party transactions are kept at bare minimum since they significantly affect the relationship of board characteristics and financial distress and if they are not properly checked financial distress will increase. A properly constituted board will help in checking these transactions. Increasing board independence is key in questioning execution of decisions. This will ensure that decisions made by the board are not detrimental to the credit unions. The study has established that agency problem exists in SACCOs and any board which is not properly constituted will land SACCOs in serious liquidity problems. Government will not revoke operating licenses of SACCOs because the causes of financial problems will be addressed hence safeguarding members' funds. Employment opportunities will also not be lost due closure of SACCOs. Through the findings of this study, the Government will formulate policies to govern against financial distress which results can also complement the Vision 2030 which requires, among others, that a facilitative role to be played by the financial services sector to mobilize reserves and savings for growth of this country through provision

improved transitional products amongst savings and investments and avail funds necessary to steer the Vision 2030 projects, attainment of millennium development goals, achieving the big four agenda objectives of the government and achieving the country's financial sector goals and better still this study will help to improve the liquidity position of SACCOs in Kenya. The research also concludes that there exists an Agency problem in SACCOs. The theory argues that where the welfare of a person and that of another are affected by the actions of either in an express or implied contract an agency relationship arises where actions are implemented by an agent while the well-being of the principal is affected by such actions of the agent and when both are value maximizers, the best interest of the principal may be compromised. Further, it is argued that agents may possess vast information and know-how in comparison to the principals which henceforth puts them in a position in which they may pursue decisions which maximize their own objectives and not the shareholder's interest. This is aggravated by the boards which are not properly constituted thus the study advises that to reduce Agency problem and consequent Agency costs, board size, board diversity, board education qualifications board tenure and board independence are aspects that need to be carefully considered. This will also improve on Upper Echelons Theory which holds that upper echelons matter. The study sought after attaining enhanced knowledge of board characteristics and they influence organizational effectiveness and came to a conclusion that organizational effectiveness is substantially influenced by board characteristics. A board which is not properly constituted will encourage related party transactions and make revenue and financing decisions which encourage financial distress of Kenyan SACCOs. According to stakeholder theory, the board is supposed to make decisions the enhance wealth maximization and satisfy every stakeholder. The theory explains that stakeholders are a group of people with authentic authority in the view of operations of an entity. While management grips stakeholder philosophy, it becomes more practical to embrace moral management

aspects into business dealings. This holds true if and only if the composition of the board is as recommended by this study. In stewardship theory, it holds that agency costs are unnecessary considering that upper echelons will manage the principals' investments to satisfaction while taking the organization at heart. The theory further argues that agents are not essentially driven by personal objectives, on the contrary to the agency theory. On the contrary they are truthful and cannot misappropriate organizational resources and that they are inspiringly carry out their duties and responsibilities. This theory that emphasizes that the management, will work as responsible bailiffs of assets assigned to them, in dissimilarly the agency theory holds a different philosophy. The study therefore concludes that for this to hold true, the board characteristics aspect needs to be considered to reduce opportunities of mismanagement and to enhance the decision making capacity of the board.

1.7 Limitations and Delimitations of the Study

The key factor for the study remained data mining from financial reports in the custody of SASRA who regulates Deposit Taking SACCOs in Kenya. The researcher used panel data which was mined by use of a purposely designed data collection sheet from SACCO's financial reports under the custody of SASRA. Authority from the science council was sought which acted as an assurance to the regulatory authority who the assigned one of their members of staff to guide in extracting the required data. This coupled with proper identification helped the researcher to acquire the most desired data for this purpose. The study was also limited by the historical nature of financial statements which is a universal limitation of financial data. This was addressed by studying financial statements of seven years and establishing a trend which can be relied upon to give futuristic advice to SACCOs. Trend analysis is regarded as management information. The third limitation was that the study relied on financial data which is always prone subjective judgement of accountants. To overcome this challenge the researcher ensured that all statements were audited financial

statements filed with SASRA. Due to the assurance given by the external auditor data contained in the audited financial statement is considered authentic and free from bias and any material misstatement. This study is only limited to secondary data mined from audited financial statements filed with SASRA and to deposit taking SACCOs in Nairobi County. Conclusions and inferences are made from results obtained by analyzing the data obtained for the SACCOs.

1.8 Scope of the study

This study considered SACCOs domiciled in Nairobi County, and only deposits taking SACCOs were studied. Secondary data was collected using a data collection sheet covering a period from 2012 financial year to 2018 financial year. The population for this study was 174 Deposit Taking SACCOs registered with SASRA selected on a sample basis. The SACCOs that are not regulated by SASRA were not considered for this particular study. The SACCOs were licensed to operate in Kenya for the year ending 31 December 2018. The study was carried out up to and including the year 2018 since the data for 2019 was no available at the time. The research was limited to Board Characteristics, related party transactions, firm Revenue and the effect they have on financial distress of Deposit taking SACCOs in Nairobi County. Financial distress was established by Altman's Z score model. This research focused on the SACCOs operating under SASRA since they operate under a different environment as compared to the SACCOs which are regulated by the ministry of cooperatives Board. Characteristics were only limited to Board Size, Board Diversity, Board independence board education and board tenure. While the researcher was fully aware that board diversity would be measured by various other parameters, the number of female members of the board was considered adequate to bring out a clear picture on the diversity of the board. It is also considered that a board with members who are women takes less risks with the members' funds, hence reducing financial distress. The level of education for board members was

considered at diploma level since the regulator requires that SACCO board members be up to date with various professional requirements and registered with professional bodies within twelve months of appointment.

1.9 Operational definition of terms

Board Characteristics: Board Characteristics are regarded as a blend of characteristics which can be possessed by members of a formal group which may regulate decisions of an entity. These comprises of age, gender, education, experience, diversity among others (Wayne et al.,, 2010).

Board Diversity: for the purpose of this study, board diversity was taken to mean number of women Board members since the ratio has an effect on board decision making (Ombaba & Omuya, 2016).

Corporate Governance: Refers to a level of management which is at the pinnacle of any organization and it engages itself in the provision or propagating the corporate vision and mission (Subramanian, 2015).

Financial Distress: Refers to a state where a business organization experiences impediments in paying off its financial contracts and in particular paying off its obligation. A situation of illiquidity where the entity has difficulties in meeting its financial obligations (Aasen, 2011).

Related Party Transactions: Related party transactions are described as dealings of an entity and its holdings, associates, owners, staff and their families, members of the board, entities possessed or controlled staff members or directors or firms controlled by people who are closely related to them (Statement of Financial Accounting Standards No 57 [FASB], 1982). For the purpose of this study, only loans to directors and staff were considered as related party transactions.

SACCOs: Refer to independent association of individuals amalgamated of your own accord to fulfill a mutual financial, societal, and cultural desires and ambitions through a jointly-owned and democratically-controlled business (ICA, 2017).

Board Education Level: This means the education qualifications of persons eligible to serve as SACCO board members (SASRA, 2015). For the purpose of this study, the diploma qualification was used as an indicator of holders of a diploma and lower level qualifications.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Various theoretical underpinnings pertinent to this investigation are discoursed in this Chapter just like the idea of the study created under the conceptual outline segment and scrutiny of experimental investigations recently directed in the territory of financial distress of SACCOs is likewise exhibited. The section also presents the conceptual frame work of the study.

2.2 Theoretical Framework

This section reviews relevant theories in financial distress realm and factors affecting financial performance. A theory is a systematic account of occurrence and an investigator ought to be acquainted with those theories which are appropriate for the current research (Shapira & Zabar, 2010). In order to firmly ground the study theoretically, a few theories were reviewed for each variable and at least one model for each variable under study. The theories reviewed relate to; financial distress and firm financial soundness. An entity that performs poorly is likely to fall into financial distress.

Alvesson and Deetz (2020) argued that good theories should be established in order to support research, based on the relevant guidelines and each research guideline offered should be premised upon 'good' theories' virtues weighted against each other making judgment a prerequisite for determining the relative importance of each virtue and each guideline. Theory-builders can use more than one theory guideline to increase the significance of their research a research done by Webster and Watson (2002) also argued that theories in research should unambiguously elucidate the contributions and methods of indicating contributions may include a method of providing a new theoretical understanding that can explain results

that might have been confusing previously. This is possible by bringing together other different theoretical components that sheds light on a phenomenon under study (Webster & Watson, 2002). Key theories, for example, stewardship theory, agency theory, upper echelons theory and stakeholder theory were assessed in regard to dependent and independent factors. The theoretical framework must show comprehension of ideas important to the subject of the exploration and that will identify with the more extensive learning base of the examination being attempted. Determination of a theory ought to be dependent on pertinence, simplicity of use, and illustrative power. The theoretical framework charges the scientist with existing learning (Chiggai, 2016).

In this section the history of SACCOs from early in the 19th century when they were started to the present-day situation is highlighted. The earlier state of existence is reinforced by the stakeholders theory in which individuals come together envisioning solution of a particular financial impediment thus profiting from such actions (Kahuthu, 2016). The SACCOs corporate governance is controlled by the "invisible hand" the Annual General Meeting (AGM) in which joint principals (members) direct the purpose of the SACCO including delegation of various accountabilities to the board of management. This often leads to the agency problem as explained by the Agency Theory. In this case the members are principals while the board of directors is taken as the Agent. Explained by the stewardship theory, the Agent are expected to make rational decisions which will be beneficial to the principal without exhibiting opportunistic behavior. The study considers the board of directors as vital for the growth of SACCO as explained by Upper Echelons Theory.

2.2.1 Agency Theory

Mitnick (2007) points out that the study of agency was introduced by Ross who viewed agency as a problem which comes about due to compensation contracting, otherwise

perceived as an incentive problem. However, Mitnick (2007) infused a new dimension to the agency theory and further explained that organizations come about as a result of agency and subsequently adapt to deal with agency as they respond to the critical deficiency of agency affiliations. It is further explained that behavior does not occur as the principal would expect given that making it perfect does not reward. However, the society creates organizations that deal with such deficiencies, handling or cushioning them, adjusting to them, or becoming completely altered by them.

Delves and Patrick (2006) further define Agency theory as a study which deals with the relationship between agents and principal including concerns arising therefrom such as lack of common interest between principal and agent while pursuing a common goal further noting that agency problems can be classified as the agent's problem, the principal's problem and the supervisory tools and incentives; where the principal should focus on motivating the agent to act towards accomplishing the objective of the principal. This can be achieved through use of such tools as fiscal incentives, prospect of sanctions as well as availing information to initiate norms including obedience and loyalty and inclinations or likings that enhance the achievement of the objectives of the principal. In the converse, the agents are faced with the problem of making decisions which will either coincide with the principal's objectives, his own goals or to strike a compromise between the two if they are differing.

Policy mechanisms are intentioned to check the freedom of choice of the agent through channels such as monitoring while incentive systems including salary increments and bonuses are intended to reward the agent for acting in favor of the objectives or goals of the principal. Negative incentives include fear of punishments. It is prudent for organizations to base policing decisions and incentives on cost-benefit analysis in order to minimize the costs incurred by the principal.

Agency theory encompasses relationships arising when principals appoint agents to carry out certain services on behalf of the principals, which may involve delegating some decision-making functions. Kahuthu (2016) perceived that modern firms experience conflict of interest emanating from an existing demarcation between ownership and management founded on the assumption that intrinsic conflict exists between the interests of the firm's agent or management and those of the members. Jensen and Meckling (1976) asserts that where the welfare of a person and that of another are affected by the actions of either in an express or implied contract an agency relationship arises where actions are implemented by an agent while the principals well-being is influenced through such actions of the agent and when both are value maximizers, paramount interest of the principal may be compromised (Jensen & Meckling, 1976). Further, it is argued that agents may possess vast information and know-how in comparison to the principals which henceforth puts them in a position in which they may pursue decisions which maximize their own objectives and not the shareholder's interest. The conflict is intensified due to the imperfectly unbalanced facts among the principal and agent (Laiho, 2011). This has been found to result to agency costs related to close supervision of managers, others related to safeguarding the owners' investment from managers (agents) mischief, damage as well as residual loss - emanating from the fact that actions are not undertaken by principals themselves. Managers may also be harmed by the principals policies that favour shareholding more at the expense of employee interest and well-being which can be attributed to the objective of growing membership due to attractive dividend policy (Smith, 2011).

Due to agency problems, corporate governance is anticipated to help in building investor confidence by building the hope of return on investment in the organization. According to corporate governance principals, the board should make investors believe that the managers will not misappropriate or invest their funds in low return ventures. Corporate governance

also explains how the principal can monitor the actions of the manager (Nyaga, 2014). This theory therefore addresses a key problem in agency being the expectation of the principal will perform assignments based on decisions that maximize the principal's objective or goals of the principal. It is instrumental in clarifying the financial distress experienced by financial institutions. The theory for example helps to explain how self-interest actions of managers and directors in this case viewed as agents, affect the wellbeing of shareholders in this case viewed as the principals, by engaging unfavorable levels of leverage, operational inefficiency due to poor management skills, poor asset management controls and poor liquidity management controls. According to Kloha et al., (2005), actions of management comprise investment decisions which may give rise to misappropriation of funds and also decisions on investing funds in unprofitable ventures. The decisions on how to utilize organization funds may give rise to agency problems which may in turn cause financial distress. Managers have even diverted shareholders' investment for private gain as recently portrayed by EKEZA SACCO where shareholders have lost all their funds to the management. Pyramid schemes have even been registered as SACCOs with a pure interest of defrauding the unsuspecting shareholders. Related party transactions have stemmed up which are used by the board for assets management thereby covering up on the actual performance of SACCOs. These actions finally lead to poor financial performance of organizations (Mathuva, 2016) and consequently to financial distress and eminent closure of some firms. Agency problems have forced the principals to incur huge monitoring costs in an effort to safeguard their funds which has only served to reduce returns earned by the shareholders and led to decisions that have been unfavorable to the agents. According to the above, various types of conflict of interests, which need to be mitigated. The interests of various groups such as shareholders and other interested parties ought to be kept under safe custody. To balance and protect the stakes of interested parties is a managerial duty. A major structural mechanism to limit this

managerial behavior is the board of directors. Board characteristics are an integral feature in guiding on board decision making. Since board characteristics explain 36% of variations in financial distress of credit cooperatives in Nairobi County, it is evident that with the boards as agents and the members being the principal, the preposition of Agency Theory is upheld. Agency theory advocates for larger boards in firms. However larger boards come with increased costs in the organization. The study advocates for smaller boards and gender diversity. This reduces chances where there is very high risk appetite that the principals' investments are at stake or very low risk taking that the returns on investment are negligible. Board Education diversity and level should also be considered while constituting board to allow for a diversified decision making and to ensure that decisions are made at a higher level. Board tenures should not be too short to disrupt implementation of decisions made or too long to encourage familiarity where the board executive feel like part of the management team and at such are not able to question management actions. There should be more directors who are independent in comparison with than non-independent directors to ensure that management and executive directors are not opportunists who advance individual egocentricity to the detriment of members' welfare. The theory also advocates for larger boards to help monitor the actions of the agents. This in turn will increase the agency costs and as also proved by this study, larger boars are negatively related to financial distress and therefore push SACCOs further into distress. If boards are not properly constituted, the boards (agents) make decisions which are detrimental to the SACCOs and thereby to the members of the SACCOs who are the principals in this case. This theory supports the moderating variable, related party transactions in view that boards which are not properly constituted may make decisions which increases related party transactions thereby increasing financial distress. Related party transactions were found to moderate the relationship between board characteristics and financial distress of SACCOs.

2.2.2 Stakeholder Theory

A stakeholder can be described as a person or group of persons possessing the ability to impact or be impacted by the realization of an entity's strategies or goals (Freeman, 2017) while the underlying principle within this concept is a redefinition of the organization and how it should be. Despite the fact that the concept envisaged by the stakeholder stems from the studies of Rhenman and Stymne (1965) in Sweden, the Stanford Research Institute (SRI) Institute of Stanford University, and in the United States, the concept was popularized by an electronic publication done by Edward.

The theory explains that stakeholders are a group of people with authentic authority in the view of operations of an entity. Due to application of stakeholder concept by management there is integration of moral aspects to efficiently manage organizational actions. Societal groups dealing with executives are regarded as partners in the organisation with vested interests, or ``stakes'', in the transactions and the existence of the entity. Such groups with vested interests are referred to as stakeholders. Thus stakeholders are seen as names and faces who are in communication with the management and as such the management must communicate and carryout various transactions with them. For a firm to succeed the management of its stakeholder relationship must be above board with the latter being regarded as genuine partners of the organisation with legitimacy and power and it is necessary to include them substantially in decision making.

According to the stakeholder theory, it is assumed that values are essentially and clearly vital in carrying out business. The understanding in stakeholder theory is that, eventually, an organization must operate in such a manner that each shareholder is contented with what they invest and the returns which they receive from the entity. These interests must be balanced over time (Freeman, 2017). The stakeholder's approach argues that in a business

organization, it is important to extend the organizational goals beyond the maximization of the organization's profit including the interests of non-shareholding groups (Mitchell et al.,, 1997) and premised on the assumption that growth and sustenance of favorable and beneficial shareholder relationships is vital for creating value. Given the societal dynamics, the stakeholder approach can be helpful to business organizations and their leaders in identifying the problems to deal with so as to bring about innovations and value (Kujala & Freeman, 2019). The theory posits that top echelons communicate business strategies and mainly the types of associations that they endear with their stakeholders at the same time carrying out their principal objective while maximizing shareholder wealth (Wicks, & Parmar, 2004). Managing stakeholders effectively should be envisioned so as to thwart adverse outcome of conflicting interests in the midst of different stakeholders which could choke the performance of SACCOs.

The argument fronted by Friedman (2006) is that that in itself, the organization should be regarded on the basis of the group of stakeholders and purposed to manage the interests, needs and viewpoints of these stakeholders or shareholders. It is expected that the stakeholder management is implemented by the board who ought to manage the firm to the satisfaction of every stakeholder ensuring that their rights and decision making are not violated and that upper echelons serve as Agents of stakeholders to safeguard the stake of each group. These groups are viewed by Freeman as absolutely necessary to the existence and growth of every organization. He further reiterates that the outlook of stakeholders is crucial and as such should be considered by the management of organizations. Under the stakeholder theory, stakeholder recourse principle may allow institution of lawful actions on the management due to failure to carry out the expected obligation of care (Freeman, 2017).

In literature the principles and views discoursed in the stakeholder concept are referred to as normative stakeholder theory which according to Friedman (2006) explains theories of how stakeholders and managers should operate and envision the objectives of the business entity ethically. Another approach to this concept is the descriptive stakeholder concept which focuses the conduct of the managers and stakeholders and how actions and roles should be viewed. Where managers want to flavor and work for their own interest, their actions is dealt with by the instrumental stakeholder theory. Freeman (2017) further explains that conceived self-interests are viewed as those interests accruing to the organization that help maximize profits and shareholder value. From the foregoing, it can be inferred in the long run, an entity will be successful if the board employs the stakeholder concept in its relationship and dealings with the stakeholders.

According to Fontaine et al., (2006), stakeholder theory argues that the management of an organisation should be based on philosophies of business ethics which discourse concerns of different stakeholders in a business environment which is dynamic. A Stakeholder Approach recognizes models that guide employee behavior towards attainment of organizational goals. The code of ethics developed by firms are aimed at guiding the employees' code of conduct at the work place. (Delves & Patrick, 2006). The stakeholder belief is for agents of the firm to have moral integrity during decision making to facilitate the firm to maximize profits with minimal harm to the society (Freeman, 2017).

Gathigia (2016) views an organization as an integral part of the society that should work towards attainment of long term stakeholder goals. Fontaine et al., (2006) alludes to open systems capability of achieving goals through recognition of stakeholder's interests and needs in the competitive business environment. It is upon the management to come up with and embrace decisions which are not conflicting with the expectations of stakeholders. Modest

entities be duty-bound to come up with resolutions which are stakeholder favourable in the view that they are socially responsible in a dynamic environment of an entity.

The stakeholder theory supports this research by explaining that SACCOs will probably continue being competitive if stakeholder information is enhanced by the presence of good representation in the board. Stakeholders, both internal and external will feel more recognized if firms implement systems which work for them. Organization productivity is usually enhanced boards will be maintained at small sizes, there is more gender inclusivity, during board composition. Education diversity is of essence of boards have to deliver their mandate. Board tenure should be ideal such that the board members are not changed very often to lack continuity of decision implementation. Firm specific knowledge is acquired during service in a firm. This helps the management make more informed decisions as opposed to new management which often changed leading to poor implementation and follow up of decisions and management thoughts being implemented by the firms. Board Independence is vital in order to question the management on the manner in which management thoughts are implemented. Stakeholder theory encourages teamwork and dedication which is essential for organizational growth and in turn reduces financial distress. SACCO boards should be well balanced so as to be assured that quality choices are made and the implementation of the decisions is above board to ensure that SACCOs are not forced into financial distress. The Decision making by managers should be in a manner maximizing the wealth of shareholders. In this way shareholders will not risk their most valued investments and even the benefits such as dividends. The management itself will also derive satisfaction from managing entities successfully and scooping rewards for good management and other remuneration from these entities. The public and the government will also benefit and every stakeholder will be contented. The returns on these investments will also be improved and sustainable and

therefore SACCOs will not closedown or operate under restricted conditions. Investors will have faith with organizations that maximize stakeholders' worth.

Stakeholder management is considered as one factor which enables credit unions to attract new members. This transforms into profitability hence growth and success of firms (Daft & Marcic, 2016). SACCO directors hence should be aware of vests of all stakeholders during decision making, because such stakes may interfere with firm value there should no stakes which should be presumed more important than others. Boards do not uphold the stakeholders' theory considering that each stakeholder should be satisfied with the expected returns of the organization. Presence of financial distress is an indicator that the principals' investments are at stake. In addition, information of RPTs revealed in the financial reports is valuable and relevant to the stakeholders, to allow prediction of the impact of such dealings in the organisation. This points to another area which is disclosure of these transactions and corporate governance. This disclosure will enable the board to evaluate whether or not the related party transactions and beneficial or detrimental to the organisation and whether the monitoring system of such transactions is adequate. The stakeholder theory is significant in this study in that it supports the independent variable board characteristics. This theory makes an assumption that the managers will make decisions that satisfy every stake holder. The presence of financial distress and its association between board characteristics points to the fact that this theory is not upheld in this study. However, a properly constituted board will make decisions to increase firm value which will in turn ensure that all stakeholders are satisfied. The current study also making an opinion as to whether related party transactions are encouraged by corporate governance and whether they come about due to board characteristics and inquiring into the existence of a statistically significant moderated association amid board characteristics and monetary distress Kenyan credit unions. This study also concludes that improving on the board characteristics would reduce related party

transitions which would in turn reduce financial distress of SACCOs in Kenya. Related party transactions increase agency problem which in turn results in poor managerial decisions which are skewed towards meeting the goals of the agents when they don't view themselves as stakeholders. This increases financial the distress of organizations.

2.2.3 Stewardship Theory

This theory can be traced to Donaldson and Davis in 1991 who posited organizational management or stewards ought to safeguard and shareholders wealth through enhanced performance of the entity. The capacity numerous managerial skills such as risk management, innovation as well as entrepreneurship, aid firms in maximizing profits which in turn will maximize shareholders wealth. It is the expectation of the shareholders that employees are duty bound to obtain appropriate knowledge and skills to make use of the scarce resources available to the entity in attainment of long term objectives more competently and efficiently. The stewards of an organization would be more inspired where corporate governance is effective and vice versa (Donaldson & Davis, 1991).

Donaldson and Davis argue that competitive firms should have governance structures that promote organizational development and appreciate diversity of workers in terms of skills and culture. To minimize the costs of operation and maximize profits, managers should create an environment that promotes creativity and innovation, change management and technological integration in the system. Abdullah and Valentine (2009) theorized that for protection of corporate image, managers should come up with policies intended to promote workers wellbeing impartially. The study argues that the theory can appropriately be applied considering the fact that it is generally be lied that it is the obligation of executives and directors to develop strategies that can increase shareholder value. Strategies of expansion, developing new products and operational efficiency are internal initiatives employed by

shareholder representatives which assist in maximizing shareholder value through dividends. As a result, strategies put in place by SACCOs may improve shareholder value in regard to profits and dividends. Flexible guiding principles allows organizations organize their strategic action in line with the rational organizational setting to the benefit of the agent and SACCO members.

Contrasting the agency theory, Donaldson and Davis advanced the stewardship theory advancing a positive opinion on the behaviour of management. Donaldson and Davis argue that agents are not essentially inspired by personal objectives, on the contrary to the agency theory. They can somewhat be trusted to manage organizations without misappropriation of firm resources that they have an individual drive to execute obligations and duties assigned to them. This a theory that emphasizes management, can act as accountable stewards if left on their own contrasting the agency theory. This theory is originated from other perceptions towards human beings (managers). The Herzberg, Mausner, & Snyderman two factor model holds that organizational role-holders can be perceived as persons who are motivated by a need to achieve, also it is expected that humans will gain intrinsic satisfaction when they perform successfully and in a fair manner (Alshmemri et al., 2017). It comes to the fact that an important motivating factor for managers is to get satisfaction from a job that is well done. To conclude, the stewardship theory states that managerial behavior will be reorganizational and in line with organization's interests. In which case decisions made will be in line with organizational goals. This encourages good performance and growth of organizations which will reduce financial distress faced by such organizations. The study sought to establish whether the managers practice this theory in ensuring that SACCO do not fall into financial distress. To this effect, board characteristics explain 36% of variations in financial distress of credit cooperatives in Nairobi County. Considering that related party transactions as well is significant in moderating this relationship indicates that the manager do not uphold the

stewardship theory. SACCO boards should embrace optimal board size or smaller board, diversified gender, a diversity of higher educational skills, optimum tenure and include more independent directors on boards. To uphold stewardship theory, SACCO revenue streams should be diversified. This will ensure more revenue generation and ensure that SACCOs' liquidity is maintained at optimum levels. The stewardship theory supports the independent variables considering that it is the opposite of agency theory. It argues that managers have the firm at heart and cannot make decision which are detrimental to the growth of the firm. It has however been proven by this study that through relate party transactions managers actions have forced SACCOs into financial distress hence the assumption that managers have the firms at heart and will only make decisions that will maximize firm value is violated due to the presence of financial distress and its association with board characteristics. When this does not happen, then agency problem comes in and increases financial distress.

2.2.4 Upper Echelons Theory

The upper echelons theory being a theory of management explains the relationship between organizational results and managerial characteristics. The upper echelons theory, as originally crafted by Mason in 2002 holds that cognitions, values, and perceptions of management inspire strategic choices, hence influencing the performance of the firm. According to Krishnan and Park (2005), reorganization and restructuring are major approaches employed by various firms to achieve organizational goals in the 1990s. It is argued that a strong relationship exists between characteristics of upper echelons (top management team) and organizational strategies as well as achievement of an organization's objectives and its overall performance (Krishnan & Park, 2005).

Upper echelons theory is founded on two principles namely the freedom of choice and the requirements of executives (Plöckinger et al., 2016). Management discretion can be explained as the possible range or leeway of action management is allowed in an organisation. It is the

lack of restrictions and restrictions which could be from the environmental, the organisation itself or personal conditions and the accessibility of several reasonable options (Finkelstein, 1990). Managerial discretion denotes the autonomy of actions enjoyed by management while coming up with strategies and options (Hambrick & Finkelstein, 1987; Carpenter & Westphal, 2001; Crossland & Hambrick, 2011). Consequently, Hambrick (2007) posited that, when where freedom of choice by management is enhanced, management features would be reasonable forecasters of firm performance as opposed to when managerial discretion is low. Ongore (2008) argues that a board in which comprises individuals with the required explicit as well as common information of the primary goal of the entity, has enhanced capability ratifying decisions which have been made by management. It is also argued that to enhance efficient management a substantial proportion of proportion non-executive directors is essential.

Executive job demands on the other hand results from the hitches and constraints faced by executives' in their professional daily routines as they make strategic choices (Hiller & Hambrick, 2005). Specifically, job hassles maybe anticipated from work related constraints like inadequate firm resources, performance challenges such as expectations of owners and various stakeholders and the management ambitions such as individual yearning of delivering excellent results (Hambrick, 2007; Plöckinger et al.,, 2016; Tang & Ye, 2015). Hambrick (2007) suggested that directors experiencing a myriad of constraints may not have ample time to envision choices and as a result may take mental shortcuts and depend essentially on their individual experiences.

According to a study by Hambrick (2007), the upper echelons theory absolutely concentrated on the relationship between management characteristics and organizational strategic decisions. Plöckinger et al., (2016) points out that influence may be applied even in a

situation where guidelines exist by methodically tracking conventional or by creative accounting or through adaptable management of earnings upwards every time that management deems it favorable to them. Financial reporting options of importance for firm's communication with stakeholders as this can be construed as part of the firms set of strategies practiced by upper echelons.

Various studies which support the upper Echelons Theory have been carried out and have consistently agreed with theory that the board can greatly influence organizational performance thus board characteristics should evaluated during selection of Board Members. Management generally applies substantial pressure on organizational resources thus acquiring the capacity of influencing the degree to which the level of earnings manipulation can be reduced. Executive directors are also duty bound in ensuring that formulated internal control systems are implemented to satisfaction which reduces chances opportunism where some managers may take unfair advantage to enrich themselves., (Wahidahwati, 2018) carried out an investigation in aid to understand more clearly ways in which features of management teams impact the efficacy of an organization and came to a conclusion that organizational effectiveness is substantially influenced by board characteristics. Similarly, CEO and TMT transformational leadership have been anticipated to impact organizational efficacy. Transformational leadership is perceived to be a channel connecting directors' character personalities to firm efficiency. The current study uniquely brings out how personality traits and leadership theories blend to foster a better understanding of how key character traits of directors impact an organization's efficacy.

Regrettably, this being not the situation as expected, various factors have contributed to the current situation. To begin with CEO power may unfavorably affect the efficiency of the management by using ways which are not right choosing the directors and taking part the selection process. A case in point could be that the control capacity of the directors not

matching up the CEO power. To add to that, the directors are dependent on management to be supplied with information to execute a monitoring function which is efficient. Thus a powerful CEO may avail only that information which is favourable for his own interest. Additionally, the CEO has great capability of arranging for friendly independent directors and also pick on submissive directors as members of the board (Combs et al.,, 2007). This assists the CEO's decisions to be ratified without any brawl (Wahidahwati, 2018). Conversely, scholars have narrowed their investigations to investigating the influence of obvious upper echelon features, such as demographic personalities on firm policies and performance. In the current study we assimilate a couple of upper echelons thus the CEO and the directors making up the board. In this case, Board independence, Board composition, Board Tenure, educational level of the board and Board size are Board characteristics building up a theoretical framework to investigate the impact on Monetary Distress of firms and particularly Deposit Taking SACCOs in Nairobi County. Board of Directors and the CEO being considered as the TMT. Hence this study sought to confirm or otherwise if the management has adhered to the required Board Characteristics to help alleviate Financial Distress conditions experienced by SACCOs in the Nairobi County. Board composition, size and tenure should be observed during constitution of SACCO board in that a well-diversified. Board education and independence must also be considered to ensure proper control on the CEO as far as implementation of management thought is concerned board will take appropriate decisions without too much risk on the members' funds. Board independence should be given the seriousness it deserves so that the CEO's actions can be questioned appropriately and related party transactions can be reduced to a bare minimum. The conclusion was that Firm revenue had no significant intervening effect on the relationship between board characteristics and financial distress of credit cooperatives in Nairobi County thus upholding the Upper Echelons Theory. This means that even with a lot of revenue being

generated, a firm can still fall into financial distress if not well managed. This theory supports the intervening variable. This theory argues that that upper echelons are very important as their decisions guarantee the sustainability of the firms. It does not however consider that even with this important the suitable board characters should be given priority. The study there advises revenue sources should be diversified and board characteristics should be considered to ensure that viable decisions are made to the sustainability of SACCOs. This theory comes in to try and solve the agency problem with the upper echelons making decisions to maximize firm value. However the board who are viewed as upper echelons in this case should be properly constituted for decision making which will not throw the firm into liquidity issues.

2.3 Conceptual Framework

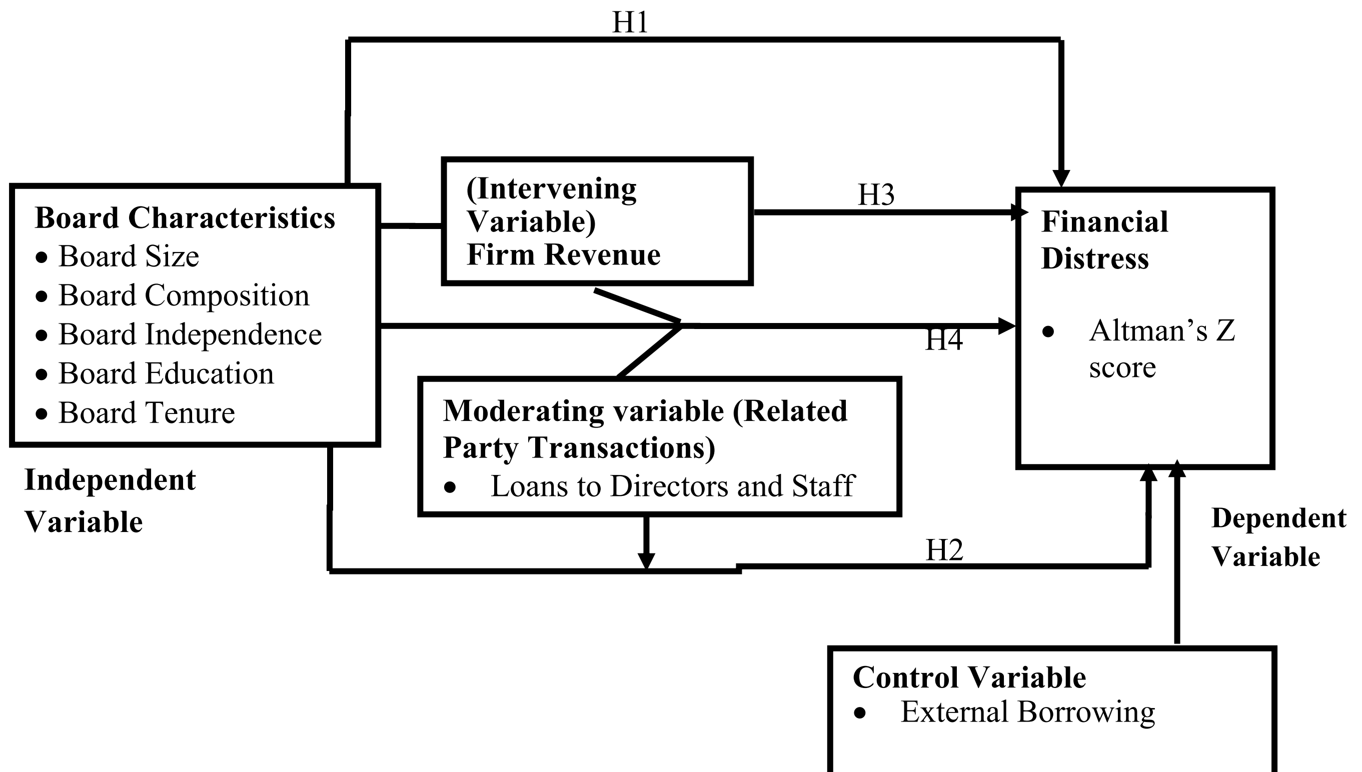
Concepts are abstract ideas inferred from specific instances (Kombo & Tromp, 2006) unlike theories, concepts need not be discussed to be understood (Durham & Stokes, 2015). A conceptual system is an investigation instrument used to compose empirical perceptions in an important Structure (Shapira & Zabar, 2010). Childs (2010) characterized it as a lot of wide-running thoughts and standards got from applicable fields of enquiry and utilized structure resulting introduction. On the off chance that briefly enunciated, it has potential helpfulness as an instrument to help a scientist make significance of ensuing discoveries shaping piece of the motivation for investigation, testing, survey and change because of investigation and clarifies the potential connections between the factors (Durham & Stokes, 2015). They are basic to inquire about since they explain and acclimatize philosophical, methodological and commonsense parts of doctoral propositions contemporaneously delineating the calling as an investigation-based order, alright with the language of meta-hypothetical discussion (Durham & Stokes, 2015).

This study adopts Agency Theory which explains the relationship of an agent and the principal and further explains the conflict of interest view between the two parties. In this study the agents are viewed as the SACCO management while the principal is the SACCO ownership or the members. Since the owners have invested in the SACCO the expect that the management in this case the Board and the CEO makes decisions while acting in the best interest of the principal so as to maximize the owners wealth. On the other hand, the board makes decisions and acts in their own self-interest. This brings about a conflict of interest between owners and the management. The aim of the study was to establish whether board characteristics in this case board size, board diversity, board independence, board education and board tenure causes SACCOs to experience financial distress. The study aimed at testing whether the theory holds even when firm Revenue, related party transactions and external financing are introduced. The dependent, independent, moderating and intervening variables of the study are discussed followed by the conceptual model. The dependent variable of the study is measured by Altman's Z score for non-manufacturing firms.

Board size, Board Diversity, Board Independence, Board Education and Board Tenure are considered as Board characteristics which is the independent variable in this case, the moderating variable is related party transactions. While firm revenue as measured by the efficiency in generating total income is an intervening variable with external borrowing as a control variable. The relationship between Board Characteristics and financial distress is assumed to be moderated by related party transactions, firm revenue is deemed to intervene and external borrowing as a measure of control. These relationships are captured in the illustrational conceptual model in figure 2.1 showing the conceptual outline for the study.

Figure 2.1:

Conceptual Framework



The primary focus of this study is the relationship between independent variable(s) and dependent variable. In majority of the studies this relationship is moderated and intervened by the corresponding variables, individually, as well as jointly (Pokhariyal, 2019; Njagi, 2017). The works of Pokhariyal (2019); Njagi (2017) and Mugambi (2020) recognizes the challenges of testing the joint effect moderator and mediator variables with the independent variables but however concludes that testing such joint relationship help to describe how all variables jointly influence the dependent variable. This Thesis recognizes these challenges as well but also agrees with these studies that testing this joint effect helps to bring out the influence of all explanatory variables on the explained variable. Intervening variable may have insignificant influence on the relationship between the independent variable and dependent variable. However when considered jointly with other variables a significant relationship is observed. This is indicates that all explanatory variables work together. In line

with this incite therefore, the relationships in the conceptual framework is similar to these works and is explained as follows:

H_1: This is the direct relationship between board characteristics (independent variable) and financial distress (dependent Variable) of deposit taking SACCOs.

H_2: This indicates the relationship between board characteristics and financial distress of SACCOs but with the moderation influence of Related Party Transaction (moderating Variable).

H_3: This shows the relationship between board characteristics and financial distress of SACCOs with the intervening influence firm revenue (intervening Variable).

H_4: this indicates the joint influence of board characteristics, related party transactions, firm revenue on financial distress of SACCOs.

2.4 Empirical literature

This section highlights previous research studies in relation to financial distress of organizations in Kenya which were reviewed. Zikmund et al., (2010) define this review as a focused examination of available studies consisting of books and journals. It can also be regarded as a detailed review of prior studies related to the objects of a current study. Yang and Miller (2008) explain that a researcher is able to place scholarly work into a historical context and intellectually declare why their research is of importance. This is achieved through application of a logical method on past academic work in line with the variables of the study.

2.4.1 Financial Distress of SACCOs

Financial distress connotes a state where or circumstances whereby a business organization experiences impediments in paying off its financial contracts and in particular those of its

creditors (Kariuki, 2013). This would mean the presence of a tight cash situation which could lead to bankruptcy and even liquidation if experienced over a period of time. Kariuki (2013) point out that the Kenya's financial system has improved remarkably in the recent past to become the largest in East Africa. Compared to neighboring economies in East Africa, the Kenyan financial sector is applauded due to its size as well as divergence. It is further noted that Kenya avails an assortment of financial institutions and markets dissimilar to the rest of the players in the region. All the same, challenges in the sector has faced various challenges in its growth having been experienced particularly in the 1980s and 1990s because of such aspects as defaulted loans as well as flaws in corporate governance which have led to corporate failure of firms in the financial sector. The Kenyan financial industry has continuously been faced with challenges which include financial distress. Corporate financial distress has been defined as grave liquidity problems which may be difficult to resolve short of substantial restructuring of the firm's financial structure and processes (Jaafar et al.,, 2018).

Financial distress can be described as terminology that denotes an unsuccessful entity as described using various methods while attempting to depict the formal process that an entity is facing and also trying to classify the economic difficulties attaching. Four phrases are generally used to describe financial distress; default, failure, bankruptcy and insolvency (Altman, 2016). Even though the terms can be used interchangeably, they are conspicuously dissimilar in application. Failure arises where rates anticipated as return on capital invested including provisions for risk are considerably and constantly lesser compared to prevalent rates on comparable investments. Similarly it may connote inadequate income to meet costs and instances of the return on investment lower than an entities cost of capital. The circumstances do not mention entities being non-existent or being discontinued. An entity can thus be regarded as having failed economically for years and yet in a position to meet its

existing debts due to nonexistence meaning being in possession of debts which cannot be enforced legally.

Insolvency denotes undesirable organizational performance and is commonly used more technically. Technical insolvency occurs once an entity fails to meet obligations due by it, indicating liquidity issues. The net cash flow as compared to existing liabilities may be the principal criteria used to define this type insolvency (Njogo, 2011). Default is another corporate condition which is inevitably linked to financial distress. Default may be legal or technical but this notwithstanding; it often encompasses the association between the borrowers firm and the lenders with the latter default arising where the debtor firm is in violation of a condition in a contract with the creditor which can form the basis for a legal action. Firms facing financial distress will consistently default on debt repayments due the tight cash situation they are operating in. default is an outcome of financial distress.

Bankruptcy connotes a firm's net negative worth position and the organization's official declaration of bankruptcy in court, backed by a petition to liquidate its assets or institute a salvage program (Altman, 2016). This comes as a result of the firm operating under financial distress for a prolonged period. The situation of financial distress may force a firm to file for bankruptcy for failure to meet financial obligations. This study therefore will define financial distress as a state of illiquidity in which a SACCO has crippled capability of meeting its financial debts as and when they fall due. This was established using atman's Z score model for non-manufacturing firms. According Altman (2016), a SACCO facing financial distress fails within the next two years from the date of failure prediction.

Financial distress and failure faces all sizes of business firms in any part of the world. Understanding organizational failure in the perspective of external environment is essential to directors, advisors, creditors, accountants and fiscal analysts.

There are various explanations of the sources of financial distress within co-operative societies in developing countries. For instance, many studies have revealed significant correlation between financial performance and financial distress, to macro and micro economic variables in various sectors such as manufacturing, insurance, and other corporate sectors. Shaukat and Hina (2015) by application of Altman Z-score Model studied the effect of fiscal stress fiscal performance of corporate sectors trading publicly in Karachi Stock Exchange in Pakistan and found the existence of a correlation of fiscal performance and fiscal stress and further, fiscal performance of firms in Pakistan increased with increase in Z-score values and with a decline in monetary stress of the firms.

While the study by Shaukat and Hina (2015) used Z-score model, Liao and Mehdian (2016) argued that the Z-score model cannot identify key financial distress factors and establish the extent of financial distress on performance more correctly and reasonably as in the case of other models. Kostopoulos et al., (2011) examined the relationship of related party transactions firm capacity, innovation and fiscal performance using path analysis where the study supported a positive relationship between financial health and innovativeness and established further that financial innovation and related party transactions capacity being some of the causes of ill financial health with a direct or indirect contribution in varied interval phases. This research was undertaken in entities trading in Greek stock markets, thus falling short of addressing diverse financial distress causes for organizations in the finance industry.

Outecheva (2007) in a study carried out in the United States of America alludes to pointers of financial distress in institutions as; declining profits, declining market share, poor administration conveyance, demotivated representatives and failure to adjust to changes.

Additionally he clarifies that an association might be distressed without defaulting because of internal wrangles of the executives and strategies of activity.

A study carried out in Ethiopia emphasized the issue of mismanagement in lending and spending, which negatively affect the society members (Tasfamariam, 2014). The study further reiterates that some evidence exist which indicates that financial distress often arises from endogenous risk factors, including maladministration, high leverage, inefficient operating structures, fund management and resource crunch, poor accounting systems, financial controls and output, low returns and administrative succession. Research carried out in Tanzania by Gikuri and Paulo (2016) cited excessive donor dependency as one of the challenges faced by SACCOs. Muriithi (2016) points out that corporations experience financial distress resulting from economic distress, dismal firm performance as well as unsatisfactory management practices particularly of uncertainties. It can further be clarified that the financial distress process commences by portraying a gestation era underpinned by undesirable occurrences of lack of liquidity including substandard administration marred with costly mistakes. Muriithi (2016) further argues that supervisors and advisors should clearly comprehend the relations between monetary situations and organizational performance in order to develop and manage reorganization approaches. The credit officers may modify their risk ratings considering the fluctuating economic conditions as well as the organization's internal environment or firm specific elements which may bring about monetary anguish. According to Ooko et al., (2013), SACCOs do not comply with their by-laws as expected and revenues realized from investments did not sufficiently fund their expenses. This also indicates the presence of financial distress. Kivuvo and Olweny (2014) studied 215 SACCOs on financial performance by use of the Altman Z score function of corporate insolvency and established that SACCOs suffered monetary anguish. The other studies only mentioned

financial distress as a variable studied among other variables to establish challenges facing various SACCOs in Kenya.

A study carried out by Wesa and Otinga (2018) on factors determining corporate failure amongst firms which are listed Nairobi securities exchange (NSE) explain dependent directors that firms which are financially distressed are firms which go through financial difficulties in carrying out their usual operations. In very serious circumstances they are prone to bankruptcy proceedings. Bankruptcy is preceded by such events as incidences of failure to adhere to loan contracts as well as inability to pay dividends and failure to collect loans that are due or past due. It comprises situations where firms cannot meet their financial obligations to their creditors and it comes about due to insufficient operating cash flows that necessitate resort to remedial measures (Wesa & Otinga, 2018).

Njogo (2011) discusses some causes of financial distress as financial causes which come as a result of financial decisions which include the determination of the amount of creditors' funds to be utilized by the firm, and therefore failure is often closely related to previous financial decisions. Poor financial management occurs where a fundamental error of having too much of the capitalization in bonds and too little in stock arises and can easily wreck a company. Incorrectly estimating the capital needs can do likewise while improper terms of sale and slack collection policies can cause considerable trouble. Njogo (2011) further argues that, difficulty in collecting on receivables and in controlling operating expenses is a frequent cause of financial distress. The selection of the wrong type of securities to sell at a particular time or the improper timing of the security sale can be disastrous to a business. Unwise dividend policies and inadequate maintenance and depreciation can eventually cause financial distress and excessive fixed charges caused by the presence of too large amount of bonds outstanding can result in such excess fixed charges that the company is unable to meet them

and distress may result. An Excessively funded debt may be another cause of financial distress where a firm might not really be insolvent; that is its assets may exceed its liabilities but the working capital position may be so weak that it is unable to provide the funds to meet the bonds and distress may result out of inability to meet large bond maturity.

This is an indicator that SACCOs are increasingly experiencing financial distress. Makori et al., (2013) instituted an investigation which established different obstacles or problems facing conformity in SACCOs; non-distinction of clients' deposits from their shares, the over-reliance on provisionary external borrowing, failure to adopt liquidity monitoring structures and approaches, excessive investment in non-earning assets, insufficient Information Communication Technologies (ICT) network, incompetent managerial capabilities and interference from the political class. Considering the challenge of high dependence on short term external borrowing, it can be established that SACCOs have a challenge of financial distress. It is only under such a condition that a firm can highly depend on short term external borrowing.

Ogilo (2012) identified elements of credit risk management as the CAMEL indicators for commercial banks. Through application of a multiple regression, it was established that CAMEL components impacted strongly on the fiscal performance of these financial institutions. The investigation also revealed that earnings by measure of ROE had a strong impact on monetary performance as opposed to quality of assets, adequacy of capital, liquidity and effectiveness of management. The examination done by Ogilo (2012) neglected to contribute on the sort of relationship, assuming any, concerning the risk management factors, financial distress factors and financial performance in Kenyan financial industry utilizing spellbinding plan on essential and secondary for 20 chosen commercial banks. Ngumi (2013) found a correlation between financial developments on financial performance

of Kenya's financial sector. Kinyua (2014) utilized a similar structure in his investigation and came up with an internal control framework as an indicator of financial performance established from information gathered from 372 ranking directors of 62 companies listed in the NSE further finding that the financial performance of companies is estimated by profitability, return on Equity (ROE), and income per share (EPS). Baimwera and Muriuki (2014) examined the relationship between financial distress companies as hypothesized by Altman (2016) and established that it was strongly impacted by growth, liquidity, profitability and leverage for firms which are listed in NSE. This investigation was however performed on firms which are not finance-oriented and used a descriptive research on secondary fiscal data which was obtained from 2007-2010 statements further analyzing univariate and multivariate accounting based distress prediction models as well as Pearson's analysis to establish the extent and form of association existing between elements of corporate financial distress and corporate financial distress itself. The study established that leverage and liquidity had no substantial impact in determination of corporate financial distress. However the ability to grow and make profits holds a substantial impact on corporate monetary stress. The study did not however show the influence of these elements on the fiscal performance of fiscal entities in Kenya. Outecheva (2007) further explains that financial distress occurs in the following phases: decline in performance, difficulty in meeting financial obligations, liquidation and bankruptcy. Inasmuch as decline and collapse are shown by performance in terms of how profitable the business organization is, bankruptcy and inability to meet business obligations are ingrained in its liquidity. Muriithi (2016) asserts that financial distress can be explained as a state of affairs in which a business organization finds impediments in recompensing its obligations. This is a situation which may be experienced by organizations as a result of internal and external challenges which may lead to insolvency and even liquidation (Gathigia, 2016). Outecheva (2007) enlists pointers to financial distress amongst organizations as;

declining ability to make profits, reduced share of market, dismal delivery of services, employees who have low morale and initiative to work.as well as lack of ability of change adoptability. Outecheva (2007) additionally argues that a business entity may experience financial distress even without failing to meet its financial obligations due to internal issues of management and policies of operation. Gichaiya et al., (2019) describe financial distress (FD) as a global crisis reflected on the existing cases of corporate failure and bankruptcy. Corporates have always suffered financial distress with cases dating back to the 1970s relating to financial crunches experienced by economies and commercial entities worldwide (Fox et al.,, 2013). Financial Distress can be described as that defining moment which gives a picture of economic difficulties in the operations of a firm. If successful turnaround strategies are not employed in a timely manner then the monetary situation grows up to events of default, corporate failure, actions of restructuring, inefficiencies in firm operations, experiencing distress costs and finally liquidation may happen (Carmassi & Patti, 2015; Muller et al.,, 2012). Organizations which are financially distressed may generally experience such conditions as; inadequate production, increased gearing levels and also inadequate liquidity, a blend which ultimately ends up in seeking exit options from an existing market share (Sitati & Odipo, 2009; Pálinkó & Svoób, 2016; Shaukat & Hina, 2015). At the same time, other turn around or reorganization approaches such as mergers and acquisitions, joint ventures, strategic alliances, delisting from the bourse, liquidation or major restructuring may be advised for firms in grey zones to assist them in turning around (Khaliq et al.,, 2014).

Muigai (2016) in his investigation to set up the influence of capital structure on monetary distress of financial enterprises not listed in NSE considered financial sourcing, expansion of requirement, the structure of equity just as resource structure as independent factors while utilizing firm Revenue as the control variable to set up the relationship between capital structure and monetary distress in the associations. The examination utilized a statistics from

listed firms and quantitative research design and uncovered that monetary influence, element of compensations and external equity don't affect financial distress of non-financial firms and furthermore settled that internal equity and long haul obligation help in decreasing the impacts of financial strain in these organizations further demonstrating that the size of the firm and the posting segment essentially moderate the impact of the relationship between capital structure and financial trouble.

Kariuki (2013) established that banks listed in NSE suffered financial distress. Financial distress was established by utilization of Altman's Z score model which was applied on secondary data obtained from banks financial statements under custody of Central Bank of Kenya (CBK). A sample of eleven banks listed at the securities exchange and eleven unquoted banks were considered in this investigation with the return on assets (ROA) ratio was applied to gauge fiscal performance and outcomes illustrated that banks which were not quoted in the stock exchange experienced more financial distress in comparison to listed banks.

Kariuki (2013) comparably established that financial distress impacted adversely on the how Kenyan financial institutions performed financially. Albeit investigation failed to point out key financial distress factors or the extent by which each factor impacts on monetary anguish of the financial institutions in Kenya. Ogilo (2012) envisaged to establish if Kenyan commercial Banks experienced a situation of financial distress and provided that this is true, only that the institutions experienced it at different levels and degree, including the degree of reliance of the internal sources and on external borrowing from the local government. In light of an example of 59 local banks in the country, Ogilo (2012) upheld that 22% of all Kenyan commercial banks are financially distressed, 71% have not indicated any financial distress while another 7% are in the Gray area. The most unusual prevalence of financial distress was

seen among the town councils. Ntoiti (2013) investigated the causes of monetary stress existing among county councils in their delivery of administrative services in Kenya. In a study aimed at a population of 175 Kenyan local authorities. The examination concluded to the components affecting monetary stresses in the local Governments as comprising of poor strategies in the management of funds, unethical managerial practices, and unethical practices in management of human resources, data innovation and rigid guidelines issued by the government. Investigations of Ogilo (2012) and Ntoiti (2013) did not anyway connect the impact of the reasons for financial distress and financial performance of different entities other than the local authorities that were eliminated under the present Constitution in Kenya.

Kinyariro et al., (2016) inspected the relationship between Basel III treaty executions with a stressed financial position of commercial banks in Kenya. The examination utilized clear plan and enumeration to collect secondary information from financial accounts of all the 43 commercial banks from 2013 to 2014, embracing numerous relapses to characterize the relationship of Basel III accord and financial distress. The investigation uncovered that capital, influence and liquidity prerequisites affected emphatically the financial distress position of commercial banks provoking the conclusion that usage of Basel III accord guidelines impacts on monetary stress position of Kenyan commercial banks and made suggestions that it was essential for commercial banks to come up with powerful guidelines which would require the execution of the Basel accord since its application would help the financial organizations in bringing down the plausibility of enduring a financially distressed situation.

A study carried out by Sporta (2018) alluded to an important correlation of asset quality, leverage, liquidity, operating efficacy, and capital adequacy as fiscal distress factors with

operational efficiency being the most significant determinant of monetary anguish on Kenyan commercial banks.

Kosikoh (2014) aimed at discovering reasons why insurance companies in Kenya financial distress. In particular, the investigation inspected profitability, liquidity, efficiency and management influence and firm Revenue with the relationship with financial distress. The investigation embraced enlightening examination configuration utilizing 45 insurance companies enrolled with the administrative specialist in Kenya as at 31st December 2013 and purposive testing utilized to choose an example of 15 companies from the strata with the outcomes demonstrating that positive correlation existed between independent factors and dependent variable being financial distress of firms in the insurance industry. This investigation took note of the biggest determinant of monetary distress in Kenya is inefficiency and low liquidity. According to him, profitability ratios are aimed at evaluating an organization's capability of generating earnings as a financial performance measure. Profit analysis is of great importance to the shareholders since they benefit from the distribution of such profits through dividends. The evaluation of profits is also of value to creditors in that it gives some assurance the obligations by the firm will settled as and when they fall due.

A study carried out by Memba and Nyanumba (2013) indicted various factors as causes of financial distress and analyzed the various factors based on internal and external qualitative variables which are indicative of a firm experiencing financial distress. This study sought to establish financial distress by Altman's Z score for non-manufacturing firms considering that firms may experience financial distress although appearing healthy. The study was carried out on deposit taking SACCOs in Nairobi County.

2.4.2 Board characteristics and Financial Distress of SACCOs

Board Characteristics are regarded as a blend of characteristics which can be possessed by members of a formal group which may regulate decisions of an entity. These comprises of age, gender, education, experience, diversity among others (Wayne et al., 2010). Aziz and Dar (2006) assert that managers of an organization can be instrumental in helping to improve company control besides determining the premeditated course for firms. The ability of board members to analyze the business environment, solve conflicts and enhance accountability to shareholders can promote organizational profitability.

An organization's business will be steered through the supervision of the board which is also directly responsible for various major issues such as, liaison with external auditors and reparation of the executive. The supervisory arm of the board executes various tasks, such as choosing the Chief Executive Officer (CEO) and supervising their performance and also overseeing the succession planning process of the organization (Kabaiya, 2012).

SASRA (2015) reiterates that the board is also responsible for setting the apex tone by requiring management to uphold the standards so set which exhibits the firm's promise of reliability as well as compliance with legal requirements. The tone establishes the foundation for an organizational culture which is then transmitted to the workforce at every organizational level. The board also has a duty to approve, implement as well as monitor strategic plans of the organization. The board can achieve this by having considerable input in the organization's strategic plan right from inception to execution. It is also expected to approve the organization's strategic plans and must frequently assess the execution of such strategies which are intended to generate lasting value whilst evaluating the risk inherent in the strategic plans and finding solutions to them at the same time.

For a company which has experienced liquidity problems, the board of directors role responsibilities of individual directors transform to other essential techniques as compared to the same roles and responsibilities when the company had not fallen into financial problems (Rechden & Miller, 2015). A case in point is where the owners and other stakeholders assume that the board will apply a more practical strategy than in the past in an attempt to position that firm back to being financially health and being profitable. Makuta (2009) argues that the said parties ordinarily may exercise the power vested on them by holding the directors legally accountable, failure to which may bring about undesirable individuals as well as professional concerns for directors. To achieve Good corporate governance, focus ought to be exercised to ensure accountability of the management board as a basis of success as compared to other corporate governance mechanisms. An argument of achieving optimality in the administrative structure can therefore be advanced which is a major step towards ensuring that the financial performance of entities is improved. The board characteristics are among various elements which may influence financial performance of corporates consequently leading to financial distress. Concluding the various studies done in regard to company control and administration stresses on the need for more research to establish how board characteristics influence an entities financial performance thereby causing firms to be financially distressed (Manzaneque et al., 2016). Among the many board characteristics, this research focuses only on board independence, board size, board diversity, board independence, Education qualifications of the members in the board as well as board tenure. Those will be subsequently discussed. To effectively and efficiently address financial distress, it is vital that board members establish that the board is duly and adequately instituted to facilitate its carrying out of its functions as well as its responsibility both to its membership and stakeholders. Consequently, the following considerations should be factored in when coming up with the structure of the Board.

For the realization of maximum efficiency it is essential that the board size is maintained between 5 and 9 directors but this is more often guided by the size of the SACCO. Additionally, it is necessary that a SACCO's Chief Executive Officer is appointed as an extra director but one without voting rights or in other words an ex-official director. Similar to other institutional boards, it is essential that SACCOs' boards adopt a divergent blend of expertise and capacities employed to satisfy the expertise and capacities needed to drive the realization of the strategy and goals of the SACCO. Consequently, it is necessary that the board should make certain that its composition factors relate to geographical distribution, gender parity, occupation, ethnicity, age, work experience and academic achievements of the directors. Further, it is also required that as a standard measure of ensuring that the board observes stipulations for guaranteeing suitably qualified individuals being recommended or nominated for appointment to the board that a nominating committee is instituted and its roles involves all facets of the appointment of SACCO's directors (SASRA, 2015). It is also essential to take note that an effective committee framework facilitates the board in dealing with main matters in a more conclusive way as compared to how they are handled during the full board consultations and in these structures, the board should ensure that there is a policy on remuneration where such committees are properly sanctioned by the AGM as per the normal budget approval procedure and documented in a normal resolve. The SACCOs financial statement should comprise the statement of the recompense and benefits of the directors and senior management. However, the full board responsible for appointment should be guided by proposals of the nominating or the committee on corporate governance to appoint or reject members to various committees and their respective chairpersons (Organization for Economic Co-operation and Development [OECD], 2015).

Agency theory advocates the existence of progressively large number of independent directors in the boards as this helps in controlling as well as limiting the opportunistic

character of managers stemming from their skill, objectivity and independence essential for the control function. It is further argued that the existence of external directors (non-executive) enhances efficiency such that the concern has more disclosures to make. Birjandi et al., (2015) reiterated that majority of external directors in a board enhance the oversight and efficiency of fiscal disclosures and reduced earnings resultant of withholding information. The manner in which the board is constituted may impact on the performance of a SACCO though its relationship is found to be positive. However, it is worth noting that boards comprised of more external directors may assist in mitigation of the agency problem by curtailing on the managers opportunistic behavior (Oguku & Olweny, 2016).

SASRA (2015) advises that the board should determine governance structure and decide on remuneration of board members which should be anchored in policies. Directors have no entitlement to remuneration in terms of pay packages for the services they offer to the SACCO. Ndirangu (2013) established that lack of policy documents and poor implementation of existing policies constitutes factors which are contributors to financial distress among cooperative societies in Kenya. The structure should guide on the voting rights of managers.

Otieno et al., (2015) in a study on growth of SACCOs in Nairobi found out that majority of the SACCOs had between 5 and 9 board members. This implied that majority of the SACCOs were in agreement with Jensen (2002) who argued that huge boards have reduced effectiveness thus easier for CEO control on the premise that boards increase in terms of board executives, it turns out to be challenging in co-ordination and may pose problems in controlling such a board. Smaller boards are also said to decrease the probability of joy riding by respective directors and increases their participation in the process decision –making.

According to SACCO guidelines, a manager should not chair board meetings. A study by Dunn and Arbunkle (2001) pointed out that over and over again, managers make decisions

influenced by internal politics instead of realistic financial matters. This favors a situation where managers can make decisions that benefit them individually but not the organization. This helps to clarify the reason why governance matters are more overstated in credit unions in comparison to other establishments. In order to assess how corporate governance could create value for firms, first it should be considered how certain board characteristics of the firms affect the firm. In a study carried out in the American firms, the board of directors is a perceived as a primary corporate governance mechanism (Walsh & Seward, 1990). The directors monitors the actions of management of the firms which could reduce possible agency problems and therefore enhance firm performance (Fama & MacBeth, 2013). A broad discussion nowadays is as to whether the boards ought to comprise of more or less non-executive directors. There are controversial findings regarding this aspect, however there is a lot of support regarding the fact that board independence could reduce possible financial distress. Another highly debated topic is the board size of firms. Some argue that a larger board size would lessen coordination and communication (Guest, 2009; Coles et al.,, 2008; Jensen, 2002), whereas others argue that a larger board size would provide the firm with more resources (Cowen & Marcel, 2011; Daily & Dalton, 1994). This research points out that SACCOs should maintain a lean board, with enhanced independence as well as gender diversity. Board education should also be embraced for proper decision making to avoid financial distress. A study by Pam (2013) forecasting corporate insolvency in Nigeria's banking sector concluded that total assets turnover, profitability operating efficiency in Altman's Z score were very powerful tools to determine the financial health of financial institutions. The investigation was carried out by use of financial data extracted from financial reports sampled from both unsuccessful as well as healthy banks trading in Nigeria's capital markets.

Research done by Kivuvo & Olweny (2014) found Altman Z-score model effective hence concluded that it was the firm's duty of making their procedures proficient. According to the researchers, stakeholders as well as firm directors ought to be accorded prominence by the firm in regard to financial information of the entity. Graham (2007) carried out a study on PEARL rating and came to a conclusion that the financial performance of the SACCOs was awfully weak depicting feebleness in various aspects, specifically management, monetary control, fiscal, operative, internal controls and managing risk of various financial institutions.

Khaddaffi et al., (2017) carried out a study which was designed aimed at establishing the financial soundness of the banking firms trading in Indonesian securities market through application of Altman Z-score in establishing the magnitude to which bankruptcy had affected these entities for the period from 2011 to 2013. Computing each firm's bankruptcy they forecasted failure 29 banking institutions and concluded that the Z'' model of bankruptcy prediction was accurate.

Agarwal (2018) performed a study which aimed at verifying the soundness of the Z" Score model and envisioned establishing a trend using the Z" Scores for Top 5 Public Sector Banks in India in line with Market Capitalization. To achieve this Altman Z'' scores were computed for a five year period that is 2012-17. The investigation concluded that Z" Score model reliably predicted correct state of the Top 5 financial institutions and the researcher was able to establish a trend.

The current study applies the Z'' model to study SACCOs in Nairobi county. This model was deemed appropriate owing to its accuracy in predicting financial distress of firms. The model is specially designed for non-manufacturing entities thus SACCOs being non-manufacturing were perfectly suited by this model.

2.4.3 Board size and Financial Distress of SACCOs

Board size can be described as director membership in an organization. Board size of a board is deemed a significant aspect which can influence the control function while affecting administrative process in firms (Fauzi & Locke, 2012) thus improving the performance of an entity which in turn influences the financial distress situation of a firm. Appiah and Amon (2017) assert the size of the board is considered an essential aspect which influences the performance of an entity. This also reiterated by other scholars such as (Fuzi et al., 2016; Hillman & Dalziel, 2003).

It is important to identify an ideal size of the board which will be effective and efficient in firm operations while ensuring that the firm remains profitable to avoid falling into financial distress (Jensen, 2002). On one hand researchers recommend boards with few board members, (Jensen, 2002; Guest, 2009). The study by Guest (2009) is in favor of small boards. This is an indicator that larger boards experience challenges relating to social loafing and free riding.

In the view of Appiah and Amon (2017) the association of board size with organizational performance is reinforced by various theories of corporate governance. Appiah and Amon (2017) further argues that Agency theory is in support of boards with large number of directors since a board with more members have a more diversified approach to decision making due to different views and diversities of board members. With diversified decision making, there is higher likelihood that decisions made will favor the principals. Agency theory argues that directors are perceived to represent different members and stakeholders of a firm to enhance monitoring of performance and management actions. It is further argued that to meet the interest of members boards should include more members who will work towards enhancing the monitoring function. Therefore the theory advocates for larger board

sizes in the belief that the performance of the firm will be enhanced since the monitoring function is improved. The stewardship theory on the other hand is in favour smaller board size due to management efficacy. The stewardship theory argues that the boards have the organizations at heart and as they make decisions they do so to the best interest of the organizations in which case such decisions will eventually favor the principal since the principals interest is a strong organization as a going concern. Supporting the Agency Theory, the upper echelons theory argues in favour of larger board size comes with an extensive diversity of proficiency, acquaintance as well as know-how in different areas which enrich the functions of the firm and enhance better decision making to improve on organizational performance. An investigation carried out by Karamanou & Vafeas (2005) points out that the effect of board-size concern in that features which inform board size choices could be different for various entities. The study further argues that, aspects that influence board size in large firms may not be the same as those influencing board sizes in small firms. Appiah and Amon (2017) assert that firms which are not large are normally meticulously held, which may indicate that Agency problems between managers and principles concerning firm decisions may not be very predominant in such entities. The perception is in favour of the fact that board size may be affected by firm level features like firm size. Karamanou & Vafeas (2005) in an examination to establish the association of the Board size with organizational performance which employed the use of natural logarithm of number of board members in measuring of the size of board and without ignoring the variations in the size of the board which are brought about by differing levels of firm revenue. This kind of measurement of board size may impact on the said relationship hence affecting the theoretical and policy recommendations. The study by Appiah and Amon (2017) supports the measurement of board size by use of the proportion of number of board members to the total asset. The study argued that the measure has a higher likelihood of

improving the association amid the size of board and performance of the firm. An argument on the association of size of board with organizational performance is fronted suggesting that the influence of board size on organizational performance could influenced by organizational features, as well as discrepancies in government regulations and policies legal practices and various other institutional practices and policies (Karamanou & Vafeas, 2005). It is worth noting that empirical studies related to this work have been conducted for firms listed in the stock exchange. A study carried out by Ntim et al., (2011) conclude that other environmental factors which include cultural factors, religious factors, governance mechanisms, legal framework as well as ownership structures impact on the composition of the board thereby affecting the monitoring function of directors and subsequently impacting on organizational performance. How a firm performs determines whether it faces distress or not. Consequently, looking into the influence of board size on monetary stress faced by a firm in developing African countries provides better insight into the impact of board size on hailing financial health faced by firms. This current research establishes relationship between board size and financial distress of deposit credit cooperatives operational in Kenya. For realization of maximum efficiency it is essential that the board size is maintained between 5 and 9 directors but this is more often guided by the size of the SACCO. OECD (2015) has added its voice to this position by recommending that boards, reflect the scope, size and complexity of the company and also its stage of development during determination of the appropriate board size noting that boards large in size comprise a wider mix of competencies, backgrounds and know-how, whereas the smaller ones are more cohesive with the ability to address issues and challenges more quickly.

Board size can viewed as very important component of a properly constituted board which may impact on the efficiency of controlling and monitoring role of the board. The size of the Board size gives a picture how capable a board is in countering the actions of powerful

managers. (Lee & Filbeck, 2006). This enhances board monitoring consequently improving on firm performance. Due to these hypothetical expectations and perspectives, Boone et al., (2007) conclude that board size as well as its independence ought to upsurge increase as organizations develop and expand over time. The impact of board size has been investigated previously in its effect on the size of board and its ability of monitoring management actions, remunerating the board the board members and improving on firm value. Hopefully board size has the capability of significantly impacting on the board's capability to offer oversight, and execute the monitoring and control duties in the firm which in turn will affect the effectiveness of internal controls instituted by the firm (Jensen, 2002; De Andres & Vallelado, 2008). Nyaga (2014) in a study of investigating effect of company administration and financial performance of SACCOs regulated by SASRA has also recognized the presence of a negative association between the size of a SACCO's and it's ROA. Related researches undertook to estimate the ideal board size. A case in point is where Jensen (2002) proposed that an ideal board size is one comprising of seven to eight directors. Research on size of board contend that boards with a lower number of members more effective for the reason that directors delight in improved interactions and collaborations in their midst (Yermack, 2006). Yermack (2006) discerned efficiency for firms with fewer directors making firms with small size boards' rank higher in terms of market value. Fischer and Pollock (2004) presents proof that boards with a small number of directors have the capability of controlling the actions of management stemming from compact harmonization including reduced free-rider glitches (Chanchart et al., 2012) to improve on particular entity performance. Guest (2009) in support of efficiency of small board to enhance organizational performance alluded to low firm performance for firms with boards where there are many members. On the Dissimilarly larger boards are assumed by other studies to be better at monitoring since they have more experience and diversity which are essential components in decision making which in turn

increases the performance of the firm ensuring that firms do not fall into financial distress (Balasubramanian, 2011). This view is also supported by Reddy et al., (2010) which is an indication that has a direct relationship with firm performance. Higher efficiency is associated with larger boards considering the capacity the board which can share work load thus delivering quality. It is also argued firms with larger boards have fewer cases of earnings management hence fewer cases of fraudulent actions (Peasnell et al.,, 2000). From the foregoing it is eminent that the association of financial distress experienced by firms and board size cannot be concluded. Evidence of the foregoing discussion also indicates that the association of the size of board with organizational performance exhibits inconclusiveness as well as attentiveness on companies listed in various stock markets. In contribution to this issue Sehrawat & Kumar (2020) concludes that boards with fewer directors are capable of manipulation by senior management with a lot of ease such that the firm is managed from managers' perspective in that the boards lacks in capacity to question the actions of management. Sehrawat & Kumar (2020) further argues a board with more directors is better placed to question management actions which impacts greatly on the functions of directors in regard to control and monitoring, hence directors become more efficient in dealing with the Agency problem thereby enhancing the performance of an entity and in turn reducing financial distress faced by firms. Sehrawat & Kumar (2020) established that boards with more directors help in improving on firm performance due to increased monitoring by the directors through reduction of CEO dominance inside the board, presenting difficulties in the adoption of contracts in favour of employees which may not be in the interest of members. A relationship between and Firm size is also established. For instance, Coles et al., (2008) posited that bigger companies which are expansive in nature had boards with a bigger number of directors as compared to smaller firms. Boone et al., (2007) reiterated that as entities increase in size and diversify their operations, board size increases; although there are more

factors like managerial ownership, age of the firm, segmentation of business, and a resistance for buyout, which could inform on the decision of required board size.

In reference to Jensen (2002) it is generally an argument of complex entities requiring boards with a larger number of directors owing to the to the challenges experienced task of monitoring, balancing the organization as well as communication glitches acknowledged by Sehrawat & Kumar (2020) the study posited that in comparison to bankrupt firms, firms which are not bankrupt have larger boards, suggesting that large boards may assist a firm to survive. It can be noted that empirical findings have been mixed and inconclusive with some concluding that non-bankrupt firms have larger boards and others pointing out that smaller boards are more efficient in managing firms. This paper therefore sought out the association of the size of board and monetary anguish of entities.

Concluding the discussed, some studies carried out on board size proposes a large size mostly inversely associated with firm performance, conversely an investigation done by Dalton and Dalton (2005) alluded that the size of board and organizational performance are positively correlated.

Boards with more members could be disadvantageous to the firm in view of cost and control. They present challenges in Scheduling, coordination of task execution, making of strategic choices as well as conducting meetings due to the large number of members. An effective board does not depend on board size but rather the quality of such members. However organizations should be guided on the minimum number of directors and the firms should envisage members with sufficient experience and knowledge to ensure that implementation of duties is carried out effectively. Considering the possibility of free rider problem poised to organizations by larger boards coupled with lack of cohesiveness, this study concludes that a lean board is to be maintained by SACCOs to discourage financial distress. All studies done

in this area are on firms listed in various stock exchanges while the current study focuses on Deposit Taking SACCOs. Fischer and Pollock (2004) maintain the idea that boards with less members have a higher ability to monitor management actions more effectively due to enhanced harmonization while reducing the problem if free riding experienced by larger boards. According to Chanchart et al., (2012), small boards enhance firm performance. This view is upheld by the current study as opposed to large boards which are harder to monitor and may also increase costs which will increase financial distress (Appiah & Amon, 2017).

2.4.4 Board Diversity and Financial Distress of SACCOs

A board of directors needs to develop skills which can help them to participate fully in the board and firm issues. This is can be facilitated by training and the diverse competencies that each board member brings along. This helps the board of directors to be effective and efficient in handling matters of the firm effectively and competently (Njagi, 2012).

Ombaba and Omuya (2016) points out that by increasing gender diversity of the board which could practically mean adding to the sum of female board members improves decisions made, due to the fact that a broader assortment of viewpoints and concerns are deliberated in addition to a wider array of outcomes being evaluated. Sener & karaye (2014) also share this is also the view.

There has been an uprising desire for diversity on boards which has increasingly led to an ever increasing call of inclusivity of more women on boards (Adams & Ferreira, 2009; Upadhyay & Zeng, 2014). The fact that mandatory quotas have been introduced in Europe is an indicator that there should be a lawful minimum percentage of women in the boardrooms (Brédart, 2014). Including more women in the boards is expected to improve communication in the board in that women are usually ready to discuss difficult issues due to their ability to think independently. This diversity also come up with diverse views and proficiencies as well

as introducing new networks to the boards (Adams & Ferreira, 2009; Huang et al., 2011). Therefore it is the desire of every board to achieve the diverse goals of the firm averting financial distress being one of them while enhancing the firm's financial performance (Brédart, 2014). Nevertheless, whether more women in the board enhances firm performance and averts financial distress is still unclear (Perryman et al., 2016).

According to a previous study conducted on board diversity, a woman on board has is applied in the measurement board diversity (Campbell et al., 2005). The study further argues that greater gender diversity has an inclination to benefit the firm. The studies argue that gender diversity makes a board to be more resourceful and encourages more innovations (Campbell et al.,, 2005). Financial innovations are encouraged for SACCOs since they are financial institutions aiming at financial inclusion and wealth creation. Upadhyay and Zeng (2014) submit that women are thought of as being "tough", earning them enormous global respect. The study pointed out that women envision coherence in that they are known to have a "feeling" of rational thinking. Furthermore, it is assumed that in their normal course of action, women may enhance the circulation of information (Earley & Mosakowski, 2000). On the other hand, several arguments are put up against board diversity which has even been considered harmful to companies. It has been seen to lengthen the decision making process (Hiller & Hambrick, 2005) cause differences in response to risk and increase the probability. Including more women on board has been viewed as increasing the cost of the board while encouraging high turnover and absenteeism (Kim, 2006). Earley and Mosakowski (2000) concludes that, a diverse board increases the probability of conflict and may turn out to be less cooperative and may also have limited communication as well as inability partake in a shared view (Christian et al., 2006). In conclusion it has been established that the reviewed studies have a diversified views concerning the usefulness of gender diversity on boards. Although the number of women pursuing a career in management is on the rise,

proportionally the presence of women on boards is comparatively low (Omar, 2008). A survey by Equal Opportunity for Women in Workspace Agency, in 2009 established reasonably high representation of women on boards in developed countries. This information indicates a rise generally in inclusion of women board members as compared to previous years. In spite of the fact that the information is indicative of an increased female involvement in boards generally, an investigation carried out by Spence (2009) revealed that almost 75% of the respondents are not in support of board diversity quota. The conclusion was that board diversity should not be mandatory but voluntary. Lückerath-Rovers (2011) confirmed the positive association of presence of female members on boards of management and dividend payment by applying an enhanced methodology of the popular research on listed firms in the Netherlands. Ombaba & Omuya (2016) argue the case for more women by pointing out that having more women on the board is beneficial due to the balanced nature of making strategic choices. In fact, investigation has exhibited that inclusion of three or more women on a board make it more effective hence increasing the performance of the firm.

Baber et al., (2012) avers that in consideration to gender & social roles, men and women do not act rationally and they hold beliefs relative to the social role occupied by them. Under this consideration, women tend to be more communal as compared to men. This indicates that they behave in a friendlier, unselfish and are generally more concerned with matters. Spence (2009) established that males have a tendency to propagate more agency problems, implying that they tend to be have higher control ability, emphatic, modest also exhibiting a domineering character. This comparison makes women to be more suitable on boards considering that they are more concerned with matters implying the decision made by such boards will be more mindful of the firm and the shareholders by extension. On the other hand a balance must be sought to bring masculinity and assertiveness from the men. In the event that women leaders exhibit a masculine behaviour, the evaluation is different from when men

exhibit the same behaviour while in a similar leadership locus. Masculinity character exhibited by men in leadership is regarded noble leadership, while the same behaviour in women is defined is considered as being as being assertive. This helps in achieving balanced boards. However, female representation in boards is believed to assign substantial energy in monitoring (Adams & Ferreira, 2009). According to Adams and Ferreira (2009), presence female representation in the boards tends to increase meeting attendance and improve on the number of meetings held by the board, believed in helping in reinforcement of board power. According to Barber & Odean (2001), while inquiring to risk appetite of individuals, it was established that women are risk-averse while making investment decisions while men have been found to possess a higher risk appetite and have also been seen to be overconfident. Research has also established that firms with females on the board do not indulge much in earnings management practices (Lakhal et al., 2015; Ginesti et al., 2011; Adams & Ferreira, 2009). The foregoing findings are indicative of effectiveness of women monitoring role if they are included on boards which is deemed a very crucial corporate governance tool. The studies also confirm that women are considered more ethical in behaviour than men. However, studies carried out on firm performance (Carter et al., 2010; Adams & Ferreira, 2009; Perryman et al.,, 2016) brings about a different view in regard to inclusion of females in the board and the outcome of this inclusion on organizational performance and consequent monetary anguish.

Kanyi (2018) as well as Ombaba and Omuya (2016) hold the opinion that by increasing gender diversity of the board which could practically mean adding to the number of female board members to improve on decision making, due to the fact that a broader assortment of viewpoints and concerns are deliberated in addition to a wider array of outcomes being evaluated (Guest, 2009). Kirsch (2018) goes a step further and advises that mandatory quotas should be introduced for all firms. This makes this study crucial in order to establish if

inclusion of women on board increases or reduces financial distress of credit cooperatives in Nairobi County. Although various studies address listed firm, this study also advises that gender diversity should be envisaged to reduce risk while making decisions in firms. This will reduce financial distress faced by Deposit taking SACCOs in Nairobi County.

2.4.5 Board Independence and Financial Distress of SACCOs

According to Saleemi (2018), a board is usually composed of executive and non-executive members. Ntoiti (2013) points out that board independence is recognized assuming the independent directors to be additionally cautious in comparison to the other directors in the premise that non-executive directors decision implementation of the firm is overly cautious thus improving the firm's financial performance, which is a vital element of monitoring. Directors without executive power have a higher probability of dismissing the CEO following poor performance and as compared to executive directors since they have an inducement of individual reputational protection non-executive directors through careful control of management actions thus safeguarding the interest of members. Saleemi (2018) supports this view and advices that firms may attain Independence by including more directors without executive power in the board; thus escalating the board capability hence improving its efficacy in monitoring the top management. Independent Directors have more motivation to efficiently keep a keen eye on the management due to a sturdy urge of improving their status as professional decision makers. Nevertheless, the attainment of such options is dependent on how independent the board is from top management. The addition of executive directors who have attachments with management may harm the independence of the Board. Peasnell et al., (2000) reiterates larger ratios of independent directors assist to reduction of financial distress. A study conducted to establish relationship between independent board and agency cost on the monetary distress in the Chinese listed companies. This particular research targeted a population of 404 Chinese listed companies for the 1998 to 2008. The study findings revealed

that independent boards impacted negatively to the likelihood of monetary anguish of studied firms (Li et al., 2008). Findings of this study implied that the firms with greater ratios of non-executive directors on boards exhibited lesser probabilities of falling into financial distress. Locally, Maina and Sakwa (2012) concluded that the key factors of financial distress included the style of management, managerial capability and government policies. It is therefore evident that the causes of financial distress remains a controversial area of research. Elsewhere, Khalil and Ozkan (2016) focused on board independence, audit quality and financial distress. The study doubted the popular conception of boards with a larger ratio of independent directors being allied to a lower probability of suffering financial distress. The findings of the study revealed that board independence impacted on financial distress however the impact was dependent on the directors' degree of firm ownership as well as the ownership control of larger shareholders and board composition.

Independent director has a duty of monitoring and controlling the actions of the firm thus reducing any opportunistic behaviour of management and misappropriation of organizational resources. It is argued that organizational performance has a positive relationship with the ratio of independent directors of a firm (Afza & Slahadin, 2009). Increasing on this ratio ought to consecutively increase firm performance considering their effectiveness in monitoring the management actions (Olsen & Tamm, 2017). Similarly some researchers are of the opinion that despite the ratio of non-executive board members being high, it has not improved the level of board independent and professionalism (Chen et al., 2005). Conversely, studies such as (Kajola, 2008) established the ratio of independent directors and organizational performance are correlated negatively. Hermalin and Weisbach (2001) however, posits there is no association of the proportion of non-executive directors with enhanced organizational performance.

From a perspective of solving the agency problem amidst mangers and members, bringing non-executive directors on boards appears like a suitable solution. Research by Garner et al., (2017) concluded that a more powerful management may possibly will engage independent directors to appease members with an artifice of dynamic control. Research findings in regard to firm performance and non-executive directors on the boards not directional. Garner et al., (2017) presents evidence of a positive association of number of independent directors to organizational performance, while Wang and Oliver (2009) are inclined to a comparable opinion.

The involvement of executive board members will be discussed. Executive board members have an important role in the board, since they are able to obtain useful specific information regarding the company's activities (Solomon, 2007). This specific information is gathered by executive board members through the internal monitoring process of subordinate managers in the organization. However this information might be useful and relevant for the decision-making process, the reliability of this information could be affected as a result of the high level of decision discretion of top managers involved. Therefore the advantage of having insider knowledge may perhaps impact on the independence of board members, which could endanger the interests of the shareholders (Christian et al., 2006). According to Garner et al., (2017), another reason why the independence of the board may be affected is due to the fact that executive directors may receive meaningful compensation. The study further indicates that non-executive board members are considered to be more objective, since they are not the implementers of the firm decisions made by the board. A possible solution regarding the above mentioned agency problems, is the inclusion of independent board members. Their role is to act as a mediator in resulting conflicts between managers and to question on executions of firm decisions and resolutions reached by directors. The strength of management teams may through the presence of independent board members, since they are more effective in the

monitoring process of management (Dahya et al., 2002; Senbet, 2010). To enhance the independence of the board, the number of independent directors should be increased. Board independence can be seen as a pointer to capability of the board regarding monitoring, disciplining as well as influencing the mangers. Dynamic and knowledgeable non-executive board members prevent while discouraging them from enriching themselves (Baber et al., 2012). Furthermore, Fich and Shivdasani (2007) are indicative of non-executive directors being more incentivized to provide objective and effective financial reporting oversight, compared to executive directors since independent directors have only a monitoring duty in the firm, and would wish to be included in new directorships.

Sometimes managers engage in excessive risk taking, even if it is expected that managers will act in the best interest of shareholders, they either take too little risk or too much (Jiraporn & Lee, 2017). According to Ramly (2013), this excessive risk taking is reduced by the control of independent directors. They check this behavior and are not influenced by other factors, since they have no direct link to the organization. It is expected that independent board members will always perform in order to maximize shareholder wealth. Contrary to a study by Mirvis and Savitt (2015) which demonstrated the fact that the independent directors evoke some corresponding costs as well, this is explained by the fact that the common scenario is that current boards often include a larger proportion of directors whose operational knowledge of the organizations which have engaged them is limited a greater proportion of them also lack the firm-specific commitment to these entities and to all their stakeholders thus posing a danger of independence which could jeopardize organizational performance thereby leading to financial distress. Furthermore, Mirvis and Savitt (2015) state that when firms enter into financial distress, executive directors will be more willing to revive the firm, considering that they faced a higher risk of losing their allowances and other benefits. However, this is in contrast with the finding of Fich and Shivdasani (2007) who

argue that independent board members will be more vigilant, compared to executive board members, to revive the firm. Other research regarding the comparison of executive with independent directors is conducted by Harris and Raviv (2008) who suggest that shareholders value will be enhanced with an executive-controlled board, since non-executive board members will not be able to obtain full and completely precise data of the organisation. Executive directors will have relevant information to the decision-making process, which non-executive directors might acquire, at a cost, and therefore this would be less efficient (Harris & Raviv, 2008). Jensen and Meckling (1976) reflected that organizational growth is dependent on the organizational ownership structure due to firm ownership arrangements as top management shareholders. They continue to argue that, executives may not avert resources which are devoted to the shareholder value optimization.

Prior literature scrutinized the influence of board independence and organizational performance, indicating mixed effects of directors' independence as well as entity performance (Fuzi et al., 2016). According to Omar and Davidson (1989), the agency theory independent board members are indispensable, because of the idea that executives will be self-interested and opportunistic, rather than altruistic. Moreover, they affect the objectivity of the board, endangering the interests of shareholders (Williamson, 1964). However, there is limited research regarding board independence and its relationship to financial distress. Some researches point to that there is a negative association of directors' with default risk (Manzaneque et al., 2016).

A study carried out a review of obtainable works on the association of corporate governance, precisely board independence with financial distress and came to a conclusion that firms trading in the various securities exchanges are listed under stringent conditions and their operations are also monitored. The study further argues that investigations to establish the

association of board independence with monetary anguish were largely undertaken in foreign countries which are characterized by unique regulatory, political, ethical and economic fronts. This makes the results not suitable for generalization in the Kenyan context, which calls for more studies for Kenyan firms, both listed and non-listed (Manduku et al., 2020). The current investigated the association of board independence with financial distress of credit unions in Nairobi County.

2.4.6 Board Educational Qualifications and Financial Distress

The board of directors should be constituted in such a manner as to embrace different skills and competencies. This will pool a mix of social competencies, and abilities which enhances decision making within the management group consequently enhancing the monitoring and control function within the entity (Carpenter & Westphal, 2001). Individual academic achievements and skills are essential components that assist management in decision making. This can be appreciated better for instance in the role of control and monitoring which is implemented better if directors are highly qualified and possess great experience and skills. Highly skilled and adept members of the board are perceived to be strategic resource offering strategic connection to diverse exterior assets (Ingley & Van der Walt, 2001). A board of directors who have greater credentials enhances board effectiveness which calls for undisputedly great levels of intelligent capability, know-how, trust worth judgmental capacity and honesty (Nicholson et al.,, 2004).

Studies carried out in this area have concluded on positive association of proficiencies with the performance of an entity (Ljungquist, 2007). It has been proved that members of the board possessing higher academic credentials are beneficial to the firms because they offer an array of proficiencies as well as aptitudes create an assortment decision support viewpoints (Mansoor et al.,, 2019). The board members with higher academic achievements spreads out

the information base of the organisation and challenge members into considering other options available in dispensation of organizational challenges (Kim, 2008). Board members who have high academic credentials essentially with research capabilities such as doctoral studies are analytical and offer a rich source of inventive concepts that help in coming up with strategic policies by way of analytical depth and precision which avail distinctive perceptions on tactical concerns (Westphal & Milton, 2000). Empirically associating scholarly credentials of the board to firm performance is scanty (Guest, 2009) surveyed board members qualifications which were not specifically academic credentials as opposed to the current study which considers academic credentials of the board members. Haniffa and Hudaib (2006) alludes to a positive association of overall corporate performance with explicit bookkeeping knowledge members of the board as well as publicity of data which determines culpability and trustworthiness of the board. Ferris et al., (2003) scanned the expert qualifications of board members where multiple directorships exist and established that venture entrepreneurs were outstanding among professionals incorporated board members. With such competencies in the board decision making is perceived to be more objective due to diversification. Smith (2011) carried out a study on women directors and came to a conclusion that the positive impact of women on the performance of the firm was influenced the academic credentials that the possessed. The findings may be generalized directors. Academic credentials are encompassed as a measure of evaluating management of corporations. (Institutional Shareholder Service, 2006). Guest (2009) points out that the prices of shares are reactive and sensitive to various things including the professional qualifications of the members of the board, principally relating accounting and finance knowledge. This leads us to conclude that board academic achievements are related to organizational performance.

Gande and Kalpathy (2017) concluded that although there is general acceptance of educational credentials of directors being critical, it should be noted that no positive relationship between higher academic credentials and organizational performance. Pereira and Filipe (2015) in a study, alluded to a significant influence of academic achievements measurement in relation to return on average equity of banks (ROAE), however this effect failed to hold true once the return on assets for the banking firms (ROAA) was employed. Likewise, King et al., (2016) contended that scholarly achievements of CEO, were not significant for firm performance in the banking sector. The study sampled CEOs from publicly-listed banks in the US for the period 1992 to 2011. Fernandes et al., (2019) underscored the importance of directors' qualification to the performance of banks and reiterating that possessing higher academic credentials essentially improved organizational decision making. This aspect is of grave importance to the banks considering that their complexity. This research sampled 72 publicly-listed European banks. While sampling the biggest fiscal institutions in the US, (Gande & Kalpathy, 2017) contends that existence CEO holding a master's degree positively increases a bank's buy and hold returns.

Additionally, John et al., (2016) were of the opinion that available studies on banks corporate governance was not conclusive considering the importance of academic qualifications of board members. Further the advised that later studies in the area should deliberate other variables including board interconnects and directors' linkages due to board academic qualifications. According to Fernandes et al., (2019), the absence financial proficiency on banks' directors may have been pertinent cause in the financial crises experiences of 2007. John et al., (2016) concluded that academic achievements of directors and the CEO are of importance, to a certain degree, in enlightening on the ROA and Tobin's *Q*. A case in point is presented by John et al., (2016) which holds that directors who holds academic degrees various institutions of higher learning outperform individuals whose qualifications are not

similar. Pereira & Filipe (2015) concludes that board members' educational attainment affects banks' performance. This also the view held by Mason (2002) while upholding the upper echelon theory view that in making critical decisions of an entity, demographic characteristics as age, tenure academic achievements as well as other features are perhaps critical factors which impact on decision-making (Van der Zee & Swagerman, 2009). In line with that, Gande and Kalpathy (2017) argues that the upper echelon theory agrees to the perception that demographic features of management or directors and other key decision makers in the organisation have considerable impact on the performance of an entity. Jung and Ejermo (2014) considers academic achievements as one demographic characteristics of the board. A study by Pohjanen et al., (2010) concluded higher academic diversity is negatively related to the performance of a firm. Akin to this study Mahadeo et al., (2012) who focused on 39 publicly trading companies, comprising of 371 board members on Mauritius Stock Exchange, concluded that boards possessing an assortment of academic qualifications resulted in lower corporate performance. Bathula (2008) is of a similar opinion. His study was carried out on a sample basis while establishing the relationship between educational diversity and firm performance. Precisely he studies directors with PhD qualifications against those without for the period 2004 to 2007 and concludes that the presence of PhD qualified directors has and inverse relationship with organizational performance hence concluding that directors with PhD adds no value to the performance of the firm. Likewise, Darmadi (2013) established a weak association between academic qualifications and the performance of the firm. Using an analysis of educational data of 1800 CEOs in establishing the association between CEO education and organizational performance the study alluded to no resilient proof that an association existed between directors' academic qualifications and organizational performance. Moreover, even though some evidence

indicated that the management executives with master's degree of reputable institutions, the result is concluded as weak and not statistically significant.

2.4.7 Board Tenure and Financial Distress of SACCOs

Board tenure can be explained to be the number of years the in which the members of the board served in an organisation (Purves et al., 2019). It mirrors the probability that the directors control on the actions of management rises with the increase in the period that the directors have served. The expectation is that board members serving a longer tenure accumulates more experience and knowledge specific to the firm (Hillman & Dalziel, 2003; Forbes & Milliken, 2010). Forbes and Milliken (2010) argues that knowledge which is specific to a firm implied and unique to that organisation allowing members of the board to efficiently handle strategic issues and also improves board capacity in provision of the required institutional resources. Hillman and Dalziel (2003) opines that the human resources capital of board members, which includes firm-specific knowledge and experience, carries inordinate prominence in expanding the capacity of that management team in controlling management actions considering that the board has gained more understanding of the activities of management and more understanding of the state of the firm. Therefore the tenure of board members should enrich the capability of the board to monitor and avail resources to the entity thereby reducing the probability of falling into financial distress. Bathula (2008) carried out a study on Australian firm aiming at establishing the correlation of internal firm management and dividend payout came to a conclusion that firms with longer board tenures pay out higher dividends than firms with shorter board tenures.

Wang and Shiu (2014) studied a business group in Korea to establish if firms with longer board tenure pay higher dividends. They came to a conclusion in support of Bathula (2008) a view held by the outcome corporate governance model and dividend payouts. Kim et al.,

(2019) additionally investigated the relationship between dividend payments the tenure of directors with gearing as the control variable on a sample of Korean firms. Their conclusion was that firms facing constraints in external financing had an inclination of paying lower dividends. Adjaoud and Ben-Amar (2010) explored the impact of board tenure on Canadian dividend policy while sampling companies trading publicly in Toronto Stock Exchange's for a period of four years. They concluded that longer board tenure led to payment of more dividend income in comparison to boards with shorter board tenures. La Porta et al., (2000) in their investigation came to a similar conclusion. In Thailand, a similar view was held by Thanatawee (2013) who conducted an investigation by sampling 1927 entities to establish the correlation of board tenure with dividend policy.

De Maere et al., (2014) on a recent research concluded that board tenure and financial distress had a negative relationship. In reiteration the held the opinion that organizations with shorter board tenures were likely to end up being financially distressed in comparison to firms with longer tenure. Additionally the opinion of the experts is applied to conclude that longer tenure has a relationship with enhanced performance of board members since the members of the board accumulate greater knowledge of the firm and its operations over time thus improving on the capacity to challenge managers' actions and decisions (Bebchuk et al., 2002). Conversely, some other studies have argued that long tenure is encourages allegiance to management. Byrd et al., (2010) that suggests that long tenure directors develop an allegiance towards management. Vafeas (2003) reads from a similar script and argues a case of management friendliness hypothesis, which holds that members of the board with longer tenures are likely to be very friendly to management thus tumbling the boards' capacity of monitoring managerial actions and decisions. Schnake (2006) argues that when directors become friendly to the management other disadvantages are experienced in the organisation which may include limitation of the cognitive conflict between directors thereby restricting

the perceptions opinions deliberated by the board. This results in delayed detection of violations and actions in the firm which may lead a firm to fall into financial distress. According to the guidelines on SACCO bylaws, a tenure comprises of three years and therefore numbers of years served were divided by three to establish the number of tenures served. This is appropriate since it was able to establish the board members who served for incomplete terms.

The foregoing discussion therefore inspired the following hypothesis for the current study:

H_0; there is no significant relationship between board characteristics and financial distress of deposit taking SACCOs in Nairobi county.

H_1; A significant relationship exists between board characteristics and financial distress of deposit taking SACCOs in Nairobi County.

2.4.8 The intervening effect of Firm Revenue on the relationship between board characteristics and financial Distress of SACCOs

A greater proportion of financial institutions income is generated from activities which are not related to financial intermediation (DeYoung & Rice, 2000) which may be allied to fiscal liberalization strategies. Banks have been forced to shift from interest income sources and diversify to other sources due non regulation and new technology which has enabled other financial institutions which are not banks to enter into the market. (Adjaoud & Ben-Amar, 2010). Research carried out in USA has presented evidence that income which is not interest related grew rapidly in the 1990s to constitute a large part (43 per cent) of the banking sector profits (Hirtle & Stiroh, 2007). Kenya's liberalization of the financial sector in the early 1990s opened the banking industry to stiff competition from new industry entrants which weakened the commercial banks' financial performance leading to collapse of some of these institutions. This has forced the banks to diversify their income sources as response which will cushion them from collapse due low income mobilization.

According to Mathuva (2016), savings and credit co-operatives should embrace revenue diversification to enhance their financial performance. This will ensure that they do not only rely on interest income but on other streams of income as well. This will improve liquidity ensuring that SACCOs are well equipped to meet their financial obligations without default and that they do not encounter financial distress.

Sathyamoorthi et al., (2016) validate this view point through identification of the credit cooperatives as a weighty cog in national monetary growth. Secondary financial data was collected from 9 operating SACCOs with audited financial statements over the 5-year observation period. Data gathered was evaluated using financial ratio analysis, correlation, common size, and regression analyses. The research concluded that SACCOs can only persist in financial soundness if the management assures an optimal balance between expensed interest through savings and interest earned through loans approved for customers. Additionally the study advices surplus funds to be invested in diversified loan assortments hence reducing the exposure of credit unions to risk while allowing them competent functionality, which will enhance their financial performance.

Chundu (2014) explored the determinants impacting on the monetary sustainability of SACCOs in Tanzania using both a qualitative (interviewing management and staff) and quantitative (questionnaire that was statistically analyzed) data analysis. His study added to literature in Tanzania through identification of borrower frequency as the main problem affecting the financial sustainability of credit cooperatives considering that these institutions core business is provision of loans to their members thus in the low frequency of loan requests revenue received by charging interest and other transaction charges is reduced. The research additionally guided that SACCOs desirably needed to think through higher margins and minimize costs in delivering services so as to be profitable and sustainable. He

recommended that loan tenors offered by SACCOs be increased research conclusions that short loan tenors amplified possibility of defaulting on repayment, translating to low profitability leading to financial distress and consequent failure of such financial institutions.

SACCOs' extension and increased membership has compelled them to tap into more steady streams of revenue. To illustrate this, Kenyan credit cooperatives have constructed sets of buildings, own investment firms and invoked additional non-interest sources of revenue. However to guard against misappropriation of members funds and to uphold a sound SACCO sector ensure, the regulations have been crafted which forbid SACCOs from undertaking specific income generating activities including foreign trade, trusts and land transactions individuals who are not SACCO members. Interestingly, this raises questions concerning interest and non-interest revenue sources that the institutions are permitted to raise revenue from and whether such revenue streams can guarantee sustainable financial performance of SACCOs. Borda-Rodriguez and Vicar (2014) availability of diversified sources of revenue for SACCOs are critical for their sustainability thus regulation should be crafted to encourage regulation Kenyan SACCOs to look into other sources of revenue. Ooko et al., (2013) contends that, there is an urgent need for all credit unions to mobilize adequate revenue in order to sufficiently offset the costs of operation and improve on its institutional capital, surplus payments and returns. Basically, credible monetary management founded on good fiscal appropriations, concrete structure of capital, and ethical appropriation of finances (Maina, 2009).

Shaheen and Malik (2012) termed firm revenue as the extent and assortment of production capability as well as ability of an entity or the magnitude and assortment of services which an entity is capable of delivering to its customers instantaneously. The revenue that a Firm is able to collect is very critical in determining how it relates to other firms within and outside

its operating environment. According to Chundu (2014), the larger the revenue base of an entity, the grander the grip it has on its stakeholders, hence firms with more revenue will outperform those firms that are not able to collect much revenue which could be due poor innovations. Considering today's global economy, the ability to collect more revenue is crucial in that it enables a firm to enjoy the economies of scale. Total revenue indicates the ability of a firm generate more income that can sustain it as a going concern. For SACCOs, the ability to generate more income is a good measure indicates the ability of a SACCO to sustain itself while being profitable and to withstand market adversities like competition.

According to Hirtle and Stiroh (2007), it is evident that the characteristics of various retail and corporate commercial banks affect the performance of these organizations differently. The retail commercial banks with transactions that are somewhat collect less revenue are faced with higher unit costs than the firms with the ability to collect more revenue. In the same manner, SACCOs with members who have higher incomes are deemed to be more efficient in comparison to SACCOs whose members have lower incomes.

Idrees and Qayyum (2018) perceived that the probability of an entity turning out to be financially distressed escalates with its ability to collect revenue. This is an indicator of the market share a firm commands. On the other hand, Waqas and Md-Rus (2008) unveiled that smaller firms are not able to collect enough revenue hence being more susceptible to Financial Distress. Chancharat et al., (2012) by use of survival analysis techniques sampled 1,117 corporations and asserted that firm revenue has a significant and positive correlation with organizational performance. Meaning that firms with less revenue have a higher likelihood of falling into monetary stress. On the other hand, Ozkan (2001) established that small firms listed in the U.K. had a higher probability of experiencing financial distress and subsequent bankruptcy and liquidation as compared to larger firms due to their inability to

collect enough revenue to meet their financial obligations. In affirmation, Shaheen and Malik (2012) advocates for an existence of a positive association of an entities revenue with operating profit while sampling 67 corporations from year 2012 to 2016. This implies that Financial Distress is negatively related to firm revenue. In contrast, Wang and Shiu (2014) using data of firms listed in China Stock Market from year 1988 to 2016, concluding that Financial Distress can neither be inferred from firm revenue nor book to market value. A study carried out on commercial banks in Ethiopia from year 2002 to 2012, argues that firm revenue does not impact on the association of company administration with fiscal stress of commercial banks (Gebreslassie, 2015). While considering firm revenue as a mediator, Kannadhasan and Nandagopal (2009) inquired into the intervening influence of total sales revenue on the relation amid business strategy and the performance of a firm using Indian automotive firms. The research established that the interaction term firm revenue and business strategy had an insignificant effect on return on assets. The study reported significant effect on other variables used in the study. The study therefore established that firm revenue does not significantly mediate on all aspects of firm performance. Muigai and Muriithi (2017) concluded that firm revenue in terms of total assets, significantly moderates the association amid capital structure decisions and monetary anguish based on Kenyan corporations trading publicly. This research consequently clinched that a negatively significant correlation of debt and financial distress which has a favorable change when it interacts with firm revenue. This therefore implies that which command a higher market share can take up more debt without experiencing financial distress in comparison to firms which command a smaller market share in terms of capability of generating total income. An investigation carried out by Shaheen and Malik (2012) a aimed at finding out interaction effect of firm revenue in the association between firm performance and growth, which examined a sample of 50 firms in Pakistan, it was established that the product term firm

revenue and growth significantly impacted on performance of an entity hence concluding that firm revenue significantly mediates the relationship.

Gichaiya et al., (2019) instituted an investigation based on non-financial firms trading publicly in Kenya, with the firm revenue as the mediator and came to a conclusion that firm revenue significantly mediates the relationship between risk and Financial Distress. Considering the studies as discussed above, there is mixed up information on the intervening effect on firm revenue and financial distress. More so the studies have tried to concentrate on both financial and other corporations trading in the capital markets of various countries. This study therefore concentrated on establishing the relationship between board characteristics and financial distress of credit cooperatives in the county of Nairobi. This motivated the current investigation which established the moderating impact of firm revenue on the association of board characteristics with financial distress of deposit taking SACCOs in Nairobi County as guided by the following objectives.

H_0; Firm Revenue does not significantly mediate the association of board characteristics and financial distress of Deposit Taking SACCOs in Nairobi County.

H_1; Firm revenue significantly mediates in the relationship between board characteristics and financial distress of Deposit Taking SACCOs in Nairobi County.

2.4.9 The moderating effect of Related Party Transactions on the relationship between Board Characteristics and Financial Distress of SACCOs

The current study also predicts that Related Party Transactions (RPT) moderates the relationship between board characteristics on financial distress of SACCOs. The level of corporate governance, specifically the directors' role impacts on the magnitude of misappropriation through the use of RPTs (Pizzo, 2013).

Related party transactions are described as dealings of an entity and its holdings, associates, owners, staff and their families, members of the board, entities possessed or controlled staff members or directors or firms controlled by people who are closely related to them (Mathuva, 2016). A related party transaction can further be described transmission of possessions or debts among affiliates, which may be monetary or otherwise. A related party can be described as person who may have control of the entity and may influential to such an organisation or a party who is under the control of or is the property of particular firm (Idrees & Qayyum, 2018). Two contrasting views can be argued out in relation to related party transactions and their effect in relation to the performance of a firm. The perception of conflict of interest can first be pointed out and the transaction efficacy standpoint as the second. Gordon et al., (2004) contend that related party transactions are non-beneficial and value reducing for principals. The study established that industry-adjusted returns had a negative association with related party transactions. Ozkan (2001) hold an opinion that cash and profits are sidetracked from businesses to meet the interests of individuals or channeled to bail out associated distressed companies or entities inside the same group by use of related party transactions. Kohlbeck and Mayhew (2010) established that businesses allowing related party dealings exhibit a considerably inferior firm value and slightly subordinate ensuing earnings in comparison to entities without these kind of dealings. Kohlbeck & Mayhew (2010) concluded that the opportunistic behaviour of management presents an agency problem as contextualized in agency theory and viewed as a significant aspect in embezzlement of organizational resources and creative accounting as established by the latest fraudulent occurrences at Enron and HealthSouth by the study by Kohlbeck & mayhew. Accordingly the managers using related party dealings directed wealth to themselves after which they came up deceptive financial reports (Kohlbeck & Mayhew, 2010). investigations carried out previously have concluded that good corporate governance can effectively reduce this

exhibited opportunistic behavior by managers, which in turn will improve a firm's reporting quality while increasing firm value and ensure that related party transactions are effectively carried out devoid of conflicting interests (Darmadi, 2013; Gordon et al.,, 2004; Abdul et al.,, 2018). Board characteristics has been considered as an effective tool which can be employed in good corporate governance actions to alleviate the negative consequences of related party dealings hence improving on the performance of an entity thereby reducing financial distress(Abdul et al.,, 2018; Gordon et al., 2004).

Related party transactions have been deemed to reduce transaction costs while enhancing execution of property rights and contracts (Meyer& Peng, 2016). On the other hand, management can use related party transactions for opportunistic purpose such as enriching themselves through misappropriation of entities' assets. According to Khanna and Yafeh (2005), this encourages earnings management. The study further argues that in earnings management the party which is in control of organisation is capable of manipulation of profits through adjustment of income and inter-firm transactions. In application to financial institutions either the volume or interest rates (price) of loans issued out to related parties may be manipulated to report profit volumes or earnings which do not exist. A possibility of managing operating profits is argued specifically by adjusting sales where sales are involved. Kim et al., (2019) presents evidence proving various methods in which management of earnings is carried through the use of related party transactions of which investors have a negative view of. Furthermore Aharony et al., (2005) demonstrate how related party services and sales may possibly unscrupulously in the management of earnings upwards during pre-IPO period. Related party dealings are purportedly used in earnings manipulation in various instances.

According to Zakaria et al., (2017), related party dealings had no moderating effect in the association of non-executive directors' functional and specific knowledge and the performance of a firm of firms listed in malasyan stock exchange. This means therefore that the agency theory which emphasizes prominence of Independent directors in the monitoring and advisory function of a firm has no support in this study. The research helps to explain the interactive effects between related party transactions on Independent directors' functional and expertise brought to the firm by Independent directors and the performance of the firm. The study established that Related party transactions generally, impact the performance of the organisation positively and the impact differs in accordance with the involved parties. To be more specific, the study established that there was higher firm performance for related party transactions in which associates, joint ventures and subsidiaries were involved. The conclusion is in support of efficient transactions hypothesis of related party transactions creating value for the firm. According to a 1995 Central Bank report, many of the local larger bank failures in the 1990's was a product of extensive insider lending. This then became the largest cause of bad loans for most of these banks. In more than 50 percent of the failed banks, insider loans contributed to a significant share of non-performing loans. Issue of moral degradation were particularly chronic in these failed banks as suggested by the high levels of insider lending abuse (CBK, 1995). The study established a substantial moderating effect on the relationship of banks' performance with risk management by top management teams of the banks. The study by the currency controller's office, found a positive correlation amid insider trading and failed banks. Insider abuse as indicated by inappropriate transactions with affiliates, unnecessary dependence on the bank for income or services by a board member or shareholder, unauthorized transactions by management officials, or self-dealing was evident in many of the problem banks during their decline. This led to the failure of 35 percent of the banks. The study established that related party transactions significantly moderates the

association between the governance of corporations and the performance of failed banks (OCC, 1988). In the view of Gordon et al., (2004) RPTs aids companies in minimization of the costs of transactions carried out an investigation between related parties and performance and therefore concluded that it significantly moderates the association of management of cooperatives and fiscal performance of firms trading in Indonesian capital markets. Nevertheless, Downs et al., (2016) concluded that related party transactions do not significantly influence the association of affect the political affiliation with organizational performance.

Reviewed studies above seem to have concentrated on the association of related party transactions with moderating effect on organizational performance while concentrating on firms listed in various stock markets and banks that are regulated by the central bank of Kenya. This study concentrates on the establishment of the moderating influence of related party transactions on the association of Board Characteristics with Financial Distress of Deposit taking SACCOs in Nairobi County. Based on these arguments, the study proposed the following hypothesis:

H_0: Related Party Transactions do not significantly moderate the relationship between board characteristics and financial distress SACCOs in Nairobi County.

H_1: Related Party Transactions significantly moderates the relationship between board characteristics and financial distress SACCOs in Nairobi County.

2.4.10 External Borrowing and Financial Distress of SACCOs

External financing can be defined as funds which are raised from outside the company. Funds not raised from the members or retained earnings from profits made by the firm (Ondieki, 2011; Makori et al., 2013; Onyango, 2016). External financing can also be viewed as that part of capital which is borrowed or owed to other stakeholders outside the firm (Saleemi,

2018). This study holds the view that external financing is debt capital or funds obtained from or payable to commercial banking institutions both public and private, credit unions, as well as other financial institutions both within and outside the country (Ondieki, 2011; Saleemi, 2018). In Kenya, external finances may be obtained from: the Kenyan government; commercial banking institutions, cooperative banking institutions individual lenders, umbrella bodies of SACCOs as well as other national and international financial institutions whose core business or mandate is provision of credit (Onyango, 2016).

Financing through debt remains the main source of external funds for firms opting to raise additional finances after establishment. (Idrees & Qayyum, 2018). It impacts both positively and negatively corporate growth the firms' investment strategies. (O'Brien & David, 2010). Sylvain (2013) alluded to the advantages of external financing including acting as a tax shield since interest is tax allowable and reduction of cash flow problems. However the costs of borrowed funds possibly include the costs of bankruptcy as well as agency conflicts of stockholders and debt holders. Consequently, while choosing funding options, the management should carry out a cost-benefit analysis on tax shield advantages of debt financing and financial distress costs stemming up from the risks of insolvency (Choi, 2015) as well as costs incurred in monitoring due to agency problem (Jensen & Meckling, 1976).

According to Fiorillo (2006) while establishing the influence of blanket loaning to credit unions in Uganda established that debt financing increased SACCOs liquidity which in turn increased the loan portfolios held by these SACCOs consequently spawning higher revenue out of interests received loans issued; they would also be able to generate more income from membership and entrance fee since they could attract new members and retain the current members. The study showed that SACCOS could highly succeed should they make use of debt financing after sensitizing members, embraced fool proof policies, did effective capacity

building. Dedicated and qualified managerial and directors teams should also be brought on board. The study further advised that debt financing when applied effectively strengthen SACCOs more though it would not turn around a weak SACCO. (Fiorillo, 2006).

According to a study done by Ondieki et al., (2012), establishing the influence of debt financing on SACCOs fiscal performance, it was discovered that the fiscal performance of credit unions was impacted provision of finances as well as venture strategies and that equality of the portfolio; they thus commended the use of external financing as highly shaping the growth of SACCOS' wealth (Ondieki et al., 2012). This however depends of management decisions made on investment of such funds which is highly influenced by Board characteristics. However, Chipembere (2009) who was concerned with revealing financing options available to farmers through primary cooperatives; perceived that if a SACCO is substantially geared, the character of the SACCO changes from an institution which is member-owned and operated since debt owners have priority over owners and seek to influence the operations of such institutions and principally if the SACCO obtains donations. The tenet of self-help through mobilization of member for lending is undermined and this was perceived to lead to laxity in servicing the loans advanced hence subsequent failure the credit cooperatives. At such he, concluded that debt financing remains one of the foundations of acceleration or deceleration in the rate of savings; rather there are other factors like the characteristics of management as well as enhanced capability and human resource support should be accorded to the cooperative unions by exterior organizations to curtail on use of debt financing for support of SACCO activities (Chipembere, 2009).

Sturm and Nuesch (2019) while undertaking a study establishing the controlling influence of debt funding on the relationship between Strong shareholder rights and internal capital allocation efficiency, alluded to an insignificant impact of external financing. Harelimana

(2017) studied the how external funding impacted businesses in Rwanda and resolved that the level of debt had a positive impact on organizational financial performance. A positive impact on firm profitability was further revealed with reference to ROE, and ROA for The Bank of Kigali where R-square of 81.3% in comparison to the R-square of 61.4% observed for I&M Bank in the said study. This pointed out to an excellent debt application for projects benefitting from the tax shield of high debt resulting in increased profitability for the Bank leading to improved financial performance. The study also alluded to the capability of the bank to repay its debts due to improved liquidity.

According to Shibutse et al., (2019), external financing is significantly and negatively related to the financial performance of deposit taking SACCOs. The research therefore asserts that SACCOs should not borrow funds for creation of loan portfolios as this will increase leverage while reducing financial performance. This in turn will lead to financial distress of SACCOs. Ng'ang'a (2017) established an insignificant association between external funding and financial performance of secondary schools in Kajiado county of Kenya. Karuma et al., (2018) instituted a study intended to determine the impact of external financing on the financial performance of manufacturing trading in the Kenyan capital markets and came to a conclusion that though there is a positive relationship, it was insignificant. For the purpose of this investigation, external borrowing was used to study the impact of borrowing on financial distress SACCOs for the period 2016 to 2019, SACCOs in consideration that for that period SACCOs operated under capped interest rates which was expected to increase external borrowing and consequently increase financial distress.

In the words of Miller (2013) interest rate caps can be defined as a method employed by the government as an intervention measure in the market place in response to perceived market failures. Capping interest rates is usually aimed at very high unfair rate charged to vulnerable

customers by financial institutions. Caps on interest rates aim at regulating the whole market or segments of the economy. Miller (2013) further contends that caps on interest rates are applied by the Government for various reasons which could be both political and economic. This could be to support a certain market segment or a case where the Government has identified a market failure in a particular sector. Capping of interest rates is an effort aimed at forcing a bigger application of fiscal resources on the identified market sector. In Bangladesh interest rate caps were applied on loans issued to the agricultural sector to help improve on production of agricultural products while in in Zambia, interest caps were applied to loans issued to SMEs to enhance their operations. The argument, being grounded on the proposition that demand for credit being at higher rates will be price inelastic, with an assumption that institutions in the finance industry have the capability of exploiting this information asymmetry as well as a few cases of monopoly market power in the short run. Due to this fact financial institutions have been deemed to make super normal profits to the detriment of client welfare. Overcharging argument is upheld in this case which fundamentally causes market failures. Essentially the Government should intervene to ensure protection of susceptible consumers from voracious loaning practices. This has informed the application of capping of interest rates. This cushions the most vulnerable customers from financial exploitation by the said financial institutions. Antagonistic recovery procedures defaulting on repayments dented the image of specific moneylenders.

A revised regulation on interest rate capping in Kenya was enforced in September 2016, with set limits on lending and deposit rates. Caps were imposed through the Banking Amendment Bill, (2015), introducing caps on interest to be charged on loans with consistent with a floor on the interest rate accessible for commercial banks deposit accounts. This freshly formulated legislation being brought about with an aim of responding to public outcry of interest on loans being exorbitantly high, and that banks were exhibiting rapacious loaning conduct.

According to Maimbo and Gallegos (2014), and Ferrari et al., (2018), more than 70 countries globally have legislated capped rates of interest to a certain extent, in different forms and having different modes of implementation. This has made it difficult to ultimate deductions on their overall influence challenging to measure. Theoretically, caps on interest rates may aid in reducing the borrowing costs for clients and are employed over and over again by governments in an attempt to shield innocent borrowers from predatory lending. However, the actual financial impact is influenced by the ability of banks to regulate supply as well as loan portfolios in response to the policy; the ability of clients to regulate demand for credit as soon as they are confronted with changes in supply; and the extent to which the variance between the nominal value of the cap and the market interest rate.

Safavian and Zia (2018) was of the opinion that caps on interest rates undoubtedly failed to mitigate the rising inclination in Non-Performing Loans, consequently failing to enhance financial inclusion. The study observed sustained escalation of NPLs even with introduction of caps on interest rates. The study points out that a well performing SME sector remained an essentially vital foundation in an economy which is developing. Contrary information from the commercial banking sector which is regulated by central bank as well as other surveys on the commercial banks indicated that SME loans did not grow pointing out to more future rationing of loans in the future for that sector. The study further established a flight towards corporate customers, a rise in stringent risk alleviation strategies, including issuing short maturity loan products presenting possible concerns on financial inclusion of smaller organizations and clients which may have a possibility of reversing gains of financial inclusion achieved recently. Loan uptake for consumers deemed as risky borrowers was reduced since they were not able to access credit from formal financial institutions thus turning to the unregulated market for financing, hence exposing them to a higher financial risk which could force them into financial distress conditions. Conclusively the findings

indicate that the interest rate caps were fundamentally ineffective as an intervention measure to improve on financial inclusion owing to prevalent economic and market situations, albeit in the short run. Introducing interest rate caps impacted negatively on the financial performance of commercial banks being pointed out by a narrowed interest rate spread causing reduced lending. Studies by Mweresa (2019) and Siriba (2019) also established that there was an increase on non-interest income after the introduction of interest rate capping law even though the income was not sufficient to cover up the decline interest income. This means that financial performance decline with a likelihood of increasing financial distress.

The Kenyan interest rates cap which became effective in September 2016 was triggered by the high cost of credit and predatory lending practices by banks (Safavian & Zia, 2018). Safavian and Zia further notes that interest rate caps aimed at promoting financial inclusion by offering reasonably priced loans to more people and firms. The guideline of interest rates was envisioned to stop financial institutions from charging exorbitant interest on loans higher than 4% above the Central Bank Rate (CBK, 2018). On the contrary, it is noted that capping of interest rates may cause financial exclusion and even make loans more expensive to clients (Maimbo & Gallegos, 2014). In some African countries, interest rate caps are put in place, especially when ordinary citizens and politicians view it as a remedy to reduced economic development (Mbengue, 2013). Mbengue proceeds to argue that placing a ceiling on interest rate may cause financial institutions to reduce operations in rural areas as well as cause them limit their transparency on loan pricing. Mbengue (2013) continues to point out that alternative measures such as consumer protection maybe embraced since its effectiveness in the reduction unfavorable practices in credit administration. Interest rate ceilings are embraced by governments upon knowledge of huge profits realized by lending institutions while applying very high rates to the disadvantage of their clients on loan products (Miller, 2013). Karlan and Zinman (2008) found out that in South Africa, a small increase in interest

rate made the demand for loans by the unfortunate people fall significantly which means that external borrowing decreased significantly as well. Campion et al., (2010) found out that interest rate caps made microfinance institutions (MFIs) in Latin America and the Caribbean reduce the provision of their services to rural customers. Also, Campion et al., (2010) noted that in Nicaragua, the MFIs were regulated on the interest rates they were to charge their clients. The regulation made them exert pressure on the government to be allowed to load new or extra commissions on their financial services, and eventually, their request was granted. Zetzsche and Dewi (2018) argue that capping of interest rates may deny the poor access to finance. Ferrari et al., (2018) opine that rate capping can result in reduced lending, opaque loan pricing, and reduced loan approval rates. Ferrari et al., (2018) found out that more than 76 nations in the world use interest rate caps, but the scope of capping varies from one country to the other. Research shows that competitive markets are far much effective than artificial rate ceilings in regulating the financial institution from raising the price of a loan (Staten, 2008). Considering the forgoing discussion, interest rate capping has not been beneficial to some extent. It has made loans more expensive and reduced financial inclusion on one hand though on the other hand it has applied selectively to some sectors and become successful. Most of the studies Zetzsche and Dewi (2018); Ferrari et al., (2018); Staten (2008) have pointed out to reduced external borrowing due to reduced loan uptake. Safavian & Zia (2018). Karuma et al., (2018); CBK (2018) have argued that interest rate capping enhances financial inclusion hence increasing borrowing for onward lending.

According to the finance amendment bill of Kenya (2015), caps on interest rates had an intention of alleviating the burden of repayment on borrowers hence enhancing financial inclusion considering that more borrowers could access the loans at lower interest rates translating to lower repayments. An investigation by Ebaid (2009) regarding the influence of borrowed funds on financial distress of companies listed in Egypt, showed that debt use had

insignificant effect on the monetary anguish of entities. Results were consistent with similar investigations carried out by Ghosh et al., (2000) and Hadlock and James (2002) whose findings alluded to financial leverage positively influencing financial distress of the firm. Although this study was not investigating the influence of interest rates on financial distress in Kenya, it takes serious consideration that the study was carried out at a time when interest rate capping was operationalized in Kenya. The aim of this capping was to encourage borrowing since capping would ensure that the borrowers were not exploited by the lending institutions in the country. According to Mweresa (2019, SACCOs are increasingly relying on short term borrowing to finance in financing member requirements. Due to this over reliance on short term borrowing it is expected that SACCOs operating during this period increased their external borrowing significantly in order to satisfy the demand for funds by their members. This prompted the researcher to investigate whether external borrowing or debt financing influenced financial distress of credit cooperatives in Nairobi County.

2.4.11 Summary of gaps

The above reviewed literature thus presents various knowledge gaps as shown in the proceeding discussion.

Otieno et al., (2015) asserts that financial reporting practices like internal auditing and communication can contribute to financial performance in the changing business environment. Wanderi (2016) also established that firms were likely to experience financial distress if information collected on changing market trends is not properly analyzed by managers. Shareholders of well managed banks were likely to experience high dividends and vice versa. Majority (71%) of the Commercial Banks have been recording a decline in profitability by 46% due to corporate governance issues further noting that on-compliance of firms with Basel III reforms introduced by the CBK to enhance financial stability among firms is determined by corporate governance. However, the study focused on policy issues but not on financial distress in Kenya.

Waweru and Kalani (2009) found that financial distress could occasion colossal as well as overwhelming costs to banks and the economy and also noted that poor performance of entities in Kenya is attributable to poor Corporate Governance and dynamic business environment characterized by stiff competition, influence of technology and monetary policies formulated by Central Banks of Kenya. Al-Saleh and Al-Kandari (2012) postulate that the knowledge and capability of members of the board can lead to firm performance; their study however established financial distress for firms in Kuwait but not in Kenya and established that qualification, knowledge and of board membership indirectly influenced fiscal performance of entities. Njogo (2011) also revealed that board composition and the executives and management styles were CG parameters that contributed to financial performance of entities. Nyor and Mejabi (2013) studied CG and enterprise performance in Nigeria and showed that the model of ownership; foreign, board and state influenced performance. Mercy and Abiodun (2014) opined that corporate governance can be attributed with 34.5 % financial performance of any entity operational in developed or developing economies further establishing that in-house policies such as savings and lending positively impacted fiscal performance of entities. Otieno et al., (2015) found that deteriorating performance of SACCOs was resultant of non-compliance with sector regulations, leadership issues, competition, and financial regulations also noting that agility in dynamic markets, technological advancement, and flexibility in strategy implementation constitute bottlenecks experienced by entities in Kenya. His study focused on performance of SACCOs but not how corporate governance can cause financial distress.

Gathigia (2016) argues that the Kenyan banking sector has continued to record significant improvements despite the challenges of corporate governance. SACCOs are seen to be the drivers of economic development in developing and developed countries despite legal, economic, political and technological challenges. Hence it is of grave importance to carefully

watch this industry and making sure that incidences are addressed urgently to avert adverse significances. Prior to the regulatory reforms that took effect in 2011, no concrete efforts had been made to pragmatically regulate the SACCOs sub-sector as these entities were deemed to be insignificant threat to the financial system of a country. These organizations nonetheless expanded in financial muscle to the extent of offering banking-like products and services; the front office services activities (FOSA) in an effort to escalate efficacy in the delivery of services a move which brought about lack of liquidity, insufficiency of capital, pitiable credit management and dwindling confidence among members (Kahuthu, 2016).

Muriithi (2016) reported that raising numbers of non-performing loans indicated growth in credit risk at the time mainly ascribable to the lag-effect associated with costly interest rates experienced during quarter one in the 2012 as well economic slowdown emanating from the activities of the March 2013 general elections. Additionally, financial organizations undergoing a slump in their asset quality were also under close monitoring by the CBK. The capital adequacy in this branch of the economy, normally measured by the proportion of Total Capital to Total Risk Weighted Assets, suffered a decline of 2%from December 2012 to December 2013 dropping to 21%. In their study Gikuri and Paulo (2016) cited excessive donor dependency as one of the challenges faced by SACCOs. This is an indicator that SACCOs are increasingly experiencing financial distress.

An investigation by Makori et al., (2013) established different obstacles or problems facing conformity in SACCOs; non-distinction of clients' deposits from their shares, the over-reliance on provisionary external borrowing, failure to adopt liquidity monitoring structures and approaches, excessive investment in non-earning assets, insufficient Information Communication Technologies (ICT) network, incompetent managerial capabilities and interference from the political class. Considering the challenge of high dependence on short

term external borrowing, it can be established that SACCOs have a challenge of financial distress; it is only under such conditions that a firm can highly depend on short term external borrowing.

Olando et al., (2012) observed that SACCOs not complying with SACCO by-laws as expected and revenues realized from investments did not sufficiently fund their expenses. This also indicates the presence of financial distress. Kivuvo and Olweny (2014) studied the financial performance of 215 SACCOs by use of Altman Z-score model of financial distress and established the presence of financial distress. The other studies only mentioned financial distress as a variable studied among other variables to establish challenges facing various SACCOs in Kenya.

Orozco et al., (2018) further argues that a large board size enhances managerial and monitoring roles of directors increasing the effectiveness of the board in dealing with the agency problem thus enhancing the performance of the firm consequently reducing financial distress faced by firms. Reddy et al., (2013) established the boards with more members enhance the performance of the board through reduction of CEO control in the board, hence avoiding contractual options by human resources which would favor them at the expense of the owners' interest.

Research has also established that firms with females on the board have less involvement in earnings management practices (Lakhal et al., 2015; Gul et al., 2011). The foregoing finds are indicative of effectiveness of women monitoring role if they are included on boards which is deemed a very crucial corporate governance tool. The studies also confirm that women are considered more ethical in behavior than men. However, studies carried out on the performance of an entity (Carter et al.,, 2010; Perryman et al.,, 2016) brings about a different view concerning inclusion of females in boards and how this inclusion impacts on firm

performance and consequent financial distress. This makes this study crucial in order to establish if inclusion of women on board increases or reduces financial distress of deposit taking SACCOs in Nairobi County.

Studies determining the association of board independence and monetary distress have largely been conducted in foreign countries which are characterized by unique regulatory, political, ethical and economic fronts. This makes the results not suitable for generalization in the Kenyan context, which calls for more studies for Kenyan firms, both listed and non-listed (Manduku et al., 2020).

De Maere et al., (2014) in a recent investigation alluded to a negative association of board tenure with financial distress of a firm. In conclusion they argued that entities which experienced financial distress had boards with shorter board tenures in comparison with firms with a longer director tenure. Accordingly, expert supposition presents an argument in favour of a longer tenure being credited with enhanced performance of directors, in that directors are endowed with more expertise over time enhancing their capacity to challenge and critique management actions and decisions (Bebchuk et al., 2002). Vafeas (2003) presents an argument that the board becomes more management friendly suggesting that board members with a long tenure have a higher likelihood of becoming more management friendly interfering with the capacity of monitoring and control function which is very critical for organizations. Schnake et al., (2006) argues that together with management friendliness, organizations' are likely to experience other drawbacks which comes with longer tenures. A longer board tenure presents a limitation to the cognitive ability of directors hence a restriction on the options and viewpoints deliberated in the board.

According to Chundu (2014), the bigger an entity is, the greater the grip exerted on its customers, thus big organizations have a tendency to perform better than trivial organizations.

Considering today's global economy, firm revenue is a critical success factoring that it benefits by employing economies of scale. Firm revenue can be measured by use of total sales revenue which indicates the ability of the firm generate more income that can sustain it as a going concern. For SACCOs, the ability to generate more income is a good measure of firm revenue in that it defines the ability of a SACCO to sustain itself while being profitable and to withstand market adversities like competition.

Gichaiya et al., (2019) performed an investigation based on non-financial firms trading publicly in Kenya, with the firm revenue as the moderator and came to a conclusion that (Kohlbeck & Mayhew, 2010) opportunistic behavior exhibited by management remains an agency problem as contextualized by agency theory aids misappropriation of firm resources and presents an opportunity to the managers to present misleading financial reports established recently in the fraudulent cases of Enron, HealthSouth, and others. In these fraud cases directors by use of related party transactions directed wealth to themselves and to come up with deceptive financial reports (Kohlbeck & Mayhew, 2010). Investigations carried out previously have concluded that good corporate governance effectively reduces management opportunism, which in turn will improve a firm's reporting quality while increasing firm value and ensure that related party transactions are efficient transactions that are carried out with conflict of interest (Darmadi, 2013, Gordon et al., 2004 ; Abdul et al., 2018).

Ferrari et al., (2018) opine that external financing can result in reduced lending, opaque loan pricing, and reduced loan approval rates. Reduced loan approvals may reduce the income generated by firms causing them to experience poor financial health.

Except for Oguku and Olweny (2016) who established distress for SACCOs in Kenya by use of Altman's Z score, the rest of the studies discussed have established financial distress of companies trading in various stock markets. Oguku and Olweny (2016) however

established distress using SACCO data up to the year 2012 which was before the regulation by SASRA. It is hoped that the SASRA regulation on SACCOs has improved the management of these SACCO hence no financial distress is expected.

In a nutshell it can be established that Wayne et al (2010); Aziz and Dar (2006) agree with the Upper Echelons Theory in the argument that Upper echelons matter. Kabaiya (2012) asserts that the board is instrumental is supervision of the CEO, the succession process as well as ensuring that new boards are constituted in accordance to the available guidelines. Rechden & miller (2015) argue that more often managers make decision under political influence. This can encourage the managers' opportunistic behaviour which may make firms to experience low financial performance and also fall into financial distress.

Otieno et al., (2015); Jensen (2002); Lipton and Lorsh (1992); Yermach (1996) are in favour of small boards as advocated to by the stewardship theory. The studies argue that small boards are cost effective and easier to management hence decisions made favour the principal considering that under stewardship theory managers are deemed to make decisions in favour of the firm and consequently favoring the principals. The Agency Theory and Upper echelons theory favour larger boards while supporting the argument on diversity in decision making. Jensen (2012); Reddy et al.,, (2013) support this view and also argue that large boards are better in terms of control of the CEO to avert opportunistic behaviour. Appiah (2017); Karamanou & Vafeas (2005); Boone et al., (2007) advance an opinion of board size being dependent on firm size. The current study therefore envisaged adding a voice to these diverse views on board size.

Considering board diversity, various vies are presented where Ombaba & Omaya (2016); Daily and Dalton (1994) holds the opinion that increased number of women on board is of essence. Adams & Ferreira (2009); Earley & Mosakowski (2007) argue that women on board

reduces the risk appetite of the boards in decision making. However Hiller & Hambrick (2005) assert that women on board lengthen the decision making process increasing the cost of such boards. Kim (2006); Kirsh (2018) advise that mandatory quotas of women on board should be enforced. The current study endeavored to add a voice to the diverse opinions for the presence of female board members.

Maina and Sakwa (2012) and Ozkan (2016) have argued that board independence has no relationship with financial distress. Hermalin & Weisbach (2001) hold a similar opinion but Manduku (2020) opined that increasing board independence increases firm performance. Marvis and Savih (2015) assert that increasing independent directors increase costs to the firm which may bring about financial distress. This presents a gap to establish the relationship between financial distress and board independence.

According to Gande & Kal Pally (2017), and Pereira & Filipe (2015) higher board qualifications enable the boards to make diverse decisions due to specialized and diversified skills which enhance firm performance. However Darmadi (2013) finds no relationship between board education and financial performance of firms. Declining financial performance cause financial distress thus it is of importance that the correlation of board independence and financial distress of organizations be established.

Longer board tenure is supported by Shiu (2014) and Kim et al., (2019) who argue that longer board tenure gives chance to the board to apply firm specific knowledge acquired due to the service of the firm for its own benefit. This is deemed to enhance firm performance while discouraging financial distress. Bebchuk et al., (2002) reiterates that longer tenure encourages allegiance to management and makes the board management friendly thus endangering supervision and CEO control. This may make firm to fall into financial distress. Conversely, Demaere et al., (2014) is of the opinion that firms ending up in financial distress have shorter

tenure. This study therefore envisioned establishment of the association between board tenure and financial distress of SACCOs in Kenya.

Mathuva (2016); Sathyamoothi et al., (2016); Chundu (2014) and Ooko et al., (2013) hold the opinion that diversified revenue sources will encourage generation of more revenue which will enhance firm performance hence alleviate financial distress. On the contrary, Gebreselasie (2015) and Gichayia et al., (2019) alluded to an association between firm revenue and organizational performance which was not significant. The current study envisioned establishment of the moderating influence on the association of financial distress with board characteristics since financial distress is related to firm performance.

Darmadi (2013), Gordon et al., (2014) and Abdul et al., (2018) allege that related party transactions enhance firm performance by reducing management opportunism. Kim et al., (2019) purport that related party transactions encourage earnings management. However Fisman & Khanna (2008) holds an opinion that related party transactions reduce transaction costs. Zakaria et al., (2017) resolved that there is moderating influence on the association of independent directors with the performance of a firm while Downs et al find an insignificant relationship. On this note this research endeavored to scrutinize the association of board characteristics with financial distress of deposit taking SACCOs in Nairobi County.

External financing means debt financing which Fiorillo (2006) argues that it increases liquidity for onward lending. Ondieki (2012) Opins that it encourages growth a view which is not shared by storm and Nalesh (2019); Harelimana (2017) who opine that there is no significant relationship, while Shibutse et al., (2019) and Karuma et al., (2019) alludes to a significantly negative association board characteristics and financial distress experienced by a firm. Establishment of the association between board characteristics and fiscal distress is

essential so as to add a voice to these diverse opinions. The studies cited above tested for the relationship of the explainer variables independently.

Related studies have failed to relate financial distress with all the explainer variables which has informed the current research. It was also expected that the explainer variables have a bearing on financial distress experienced by SACCOs in Kenya. This prompted the formulation of hypothesis to test this joint relationship as follows:

H_0; Board characteristics, related party transactions and firm revenue do not jointly and significantly affect financial distress of Deposit Taking SACCOs in Nairobi County.

H_1; Board characteristics, related party transactions and firm revenue do not jointly and significantly affect financial distress of Deposit Taking SACCOs in Nairobi County.

CHAPTER THREE:

RESEARCH METHODOLOGY

3.1 Introduction

This section discusses the steps which were followed in performing the research. It entails the research philosophy, the study's research design, the target population and sampling approach, the study's empirical model, operationalization of research variables, and diagnostic testing.

3.2 Research Philosophy

Philosophy of science which is at the centre of knowledge development is pegged on researcher's views or perceptions of what the world entails (Saunders & Cornett, 2012). There are two main research philosophies used in social science research, namely Positivism and phenomenology. Positivism is based on use of statistical and quantifiable computations of sampled variables to enhance formation of generalizations about some variable (Johnson & Christensen, 2010). Positivism is premised on the conjecture that the researcher is objective and thus independent of the variables being investigated rather than being inferred subjectively (Mugenda & Mugenda, 2003). In phenomenology the researcher does not only interact with what is being measured, reaches conclusions through personalized assessment and interpretation of what he or she sees and draws from them (Saunders & Cornett, 2012).

Positivism is grounded on actual realities, a neutral stance of the investigator, unbiased measurements of the variables and soundness of results. Saunders & Cornett (2012) perceived that positivism embraces a usual science position where occurrences are accurately experimented/measured leading to fabrication of dependable information. The current research is anchored on positivistic philosophy since it sought to examine various propositions to establish their credence. It equally sought to accurately examine proofs empirically and institute associations amongst variables by use of statistical approaches.

Hypothesis articulated in this research, were thus tested and accepted or rejected using statistical approaches guiding the commendations according to result.

3.3 Research Design

Research design is the strategy or plan, used to acquire respondents. It also entails the method of collecting data from them to draw conclusions about the study at hand (Zikmund et al., 2010). There exists three basic kinds of research design: exploratory, causal and descriptive. Descriptive designs comprise of three key approaches which include; survey studies, the correlation studies, and developmental studies (Blumberg et al.,, 2014). Descriptive designs are also classified either as cross-sectional which encompasses drawing a sample of elements from the populace of interest and assessing features of the elements only once or longitudinal where sampled elements are measured repetitively over a certain period of time (Sekaran & Bougie, 2016).

The study used descriptive longitudinal research design. A longitudinal research is conducted over long time (could be decades). In this form of research, an aspect is observed iteratively. The research entailed collecting and analysing secondary panel data for the 2012 – 2018 time period, on deposit taking SACCOs in Nairobi County and therefore this research design was deemed most apt for the study.

3.4 Population of the Study

Population is explained as the total group of persons or entire category or classification of items sharing the same characteristics that are under study in any discipline of investigation (Mugenda & Mugenda, 2003). According to Sekaran and Bougie (2016), population comprises the total assemblage of people, events or things of concern forming the scope of the investigative interest of the researcher. The population for this research involved the 174 deposit taking SACCOs that are licensed to operate in Nairobi County. According to SASRA

(2019), there are 174 deposit taking SACCOs. As such, the target population of this study was 174.

3.5 Sample and Sampling Design

A sample is made up of subsets of the population comprising part participants carefully chosen from it. Mugenda and Mugenda (2003) describe this subset as a portion drawn from the desired population. Orodho (1997) calls it a predetermined number of characters or items chosen to represent the whole population. According to Kothari (2004), it is an assortment of elements selected out of the population as a representation of the population. Kombo and Tromp (2006) outline it as a set portion of a statistical populace the characteristics of which are studied to draw insights on the entire populace. Through the study on sample, one can come up with conclusions which are then generalized to the population of interest (Kothari, 2004).

The sample for this study was obtained from a frame which is inclusive of all deposit taking SACCOs licensed by SASRA to operate in Nairobi County, Kenya. The researcher used purposive sampling technique to select the study's sample. The method can also be described as discerning, or biased, selection, a method which is dependent on the decision of the investigator during the choice of participants. Nairobi has the highest population of SACCOs in Kenya with most of these financial institutions operating head offices in Nairobi County and are spread across all sectors of the Kenyan economy (SASRA, 2015). Owing to this spread of SACCOs in Nairobi across all sectors the researcher a clear picture of all SACCOs in Kenya. SACCOs in Nairobi account for 59% of the asset base of all SACCOs in Kenya (SASRA, 2019). Since the SACCOs account for a substantial percentage of the asset base, it is important to establish if the SACCOs are faced with any danger of financial distress since they have a crucial role in the Kenyan financial sector (Kiaritha, 2015; Ndungu, 2013; Njogo, 2011). Have conducted studies on SACCOs based in Nairobi County. The standard for

selecting items in the sample was data obtainability. Consequently, only SACCOs whose comprehensive data was obtainable over the data gathering period (2012 to 2018) were included. SACCOs that were not licensed before 2012 or were deregistered, for any duration of time, before 2018 were not included in the sample. As per SASRA records, 43 deposit taking SACCOs were in operation for the 2012 - 2018 period, and hence these formed the sample of the study.

3.6 Data and Data Collection Instruments

The study used the annexed data collection form (Appendix IV) to collect the data. For each sampled SACCO, data on the various indicators of the study's objectives for the 2012 – 2018 period was collated. After collection of the raw data, it was then compiled in readiness for analysis. This entailed computation of the actual indicators of the study's variables from the collected raw data.

3.7 Diagnostic Testing

Diagnostic tests are pre estimation procedures that evaluate whether the assumptions of Ordinary Least Squares (OLS) panel regression analysis are up held. In particular, a strong linear relationship should not exist between any variables that are fitted jointly as regressors in a model (no multicollinearity), there should be panel level stationarity, error terms should be linearly independent (no autocorrelation), the variance of the error terms should be constant (no heteroscedasticity), and the error terms should be normally distributed (with a mean of zero and a constant variance). These assumptions and the particular tests that were used to test for each of them are discussed in detail below.

3.7.1 Tests for Multicollinearity

The researcher used Variance inflation factors predictor variables to test multicollinearity. Variance inflation factors (VIF) assesses the extent of variance of the estimated regression coefficients relative to when these variables do not have a linear relationship.

3.7.2 Panel Level Stationarity

In order to analyse data using panel regression models, it should be stationary. To test the data for stationarity, the Levin Lin Chu (LLC) Test unit root test was applied for all regression analyses of this study. The null hypothesis being that panels contain unit roots, whereas the alternative hypothesis implies stationarity in the panel data. Pertaining rejection criteria, the null hypothesis of a unit root is rejected if the p value of the LLC test is less than 5%.

3.7.3 Serial Correlation

Serial correlation which is also known as autocorrelation can be described as an occurrence that sets in once the error terms of regression variables for consecutive periods are interrelated. Using the Wooldridge test for auto correlation; we tested data for this research to establish the existence of serial correlation. The null hypothesis for this test is that there is no first order serial correlation in the data. Where the p value is more than 5%, the null hypothesis is rejected.

3.7.4 Likelihood Ratio Test for Heteroscedasticity

Heteroscedasticity is a challenge because it inclines to inflating the standard errors, hence escalating the likelihood of committing a type two errors that is failure to reject a false hypothesis about a coefficient. Heteroscedasticity was tested by use of the likelihood ratio test.

3.8 Operationalization of the Research Variables and Measurements

Operationalization is the process by which indicators or items for measuring constructs are developed. Operationalizing a variable means to define the concept such that it can be quantitatively or qualitatively measured or expressed. Variables are operationalized in order to have a way to quantify abstract concepts so as to make meaningful comparisons between

real world phenomena in terms of the properties suggested by those concepts (Sekaran & Bougie, 2016).

The independent variable (Board Characteristics) was operationalized as board Size, board composition, board independence, Board members' level of education, and Tenure of board members. Board size was measured by the absolute number of members in the board. In Board composition the ratio of female members of the board to male members was used as the measure of this variable. Similarly in board independence, the ratio of non-executive members to the executive members was determined for each SACCO. For the board members level of education, a nominal scale was established with exclusive categories on education levels; secondary, tertiary, university (Undergraduate) and University (Postgraduate). Each board member was graded on this scale and the average score for each SACCO was calculated for further analysis and model fitting. On Tenure of board members, the absolute number of years a member served in the board was recorded and an average taken for each SACCO. The number of years served were divided by three since the SACCO by laws indicate that one tenure comprises of three years. This was deemed appropriate measurement which could establish members who have served incomplete terms.

The intervening variable (Firm Revenue) was measured using the total revenue for each SACCO. The absolute total revenue in Kenya shillings for each SACCO was recorded. To reduce skewness on the distribution of this data, the data was transformed using the natural logarithm where the natural logarithm was taken for each data value. This made the data to follow a normal or precisely a near normal distribution. Hence a panel model would be applicable to this data.

The study further operationalized the moderating variable (Related Party Transactions) using the ratio of Loans to directors and staff to all total loans disbursed.

For the control variable, (external borrowing)'s data was operationalized using the level of external borrowing. Just like the total revenue, the absolute total external borrowing in Kenya was recorded for each SACCO and the data transformed using the natural logarithm.

The dependent variable (Financial distress) was established by use of Altman's Z score index given by equation 3.1.

$$Z'' = 6.56(X_1) + 3.26(X_2) + 6.73(X_3) + 1.05(X_4) \quad (3.1)$$

A summary of the operationalization of the variables is given in table 3.1.

Table 3.1

Operationalization of Study Variables

Variables	Operational Indicator	Measurement	Operationalization
Independent Variable: Board Characteristics			
Board Characteristics	Board Size	Absolute Scale	The sum total of board members
	Board Composition	Ratio scale	The proportion of female board members to total number of board members
	Board Independence	Ratio scale	The proportion of independent members in the board
	Board Average Level of Education	Ordinal scale (Likert scale)	1 for Tertiary level and below 2 for undergraduate degree 3 for postgraduate degree
	Board Tenure	Absolute Scale	The average number of years the board members have served in the organisation.
Moderating Variable: Related Party Transactions			
Related Party Transactions	Loans to directors and staff	Ratio scale	Loans to directors and staff as a percentage of all total disbursed loans
Intervening Variable: Firm Revenue			
Firm Revenue	Total Revenue	Absolute Scale	Natural log of Total Reported revenue (in Kenya Shillings)
Dependent Variable: Financial Distress			
Financial Distress	Altman's Z score	Absolute scale	Altman's Z Score Index
Control Variable: External Borrowing			
External Borrowing	External Borrowing	Absolute Scale	Natural log of Total Borrowings from external parties (in Kenya Shillings)

3.9 Data Analysis

Data analysis has been described as the utilization of interpretation to understand the gathered data anchored on the objective of establishing consistent patterns and outlining the pertinent information demonstrated in the scholarly research (Zikmund et al., 2010). Additionally, it aids in establishing patterns displayed by the gathered data with respect to the scholarly investigation's variables. Panel data analysis techniques were applied to quantify the relationship between the independent and dependent variables, as well as the moderating, intervening, and control effects. The panel regression models that were used to test the various hypotheses of the study are elucidated below. Panel regression analysis was considered the most appropriate for this study in view of the nature of data collected. The requirement by panel regression analysis that data should be both longitudinal and cross sectional (Mackinnonet al., 2019; Priori, 2018) was a condition achieved by this study. This thesis utilized data collected from SACCO societies regulatory authority (SASRA) from 2012-2018 (longitudinal) for 43 SACCOs (cross sectional) thus panel data analysis was deemed most appropriate.

3.9.1 Empirical Model for Testing Hypothesis One: Board Characteristics and Financial Distress

The first objective was to determine the relationship between board characteristics and financial distress of deposit taking SACCOs in Nairobi County. To attain this objective, model 3.2 was fitted.

$$FD_{it} = \beta_0 + \beta_1 BS_{it} + \beta_2 BC_{it} + \beta_3 BI_{it} + \beta_4 BE_{it} + \beta_5 BT_{it} + \mu_{it} \quad (3.2)$$

Where:

FD_{it} = Financial Distress of SACCO *i* in year *t*.

β_0 = Intercept

β_1 = Coefficient of Board Size

BS_{it}= Board Size of SACCO *i* in year *t*.

β_2 = Coefficient of Board Composition

BC_{it}= Board Composition of SACCO *i* in year *t*.

β_3 = Coefficient of Board Independence

BI_{it}= Board Independence of SACCO *i* in year *t*.

B_4 = Coefficient of Education Level

BE_{it}= Average Board Education Level of SACCO *i* in year *t*.

B_5 = Coefficient of Board Tenure

BT_{it}= Board Tenure of SACCO *i* in year *t*.

μ_{it} = Error Term

3.9.2 Empirical Models for Testing Hypothesis Two: Moderating Effect of Related Party Transactions on the relationship between board Structure and Financial Distress

Objective number two was to establish the moderating effect of related party transactions on the relationship between board characteristics and financial distress of deposit taking SACCOs in Nairobi County. To test for the moderating effect, Stone-Romero and Liakhovitski (2002) two step approach was utilized. This procedure is outlined below:

3.9.2.1 Step one of testing the Moderating Effect of Related Party Transactions

Step one of the Stone-Romero and Liakhovitski (2002) approach entails estimating a model in which both the independent and moderating variables are regressors of the dependent variable. Therefore, the indicators of both the independent variable (board characteristics) and the moderating variable (related party transactions) were used to fit a panel regression model as predictors of financial distress. Equation 3.3 depicts this relationship.

$$FD_{it} = \beta_0 + \beta_1 BS_{it} + \beta_2 BC_{it} + \beta_3 BI_{it} + \beta_4 BE_{it} + \beta_5 BT_{it} + \beta_6 RPT_{it} + \mu_{it} \quad (3.3)$$

Where:

FD_{it} = Financial Distress of SACCO *i* in year *t*.

β_0 = Intercept

β_1 = Coefficient of Board Size

BS_{it}= Board Size of SACCO *i* in year *t*.

β_2 = Coefficient of Board Composition

BC_{it}= Board Composition of SACCO *i* in year *t*.

β_3 = Coefficient of Board Independence

BI_{it}= Board Independence of SACCO *i* in year *t*.

B_4 = Coefficient of Education Level

BE_{it}= Average Board Education Level of SACCO *i* in year *t*.

B_5 = Coefficient of Board Tenure

BT_{it}= Board Tenure of SACCO *i* in year *t*.

B_6 = Coefficient of Loans to Directors and Staff

RPT_{it}= Loans to Directors and Staff of SACCO *i* in year *t*.

μ_{it} = Error Term

3.9.2.2 Step Two of Testing the Moderating Effect of Related Party Transactions

In step two, the regression in step one above is repeated but with additional predictor variables derived from the interaction of the independent variable and the moderating variable. Such variables are called interaction terms. This study had five interaction terms that are outlined in table 3.2. Each moderating variable was multiplied by the corresponding independent variable to create the pertinent interaction term.

Table 3.2

Interaction Terms of the Independent and Moderating Variables

		Independent Variable				
		Board Size	**Board Composition**	**Board Independence**	**Board Education Level**	**Board Tenure**
Moderating Variable	Loans to Directors and Staff	IT1	IT2	IT3	IT4	IT5

Thus, for step two of testing the moderating effect, the following model was fitted:

$$FD_{it} = \beta_0 + \beta_1 BS_{it} + \beta_2 BC_{it} + \beta_3 BI_{it} + \beta_4 EL_{it} + \beta_5 BT_{it} + \beta_6 RPT_{it} + \beta_7\, IT1_{it} + \beta_8 IT2_{it} + \beta_9 IT3_{it} + \beta_{10} IT4_{it} + \beta_{11}\, IT5_{it} + \mu_{it} \quad (3.4)$$

Where:

FD_{it} = Financial Distress of SACCO *i* in year *t.*

β_0 = Intercept

β_1 = Coefficient of Board Size

BS_{it}= Board Size of SACCO *i* in year *t*.

β_2 = Coefficient of Board Composition

BC_{it}= Board Composition of SACCO *i* in year *t*.

β_3 = Coefficient of Board Independence

BI_{it}= Board Independence of SACCO *i* in year *t*.

B_4 = Coefficient of Education Level

BE_{it}= Average Board Education Level of SACCO *i* in year *t*.

B_5 = Coefficient of Board Tenure

BT_{it}= Board Tenure of SACCO *i* in year *t*.

B_6 = Coefficient of Loans to Directors and Staff

RPT_{it}= Loans to Directors and Staff of SACCO *i* in year *t*.

β_7 = Coefficient of Interaction Term One

$IT1_{it}$ = Interaction Term One of SACCO *i* in year *t*.

β_8= Coefficient of Interaction Term Two

$IT2_{it}$ = Interaction Term Two of SACCO *i* in year *t*.

β_9 = Coefficient of Interaction Term Three

$IT3_{it}$ = Interaction Term Three of SACCO *i* in year *t*.

β_{10}= Coefficient of Interaction Term Four

$IT4_{it}$ = Interaction Term Four of SACCO *i* in year *t*.

β_{11} = Coefficient of Interaction Term Five

$IT5_{it}$ = Interaction Term Five of SACCO *i* in year *t*.

μ_{it} = Error Term

The moderating effect would be deemed present if the value of the coefficient of determination increased after inclusion of the interaction terms.

Thus, the overall model to test the moderating effect of related party transaction to financial distress was given by,

$$FD_{it} = \beta_{0it} + \beta_1 BCHARS_{it} + \beta_2 BCHARS * RPT_{it} + \varepsilon_{it} \qquad (3.5)$$

Where:

FD_{it} = Financial Distress of SACCO i in year t.

β_{0it} =intercept

β_1 = Coefficient of Board Characteristics

β_2= Coefficient of Board Characteristics moderated by Related Party Transaction

ε_{it} = Error Term

3.9.3 Empirical Models for testing Hypothesis Three: Intervening Effect of Firm Revenue

The third study objective entailed determination of the intervening effect of firm revenue on the relationship between board characteristics and financial distress. The MacKinnon et al., (2007) four step approach was utilized to evaluate this objective. These steps are elucidated below.

3.9.3.1 Step One of Testing the Intervening Effect of Firm Revenue

Step one entailed regressing the independent variable (board Characteristics) of the study against its dependent variable (Financial Distress), while ignoring the intervening variable (firm revenue). In essence, the model to be fitted was similar to model 3.2. As such, results of fitting model 3.2 would be considered in this step, subject to the condition that a statistically significant relationship exists between the financial distress and board characteristics.

3.9.3.2 Step Two of Testing the Intervening Effect of Firm Revenue

Step two of testing the Intervening effect of firm Revenue entailed estimating the relationship between the independent variable (Board Characteristics) and the Intervening Variable (Firm Revenue), while ignoring the dependent variable (Financial Distress). Panel regression analysis was conducted where each independent variable had a model in which it was the predictor of the intervening variable. As such, the panel regression model specified below was estimated:

$$FR_{it} = \beta_0 + \beta_1 BS_{it} + \beta_2 BC_{it} + \beta_3 BI_{it} + \beta_4 BE_{it} + \beta_5 BT_{it} + \mu_{it} \quad (3.6)$$

One should proceed on to step three if at least one indicator of the independent variable has a significant effect on the intervening variable, and the regression equation specified above has an overall p value of less than 5%; since this implies that a statistically significant relationship exists between the board characteristics and firm revenue.

3.9.3.3 Step Three of Testing the Intervening Effect of Firm Revenue

In step three of testing the intervening effect of firm revenue, a panel regression model was fitted to ascertain the link between firm Revenue (the intervening variable) and financial distress (the dependent variable), while ignoring the independent variable (board characteristics). Thus, the model specified below was estimated:

$$FD_{it} = \beta_0 + \beta_1 FR_{it} + \mu_{it} \quad (3.7)$$

The study would proceed to step four if the intervening variable had a statistically significant effect on the dependent variable, and the overall model was also statistically significant.

3.9.3.4 Step Four of Testing the Intervening Effect of Firm Revenue

In step four, panel regression analysis was performed between the dependent variable (board characteristics) on one hand and both the Intervening variable (firm Revenue) and independent variable (financial distress) on the other hand. The intervening variable of firm Revenue would be deemed to be present if the joint effect of the intervening and independent variables was statistically significant.

3.9.4 Empirical Model for Testing Hypothesis Four: Joint Effect of Board Structure, Related Party Transactions, and Firm Revenue on Financial Distress

The fourth research objective was to establish the joint effect of Board Structure, Related Party Transactions, and Firm Revenue on Financial Distress of deposit taking SACCOs in Nairobi County (Pokhariyal, 2019; & Njagi, 2017).

$FD_{it} = \beta_0 + \beta_1 BS_{it} + \beta_2 BC_{it} + \beta_3 BI_{it} + \beta_4 EL_{it} + \beta_5 BT_{it} + \beta_6 RPT_{it} + \beta_7 FR_{it} + \mu_{it}$……………… (3.8)

Where:

FD_{it} = Financial Distress of SACCO *i* in year *t*.

β_0 = Intercept

β_1 = Coefficient of Board Size

BS_{it} = Board Size of SACCO *i* in year *t*.

β_2 = Coefficient of Board Composition

BC_{it} = Board Composition of SACCO *i* in year *t*.

β_3 = Coefficient of Board Independence

BI_{it} = Board Independence of SACCO *i* in year *t*.

B_4 = Coefficient of Education Level

BE_{it} = Average Board Education Level of SACCO *i* in year *t*.

B_5 = Coefficient of Board Tenure

BT_{it} = Board Tenure of SACCO *i* in year *t*.

B_6 = Coefficient of Related Party Transactions

RPT_{it} = Loans to Directors and Staff of SACCO *i* in year *t*.

B_7 = Coefficient of Firm Revenue

FR_{it} = Firm Revenue of SACCO *i* in year *t*.

μ_{it} = Error Term

3.9.5 Empirical Model for Testing control effect: Control Effect of External Borrowing on Financial Distress

The fifth research objective was to establish the control effect of external borrowing (EB) on financial distress of deposit taking SACCOs in Nairobi County. The research was interested in evaluating whether externally borrowed funds had a control effect on financial distress considering the board characteristics, related party transactions and firm revenue. Therefore the model of the overall joint effects was as follows:

$$FD_{it} = \beta_0 + \beta_1 BS_{it} + \beta_2 BC_{it} + \beta_3 BI_{it} + \beta_{4B} E_{it} + \beta_5 BT_{it} + \beta_6 RPT_{it} + \beta_7 FR_{it} + \beta_8 EB + \mu_{it} \ldots\ldots\ldots (3.9)$$

Where:

FD_{it} = Financial Distress of SACCO *i* in year *t*.

β_0 = Intercept

β_1 = Coefficient of Board Size

BS_{it} = Board Size of SACCO *i* in year *t*.

β_2 = Coefficient of Board Composition

BC_{it} = Board Composition of SACCO *i* in year *t*.

β_3 = Coefficient of Board Independence

BI_{it} = Board Independence of SACCO *i* in year *t*.

B_4 = Coefficient of Education Level

BE_{it} = Average Board Education Level of SACCO *i* in year *t*.

B_5 = Coefficient of Board Tenure

BT_{it} = Board Tenure of SACCO *i* in year *t*.

B_6 = Coefficient of Related Party Transactions

RPT_{it} = Loans to Directors and Staff of SACCO *i* in year *t*.

B_7 = Coefficient of Firm Revenue

FR_{it} = Firm Revenue of SACCO i in year t.

B_7 = Coefficient of External Borrowing

EB =Total External Borrowing

μ_{it} = Error Term

3.10 Ethical Considerations

The researcher first explained the objectives of the study to the SACCO Societies Regulatory Authority before access to collect secondary data was sought and granted. A data collection assistant was allocated to the researcher after presentation of data collection permit from NACOSTI and an introduction letter from Kenya Methodist University. Secondly, the researcher assured the regulator that all information obtained from its offices would be handled with utmost care and confidentiality, and it would only be utilized for the intended study purpose. The authority was also assured that data collected will be used as obtained and no alterations will be done.

CHAPTER FOUR:

RESULTS AND DISCUSSION

4.1 Introduction

Chapter four includes empirical research findings, presentation of data analysis results and the discussion thereof. It begins with by presenting and discussing descriptive statistical and correlation summaries. Then diagnostic tests are done and the results presented and discussed. Finally, panel regression analysis which are the basis for testing the study's hypotheses are done and the results presented and discussed.

4.2 Descriptive Data Analysis

The researcher undertook a descriptive analysis of data, so as to capture a general depiction of the raw data. In particular, the following metrics about the data for all variables were computed: mean maximum, minimum, variance, standard deviation, skewness, and kurtosis. The mean indicates the average value of all recorded observations, while the maximum shows the highest recorded observation for each variable. Further, the minimum indicates the least recorded observation for each variable. Variance and standard deviation are measures of dispersion which show the variability of the observations about the mean. Further, skewness indicates whether the observed values were conforming to a symmetrical distribution or were skewed, either positively or negatively. Finally, kurtosis indicates the level of peakedness of the observed values.

Table 4.1

Descriptive Statistics

	Mean	**Maximum**	**Minimum**	**Variance**	**Standard Deviation**	**Skewness**	**Kurtosis**
Financial Distress	1.870	6.644	-19.332	3.242	1.801	-5.553	7.659
Board Size	6.929	9.000	5.000	1.643	1.282	0.065	1.993
Board Composition	0.314	0.600	0.111	0.022	0.148	0.324	1.841
Board Independence	0.469	0.857	0.111	0.053	0.231	0.037	1.677
Board Average Level of Education	1.968	2.500	1.500	0.104	0.323	0.275	1.797
Board Tenure	5.570	15.783	1.009	12.013	3.466	1.011	3.360
Related Party Transactions	0.0187	0.080	0.000	.000254	.0159	2.258	7.999
Firm Revenue	19.407	22.484	15.512	1.598	1.264	0.013	3.537
External Borrowing	18.580	23.390	14.252	2.138	1.462	0.068	3.456

From table 4.1, it is evident that the independent variable (Financial Distress, as measured using the Altman's Z score) had a mean of 1.87, which is quite low and thereby implies that on average, deposit taking SACCOs operating in Nairobi County is financially distressed. The maximum observation for the Altman's Z score is 6.644, while the least is -19.332. The dependent variable has a relatively low extent of variation since the variance is 3.242 and the standard deviation is 1.801. Additionally, it can be seen that this variable is negatively skewed (Skewness = -5.553), thereby implying that most of the observations were less than the mean. Further, the kurtosis is quite high (kurtosis = 7.659). This implies that majority of the observed values for Altman's Z score either coincided with the mean or was very close to the mean. These results are in agreement with Kivuvo and Olweny (2014); Kariuki (2013) and Wesa and Otinga (2018) who established that by use of Altman's Z score firms in various sectors suffered financial distress. However, Kivuvo and Olweny studied SACCOs before SASRA became the regulator of deposit taking SACCOs while Wesa & Otinga established the financial distress of SACCOs listed in Nairobi securities exchange. This approves the Altman's model as robust for measuring financial distress. This study established that on overage SACCOs were suffering financial distress with an average Z score of 1.87.

The independent variable (Board Characteristics) was operationalized using five indicators: board size, board composition, board independence, board average level of education, and board tenure. On board size, it can be seen that the average size of the board of the sampled SACCOs in the years of the study was roughly 7 members (6.929). The largest observation for this indicator was a board size of 9 members, while the smallest observation was a board size of 5 members. This indicator had a variance and standard deviation of 1.643 and 1.282 respectively, indicating a low level of dispersion. Further, board size was fairly symmetrically distributed, but with a slight positive skewness (skewness = 0.065). Finally, it has a platykurtic tendency, since the kurtosis was only 1.993.

The second indicator of the independent variable was board composition. Board composition was measured by use of the proportion of board members who are of the female gender. The mean of 0.314 shows that on average, the female representation on the boards of the sampled SACCOs in the 2013 – 2018 periods was 31.4%. The highest observed level of female representation was 60%, while the least observed level was 11.1%. Further this indicator had a variance of 0.022 and a standard deviation of 0.148. Finally, board composition was observed to be positively skewed (skewness = 0.324) and platykurtic (1.841).

Board Independence was the third indicator of the dependent variable. This indicator was measured using the proportion of board members who are independent. The mean of 0.469 implies that 46.9% of the board members of all sampled SACCOs were independent. The highest observed value for the indicator was 0.857, implying that 85.7% of the members of the pertinent board were independent. Conversely, the minimum of 0.111 shows that the least observed level of board independence was in a board in which only 11.1% of the members were independent. Further, this indicator had a variance of 0.053 and standard deviation of 0.231. Further, it was slightly positively skewed (skewness = 0.037) and also platykurtic (kurtosis = 1.677).

The fourth indicator of board characteristics was the average level of education of the board members. This indicator was measured using a nominal scale for the highest level of education for each board member (1 for Tertiary level, 2 for undergraduate degree, and 3 for postgraduate degree). After this, an aggregate score for the average education levels of the board members of each board in each year was computed. The mean value of this indicator was 1.968, implying that on average; most board members of the sampled SACCOs had a bachelor's degree, with only a tiny minority having tertiary level education. The maximum observation of this indicator was 2.5, which implies that there was a board in a particular year which was equally comprised of bachelors and post graduate degree holders. Likewise, the

minimum observation of 1.5 implies that there was a board in a particular year which was comprised equally of holders of tertiary qualifications and bachelors' degrees. The level of variability in this indicator was quite low (variance = 0.104; standard deviation = 0.323). Additionally, this indicator was slightly positively skewed (skewness = 0.275) and it was also platykurtic (kurtosis = 1.797).

The last indicator of the independent variable was board tenure, which was measured using the average number of years the current directors, in any given year had served on the board. The mean of 5.570 shows that the average tenure of the board members was 5.57 years. The maximum observation for this indicator was 15.783, which implies that one board the average tenure of its members was 15.783 years. Conversely, the minimum observation (1.009) implies that in one board, the members had served for an average period of only 1.009 years. There was a relatively high level of variability in this indicator (variance = 12.013; standard deviation = 3.466). Further, it was positively skewed (skewness = 1.011) and leptokurtic (kurtosis = 3.360).

The moderating variable (Related Party Transactions) was measured using the Loans to directors and staff as a percentage of all total disbursed loans. Its mean observation of 0.0187 means that on average, directors and staff had borrowed and average of 1.87% of all money lent out. The maximum observation was a scenario in which directors and staff had borrowed 8% of all money lent out while the minimum observation was a scenario in which directors and staff had borrowed no money at all (0%) from their SACCO. The variance and standard deviation for the moderating variable were 0.000254 and 0.0159 respectively. Further, this variable was positively skewed (skewness = 2.258) and also leptokurtic (kurtosis = 7.999).

The intervening variable (Firm Revenue) was operationalized using the natural log of total reported revenue. It had a mean value of 19.407, maximum of 22.484, and minimum of 15.512. Finally, the control variable (External Borrowing) was operationalized using the

natural log of total borrowings from external parties. This variable had a mean of 18.580, maximum of 23.390 and minimum of 14.252.

Correlation Analysis

For the purpose of conceptualizing the intrinsic relationship between the studies independent, moderating, and intervening variables, correlation analysis was undertaken. Another essence of this procedure was to evaluate the strength of linear interrelationships between these variables, thereby precluding the problem of multicollinearity. Results of correlation analysis are shown in table 4.2:

Table 4.2:

Correlation Analysis

	Board Size	Board Composition	Board Independence	Board Average Level of Education	Board Tenure	Related Party Transactions	Firm Revenue	External Borrowing
Board Size	1							
Board Composition	0.0527	1						
Board Independence	0.0835	-0.0713	1					
Board Average Level of Education	0.0559	0.0512	-0.0105	1				
Board Tenure	0.038	0.1317	0.0196	0.0527	1			
Related Party Transactions	0.2064	0.0644	0.0603	-0.0326	-0.104	1		
Firm Revenue	0.1298	0.0231	0.0425	0.0365	0.1345	-0.0619	1	
External Borrowing	0.0158	-0.0236	0.0399	-0.0018	0.0188	-0.0447	0.5057	1

As per the output depicted on table 4.2 all the indicators didn't have any excessive levels of strong correlation. Thus, they can be jointly fitted as well as firm revenue and external borrowing. Board composition has a negative linear relationship with board independence and external borrowing, but a positive relationship with other indicators. Board independence has a negative relationship with the Board Average level. Education but a positive relationship with all other variables. Further, Board Average Level of Education was found to have a negative correlation with Related Party Transactions and External Borrowing but a positive relationship with the other variables. Board tenure has negative relationship with Related Party Transactions, and Related Party Transactions has a negative relationship with both firm revenue and external borrowing. Finally, there is a positive correlation between firm revenue and external borrowing.

4.3 Diagnostic Testing

Diagnostic tests are pre estimation procedures that evaluate whether the assumptions of Ordinary Least Squares (OLS) panel regression analysis are upheld. In particular, a strong linear relationship should not exist between any variables that are fitted jointly as regressors in a model (no multicollinearity), there should be panel level stationarity, error terms should be linearly independent (no autocorrelation), the variance of the error terms should be constant (no heteroscedasticity), and the error terms should be normally distributed (with a mean of zero and a constant variance). These assumptions and the particular tests that were used to test for each of them are discussed in detail as follows:

4.3.1 Testing for Multicollinearity

The researcher used Variance inflation factors of the independent variables to test multicollinearity. Variance inflation factors (VIF) indicates the extent to which the variance of estimated regression coefficients are overstated in comparison to when the predictor variables have no linear relationship. The decision criteria in this case is that for a variable

with VIF values larger than 10, additional investigation is of importance. Tolerance, defined as 1/VIF, is extensively used by researchers to examine the extent of collinearity. A tolerance value of 0.1 as in the case of VIF of 10 indicates the presence of collinearity.

Table 4.3

Test for Multicollinearity

Variable	VIF	Tolerance
Board Size	1.02	0.9848
Board Composition	1.03	0.9698
Board Independence	1.01	0.9862
Board Average Level of Education	1.01	0.9917
Board Tenure	1.03	0.9728
Mean VIF	1.02	

Table 4.3 shows that none of the indicators of the independent variable had a high level of linear dependence. This is deduced from the fact that all variables had a VIF that exceeded the maximum threshold of 10. Further, all values of tolerance are greater than the minimum threshold of 0.1.

Therefore, the data was deemed to pass the assumption of no multicollinearity.

4.3.2 Testing for Serial Correlation

Through application of the Wooldridge test for autocorrelation; we tested data for this research to establish if serial correlation existed for this dataset. The null hypothesis for this test is that 88there is no first order autocorrelation in the panels. For p values which are less than 5% the null hypothesis is rejected.

The researcher used the Wooldridge test for autocorrelation in panel data to test whether the study’s data conformed to the assumption of no autocorrelation.

Table 4.4

Wooldridge Test for Autocorrelation

Wooldridge test for autocorrelation in panel data
H0: no first-order autocorrelation
F(1, 41) = 22.585
Prob> F = 0.0000

Table 4.4, designates that the null hypothesis of no first order autocorrelation was strongly rejected, since the p value is highly statistically significant. This shows that the assumption of no autocorrelation was violated thus pointing to the use of a different model other than the Ordinary Least Squares as shown in section 4.4.5.

4.3.3 Heteroscedasticity

To establish Heteroscedasticity the study's data as tested using the likelihood Ratio Test. The null hypothesis of the Likelihood Ratio test is that the data is homoscedastic across entities, this means that the error terms depicts a constant variance. If the null is rejected, the deduction is that the data is heteroscedastic that is the variance of error terms across entities is not constant. To reject the null hypothesis in this test, the computed P values must be less than 5%.

The study utilized the Likelihood Ratio test to evaluate whether the assumption of no heteroscedasticity was met.

Table 4.5

Likelihood-ratio test for Heteroscedasticity

Likelihood-ratio test	LR chi2(41)	=	243.56
(Assumption: nested in hetero)	Prob> chi2	=	0.000

Table 4.5, shows that the p value of this test was statistically significant to a large degree. The implication is that the null hypothesis of no heteroscedasticity was rejected, thereby leading to the conclusion of the presence of heteroscedasticity. This dictated the use of a model other than the OLS model.as shown in section 4.4.5.

4.3.4 Model Specification

Classic panel data analysis suggests that the Hausman specification test should be used to help the researcher in making a decision of fitting the random effects model or the fixed effects model. These two models assume that the data meets all the assumptions of regression analysis, this means that there exists no collinearity of regressors, no autocorrelation, and that the error terms are normally distributed with a mean of 0 and a constant variance, this means that there existed no heteroscedasticity.

Each violation of CLRM assumptions has a remedy. In instances where there is multicollinearity, the variable with the highest Variance Inflation Factor (VIF) should be excluded from further analysis. In cases of autocorrelation, a PraisWinsten Panel Regression model should be fitted while in cases where there is heteroscedasticity, a normal panel model (but with corrected standard errors) should be fitted.

4.4 Relationship between Board Characteristics and Financial Distress

This part addresses the first research objective, which was to determine the relationship between board characteristics (as measured using Board Size, Board Composition, Board Independence, Board Average Level of Education, and Board Tenure) and financial distress

(as measured using the Altman's Z score) of deposit taking SACCOs in Nairobi County. In order to evaluate objective one, hypothesis one of the study, which is replicated below, was tested.

H_{01}; *There is no significant relationship between board characteristics and financial distress of Deposit Taking SACCOs in Nairobi County.*

4.4.1Model Fitting

Diagnostic testing has revealed the existence of first order autocorrelation and heteroscedasticity. Therefore, the commonplace panel data models, such as the pooled OLS model, fixed effects model, and random effects couldn't be utilized since they all work only in instances where the assumptions of panel data analysis are upheld. Reyna and Brainerd (2007) note that in the presence of autocorrelation and heteroscedasticity, a PraisWinsten model with corrected standard errors should be fitted. The PraisWinsten procedure generates robust results in the presence of autocorrelation, while the corrected standard errors implement a correction mechanism to reverse the effects of heteroscedasticity, thereby ensuring that the estimators so generated are still BLUE (Best, Linear and Unbiased Estimators). Table 4.6 shows the results of model fitting.

Table 4.6

Panel Regression Results for Testing Hypothesis One

Prais-Winsten regression, heteroskedastic panels corrected standard errors			
Group variable:	Saccoid	Number of obs =	294
Time variable:	Year	Number of groups =	42
Panels:	heteroskedastic (balanced)	Obs per group: min=	7
Autocorrelation:	panel-specific AR(1)	avg =	7
		max =	7
Estimated covariances =	42	R-squared=	0.3666
Estimated autocorrelations =	42	Wald chi2(5) =	87.19
Estimated coefficients =	6	Prob>chi2=	0.0000

FD	Coef.	Het-corrected Std. Err.	Z	P>|z|
BS	0.031	0.016	2.015	0.041
BC	-2.443	1.111	-2.198	0.028
BI	-0.103	0.047	-2.187	0.020
BE	-0.553	0.069	-7.954	0.012
BT	0.055	0.008	6.847	0.034
_cons	5.377	0.385	13.984	0.005

FD = Financial Distress, BS= Board Size, BC = Board Composition, BI = Board Independence, BE = Board Average Level of Education, BT = Board Tenure

The results indicated in table 4.5 shows that all indicators of board characteristics have a significant effect on financial distress. The table shows results of 42 SACCOs for a period of 7 years totaling to 294 observations. Board size has a positive and significant relationship with financial distress (b = 0.031, p = 0.016). This implies that larger boards could be detrimental to the smooth running of the organization, and a leaner board is better. The positive relationship is an indicator that the Altman's Z score increases (though a smaller score is more preferable) with increase in the board size. This is supported by Cannella (2009) who favours small boards however, Appiah and Amon (2017) are of a different opinion since they advocates for a larger board. The Agency theory favors a larger board.

This increases costs of monitoring while rendering decision making difficult for the SACCOs thus lean boards should be maintained.

Board composition has a significant negative influence on financial distress (b = -2.443, p = 0.028). Thus, as the ratio of female to male members of the board increases, financial distress decreases. The female gender is traditionally underrepresented in boards, and thus the results indeed show that having a gender-diverse board is essential in forestalling financial distress. Kanyi et al., (2018); Ombaba and Omuya (2016) and Kirsch (2018) agree with this observation. This study has established that boards need more women such that there is diversity in decision making. Appiah and Amon (2017) is the opinion that including more women on boards reduces opportunistic behavior thus decreasing the cost of monitoring by the principals.

Board independence also has a negative and significant effect relationship with financial distress (b = -0.103, p = 0.047). This underscores the fact that independent directors introduce outside skills set that could be effectual in enabling the firm to achieve its financial goals, thereby curtailing financial distress. Saleemi (2018) and Ntoiti (2013) agree with this study in reiteration that board independence should be enhanced to ensure that actions of management are duly questioned. This reduces agency problem as well costs of monitoring.

Further, the Average level of education of board members was also found to have a negative and significant relationship with financial distress. Ostensibly, the results imply that education helps in the betterment of the entire board and the quality of its decisions in running the firm. Pereira and Filipe (2015) concluded that although it is generally accepted that educational credentials for board members are critical, there is no positive relationship between higher education level and the performance of an entity. It is how ever clear as

indicated by the results of this study that the higher the educational qualifications of board members the better the decisions made by such a board.

Finally, it was established that board tenure had a positive and significant relationship with financial distress. This is attributable to the fact that high levels of board tenure imply that the members of the board have served for a long time, and probably infusion of new ideas, through replacement of some of the long serving members of the board can be helpful in helping firms the minimize the probability of financial distress. De Maere et al., (2014) supports this outcome in that they favour a short board tenure arguing that the firms with a short tenure are have likelihood of ending in financial distress. Byrd et al., (2010); Schnake et al., (2006); Vafeas (2003) all favor a short tenure and advance an argument that boards with a longer tenure will become more management friendly and thus unable to question the actions of management. This encourages financial distress. Forbes and Milliken (2010) are opposed to boards with a short tenure since boards with longer tenure have more tacit knowledge which enables them to make more informed decisions which have add value to the firm. Thus, the results imply that board characteristics definitely highly impact on the level of financial distress in the deposit taking SACCOs operating in Nairobi County.

The empirical model for this relationship is as per the equation below:

$$FD = 5.377 + 0.031BS - 2.443BC - 0.103BI - 0.553BE + 0.055BT$$

Where:

FD = Financial Distress

BS= Board Size

BC = Board Composition

BI = Board Independence

BE = Board Average Level of Education

BT = Board Tenure

Therefore, null hypothesis one is rejected at the 5% level of significance, in favor of the alternative hypothesis that there is a significant relationship between board characteristics and financial distress of Deposit Taking SACCOs in Nairobi County.

4.5 Moderating Effect of Related Party Transactions on the Relationship between Board Characteristics and Financial Distress

The second research objective was to establish the moderating influence of related party transactions on financial distress of deposit taking SACCOs in Nairobi County. To address this objective, the study's second hypothesis, which is outlined below, was tested:

> ***H_{02};*** *related party transactions do not significantly moderate the relationship between board characteristics and financial distress of deposit taking SACCOs in Nairobi County.*

The Stone-Romero and Liakhovitski (2002) three step procedure was applied to test the moderating effect of related party transaction.

4.5.1 Step one of testing the Moderating Effect of Related Party Transactions

The first step of testing the Moderating Influence of Related Party Transactions entailed fitting a panel regression model in which the five indicators of the independent variable (board characteristics) and the moderating variable (related party transactions) were utilized as regressors of the dependent variable (financial distress).

4.5.2 Diagnostic Testing

As per best practice before fitting any regression model, diagnostic testing was first conducted before model fitting.

4.5.3 Testing for Multicollinearity

The test for multicollinearity indicates that there was no linear relationship amongst the indicators of the independent variable and the moderating variable. This is ascertained from the fact that all variables had a VIF of below 10, and a tolerance that exceeded 0.1

Table 4.7

Testing for Multicollinearity

Variable	VIF	Tolerance
Board Size	1.06	0.9442
Board Composition	1.03	0.9669
Board Independence	1.02	0.9838
Board Average Level of Education	1.01	0.9906
Board Tenure	1.04	0.9643
Related Party Transactions	1.07	0.9359
Mean VIF	1.04	

4.5.4 Testing for Serial Correlation

From the Wooldridge test, it can be seen that there was presence of first order autocorrelation, since this test was statistically significant (p value = 0.0003).

Table 4.8

Wooldridge Test for Autocorrelation

Wooldridge test for autocorrelation in panel data H0: no first-order autocorrelation
F(1, 41) = 15.477
Prob> F = 0.0003

4.5.5 Testing for Heteroscedasticity

The Likelihood ratio test for heteroscedasticity further indicated that there was presence of heteroscedasticity since it was significant at the 1% level.

Table 4.9

Likelihood Ratio test for Heteroscedasticity

Likelihood-ratio test	LR chi2(41)	=	366.35
(Assumption: nested in hetero)	Prob> chi2	=	0.000

4.5.6 Model Fitting

Due to existence of autocorrelation and heteroscedasticity, model fitting was undertaken using the PraisWinsten approach with corrected standard errors. Results of fitting this model for step one of testing the moderating effect of related party transactions are depicted in table 4.10.

Table 4.10

Panel Regression Results for Step One of Testing the Moderating Effect

Prais-Winsten regression, heteroskedastic panels corrected standard errors

Group variable:	saccoid	Number of obs =	294
Time variable:	year	Number of groups =	42
Panels:	heteroskedastic (balanced)	Obs per group: min =	7
Autocorrelation:	panel-specific AR(1)	avg =	7
		max =	7
Estimated covariances =	42	R-squared=	0.2666
Estimated autocorrelations =	42	Wald chi2(5) =	27.19
Estimated coefficients =	7	Prob>chi2=	0.0000

FD	Coef.	Het-corrected Std. Err.	z	P>|z|
BS	0.193	0.075	2.580	0.010
BC	-0.609	0.324	-1.880	0.382
BI	-0.746	0.271	-2.750	0.000
BE	-0.529	0.195	-2.710	0.000
BT	0.004	0.023	0.180	0.860
RPT	0.101	0.034	-2.940	0.000
_cons	1.251	0.857	1.460	0.145

FD = Financial Distress, BS= Board Size, BC = Board Composition, BI = Board Independence, BE = Board Average Level of Education, BT = Board Tenure, RPT = Related Party Transactions.

It can be deduced from table 4.9 that Board Size (b = 0.193, p = 0.010), Board Independence (b = -0.746, p = 0.000), Board average Level of Education (b = -0.529, p = 0.000) have negative and significant effect on financial distress. Related Party Transactions (b = 0.101, p = 0.000) have positive and significant effect on financial distress. These results further show a R^2 of 0.2666. This means that before introduction of interaction terms in the model, variability in the indicators of board characteristics and in the moderating variable account for 26.66% of variability in financial distress.

The empirical model in this step can be written as:

FD = 1.251 + 0.193BS - 0.609BC - 0.746BI - 0.529BE + 0.004BT + 0.101RTP

Where:

FD = Financial Distress

BS= Board Size

BC = Board Composition

BI = Board Independence

BE = Board Average Level of Education

BT = Board Tenure

RPT = Related Party Transactions

4.5.7 Step Two of Testing the Moderating Effect of Related Party Transactions

In the second step of testing the Moderating Influence of Related Party Transactions, the analysis of step one above was replicated, but with inclusion of interaction terms, between the independent variable and the moderating variable. As such, five interaction terms were included as additional regressors in this part. These interaction terms were computed by multiplying each of the five indicators of the independent variable with the moderating variable. To avoid the challenge of multicollinearity which would inevitability arise in this

setting, the researcher transformed the interaction terms through computation of their z scores and utilization of these z scores in the model instead of the actual raw observations (Mirie, 2014).

There were five interaction terms, which were derived from the linear combination of the moderating variable and the independent variable as per table 4.11:

Table 4.11

Interaction Terms of the Independent and Moderating Variables

		Independent Variable				
		Board Size	**Board Composition**	**Board Independence**	**Board Education Level**	**Board Tenure**
Moderating Variable	Related Party Transactions	IT1	IT2	IT3	IT4	IT5

4.5.8 Diagnostic Testing

Regardless of the fact that standardized interaction terms were utilized in this step, testing for multicollinearity indicated the IT1, IT2, and IT4 had variance inflation factors which exceeded the threshold of 10.

Table 4.12

Testing for Multicollinearity

Variable	VIF	Tolerance
Board Size	1.86	0.5375
Board Composition	2.7	0.3704
Board Independence	2.39	0.4181
Board Average Level of Education	1.84	0.543
Board Tenure	2.6	0.3845
IT1	17.87	0.0559
IT2	10.67	0.0937
IT3	7.83	0.1278
IT4	27.19	0.0368
IT5	6.6	0.1516
Mean VIF	7.51	

Consequently, IT4 was removed from further analysis since it had the highest variance inflation factor, implying that it had a strong linear relationship with most other interaction terms.

4.5.9 Testing for Multicollinearity (After excluding IT4)

After IT4 was excluded, the researcher repeated the test for multicollinearity. This time round, all variables and interaction terms had VIFs that were within the threshold of 10, and the issue of multicollinearity was deemed resolved. This is as per table 4.13.

Table 4.13:

Testing for Multicollinearity (After excluding IT4)

Variable	VIF	Tolerance
Board Size	1.48	0.6754
Board Composition	2.39	0.4176
Board Independence	2.34	0.4277
Board Average Level of Education	1.03	0.974
Board Tenure	2.52	0.3969
IT1	9.75	0.1026
IT2	8.39	0.1192
IT3	7.45	0.1341
IT5	6.31	0.1585
Mean VIF	4.27	

4.5.10 Testing for Serial Correlation

The Wooldridge test for autocorrelation in panel data had a p value which was strongly statistically significant. Therefore, the autocorrelation was deemed to be evident in the data.

Table 4.14

Wooldridge test for autocorrelation

Wooldridge test for autocorrelation in panel data **H0: no first-order autocorrelation**
F(1, 41) = 12.631 Prob> F = 0.0010

Testing for Heteroscedasticity

The likelihood test for heteroscedasticity indicated the presence of heteroscedasticity in the data. This was deduced from the fact that this test was statistically significant (p value = 0.000).

Table 4.15: Likelihood-ratio Test for Heteroscedasticity

Likelihood-ratio test	LR chi2(41)	=	366.56
(Assumption: nested in hetero)	Prob> chi2	=	0.000

4.5.11 Model Fitting: Panel Regression Results for Step Two of Testing the Moderating Effect

Owing to the presence of autocorrelation and heteroscedasticity, the empirical model for step two of testing the moderating effect of related party transactions was undertaken using the Prais-Winsten panel regression with corrected standard errors as shown in table 4.16.

Table 4.16

Panel Regression Results for Step Two of Testing the Moderating Effect

Prais-Winsten regression, heteroskedastic panels corrected standard errors

Group variable:	saccoid	Number of obs =	294
Time variable:	year	Number of groups =	42
Panels:	heteroskedastic (balanced)	Obs per group: min =	7
Autocorrelation:	panel-specific AR(1)	avg =	7
		max =	7
Estimated covariances =	42	R-squared=	0.2714
Estimated autocorrelations =	42	Wald chi2(5) =	19.94
Estimated coefficients =	11	Prob>chi2=	0.0183

FD	Coef.	Het-corrected Std. Err.	z	P>|z|	[95% Conf. Interval]
BS	-0.009	0.004	2.070	0.004	
BC	-1.100	1.134	-0.970	0.333	
BI	-1.103	0.292	-3.780	0.011	
BE	-0.668	0.270	-2.470	0.013	
BT	0.036	0.010	3.750	0.010	
RPT	0.515	0.223	2.310	0.021	
IT1	0.202	0.071	2.840	0.016	
IT2	-0.355	0.208	-1.710	0.087	
IT3	-0.316	0.087	-3.630	0.010	
IT5	2.603	0.845	3.080	0.002	
_cons	0.009	0.004	2.070	0.004	

FD = Financial Distress, BS= Board Size, BC = Board Composition, BI = Board Independence, BE = Board Average Level of Education, BT = Board Tenure, RPT = Related Party Transactions, IT1 = Interaction Term 1, IT2 = = Interaction Term 2, IT3 = Interaction Term 3, IT5 = Interaction Term 5

As evident from table 4.16, board size, board independence and board education have negative and statistically significant influence on financial distress. Board tenure has positive and statistically significant influence on financial distress. Likewise, the moderation variable and all interaction terms, except IT2 and IT3 have positive and significant effect on the dependent variable. IT3 has negative and significant effect on the dependent variable. It can

also be noticed that there was an increase in the coefficient of determination (R^2) after inclusion of the interaction terms, precisely from 26.66% to 27.14%. Therefore, the moderating influence of related party transactions on the association of board characteristics and financial distress is deemed present; because the value of the coefficient of determination (R^2) increases after inclusion of the interaction terms.

As such, null hypothesis two that related party transactions do not significantly moderate the relationship between board characteristics and financial distress of deposit taking SACCOs in Nairobi County, was rejected in favor of the alternative hypothesis that related party transactions have a moderating effect on the relationship between board characteristics and financial distress of deposit taking SACCOs in Nairobi County.

The findings are supported by Gordon et al., (2004) who contend that related party transactions are non-beneficial and have a tendency of reducing shareholder value. It can also be noted that management use related party transactions both to direct wealth to themselves and to come up with deceptive financial statements (Kohlbeck & Mayhew, 2010). Gordon et al., (2004) and Abdul et al., (2018) are among other studies which hold a similar opinion.

Kim et al., (2019) and Aharony et al., (2005) are other studies which hold the opinion that related party transactions are negatively related to firm performance and can therefore encourage financial distress. However, Zakaria et al., (2017) are of a different opinion that related party transactions impact firm performance positively albeit the effect varies according to the parties involved.

4.6 Intervening Effect of Firm Revenue Relationship between Board Characteristics and Financial Distress

The third objective of the study was addressed in this part. The author applied the MacKinnon et al., (2007) three step approach to intervening influence of firm Revenue on the relationship between board structure and financial distress.

4.6.1 Step One of Testing the Intervening Effect of Firm Revenue

In step one of testing the Intervening Effect of Firm Revenue, the relationship between the dependent variable and the independent variable (while ignoring the intervening variable) is established. This is equivalent to the results of testing hypothesis one, as per table 4.6. Therefore, table 4.17 was replicated for convenience.

Table 4.17

Panel Regression Results for Step One of Testing the Intervening Effect

Prais-Winsten regression, heteroskedastic panels corrected standard errors

Group variable:	saccoid	Number of obs =	294
Time variable:	year	Number of groups =	42
Panels:	heteroskedastic (balanced)	Obs per group: min=	7
Autocorrelation:	panel-specific AR(1)	avg =	7
		max =	7
Estimated covariances =	42	R-squared=	0.3666
Estimated autocorrelations =	42	Wald chi2(5) =	87.19
Estimated coefficients =	6	Prob>chi2=	0.0000

FD	Coef.	Het-corrected Std. Err.	z	P>|z|	[95% Conf. Interval]
BS	0.031	0.016	2.015	0.041	
BC	-2.443	1.111	-2.198	0.028	
BI	-0.103	0.047	-2.187	0.020	
BE	-0.553	0.069	-7.954	0.012	
BT	0.055	0.008	6.847	0.034	
_cons	5.377	0.385	13.984	0.005	

FD = Financial Distress, BS= Board Size, BC = Board Composition, BI = Board Independence, BE = Board Average Level of Education, BT = Board Tenure

From table 4.17, it can be seen that all indicators of the independent variable had a statistically significant effect on the dependent variable. Board size and board tenure has positive effects to financial distress while board composition, board independence and board education effects financial distress negatively.

4.6.2 Step Two of Testing the Intervening Effect of Firm Revenue

Step two of testing the intervening effect of firm Revenue entailed estimating the relationship between the independent variable (Board Characteristics) and the Intervening Variable (Firm Revenue), while ignoring the dependent variable (Financial Distress). Panel regression analysis was conducted where each independent variable had a model in which it was the predictor of the intervening variable.

4.6.3 Diagnostic Testing

Diagnostic tests are carried out to address any form of bias in the data collected. Various diagnostic tests were carried out and the results are presented in the succeeding section.

4.6.4 Testing for Multicollinearity

As per table 4.18, all variance inflation factors of the regressors were less than 10. As such, it was deduced that there was no multicollinearity in the model.

Table 4.18

Testing for Multicollinearity

Variable	VIF	Tolerance
Board Size	1.01	0.9857
Board Composition	1.03	0.9726
Board Independence	1.02	0.985
Board Average Level of Education	1.01	0.9909
Board Tenure	1.04	0.958
Mean VIF	1.02	

Testing for Serial Correlation

Table 4.18 shows that the Wooldridge test for autocorrelation indicated the presence of serial correlation in the model.

Table 4.19

Wooldridge Test for Autocorrelation

Wooldridge test for autocorrelation in panel data **H0: no first-order autocorrelation**
F(1, 41) = 12.100
Prob> F = 0.0012

4.6.5 Testing for Heteroscedasticity

As per the output of the Likelihood ratio test for heteroscedasticity in table 4.19, there was presence of heteroscedasticity in the model.

Table 4.20

Likelihood-ratio test for Heteroscedasticity

Likelihood-ratio test	LR chi2(41)	=	345.19
(Assumption: nested in hetero)	Prob> chi2	=	0.0000

4.6.6 Model Fitting

Owing to the fact that there was evidence of autocorrelation and heteroscedasticity on diagnostic testing, the empirical model was fitted using the Prais-Winsten Panel Regression model with Corrected Standard Errors approach. Results of fitting this model are shown in table 4.20.

Table 4.21:

Panel Regression Results for Step Two of Testing the Intervening Effect

Prais-Winsten regression, heteroskedastic panels corrected standard errors

Group variable:	saccoid	Number of obs	=	294
Time variable:	year	Number of groups	=	42
Panels:	heteroskedastic (balanced)	Obs per group: min=		7
Autocorrelation:	panel-specific AR(1)	Avg	=	7
		Max	=	7
Estimated covariances =	42	R-squared=		0.9850
Estimated autocorrelations =	42	Wald chi2(5)	=	1.80
Estimated coefficients =	6	Prob>chi2=		0.8757

FS	Coef.	Het-corrected Std. Err.	z	P>|z|
BS	-0.026	0.048	-0.540	0.587
BC	-0.061	0.156	-0.390	0.694
BI	-0.016	0.091	-0.170	0.863
BE	-0.043	0.063	-0.690	0.490
BT	0.010	0.011	0.910	0.365
_cons	19.438	0.353	55.090	0.000

FS = Firm Revenue, BS= Board Size, BC = Board Composition, BI = Board Independence, BE = Board Average Level of Education, BT = Board Tenure

From table 4.21, all indicators of the independent variable do not have a significant effect on the intervening variable. Further, the overall model is also highly insignificant (p = 0.8757). Therefore, the MacKinnon et al., (2007) testing procedure for the intervening effect terminated at the second stage, and the intervening effect of firm revenue is deemed absent. As a result, the study did not reject the third null hypothesis that firm revenue does not significantly intervene in the relationship between board characteristics and financial distress of Deposit Taking SACCOs in Nairobi County.

4.7 Joint Effect of Board Characteristics, Related Party Transactions and Firm Revenue on Financial Distress

The fourth objective of the study was handled in this part. Here, the study was keen on establishing the Joint Effect of Board Characteristics, Related Party Transactions and Firm Revenue on Financial Distress of deposit taking SACCOs in Nairobi County, Kenya.

4.7.1 Diagnostic Testing

Diagnostic tests were carried out to ensure that the collected data meets the required threshold and the results are presented in the succeeding section.

4.7.2 Testing for Multicollinearity

The test for multicollinearity indicated that the independent, moderating, and intervening variables did not have a strong linear relationship, and could be jointly included as regressors in the same model. This is deduced from the fact that all VIFs were less than 10.

Table 4.22

Test for Multicollinearity

Variable	VIF	Tolerance
Board Size	1.08	0.9267
Board Composition	1.04	0.9645
Board Independence	1.03	0.9736
Board Average Level of Education	1.02	0.9795
Board Tenure	1.06	0.9429
Related Party Transactions	1.08	0.9281
Firm Revenue	1.03	0.9717
Mean VIF	**1.05**	

4.7.3 Testing for Serial Correlation

The Wooldridge test for autocorrelation had a p value of 0.0000, which was highly statistically significant. This implies the presence of autocorrelation in the model.

Table 4.23

Wooldridge Test for Autocorrelation

Wooldridge test for autocorrelation in panel data **H0: no first-order autocorrelation**
F(1, 41) = 31.561 Prob> F = 0.0000

4.7.4 Testing for Heteroscedasticity

The likelihood Ratio Test for Heteroscedasticity shows that there was presence of heteroscedasticity in the model. This is deduced from the fact that it was highly significant.

Table 4.24

Likelihood-Ratio Test for Heteroscedasticity

Likelihood-ratio test	LR chi2(41)	=	366.57
(Assumption: nested in hetero)	Prob> chi2	=	0.0000

4.7.5 Model Fitting

Owing to the presence of autocorrelation and heteroscedasticity, the model was fitted using the PraisWinsten approach with corrected standard errors. The results of fitting this model are shown in table 4.25

Table 4.25

Panel Regression Results for Testing the Joint Effect of board characteristics, related party transactions and firm revenue on financial distress of SACCOs

Prais-Winsten regression, heteroskedastic panels corrected standard errors

Group variable:	saccoid	Number of obs	=	294
Time variable:	year	Number of groups	=	42
Panels:	heteroskedastic (balanced)	Obs per group: min	=	7
Autocorrelation:	panel-specific AR(1)	Avg	=	7
		Max	=	7
Estimated covariances =	42	R-squared	=	0.7385
Estimated autocorrelations=	42	Wald chi2(5)	=	14.89
Estimated coefficients =	8	Prob>chi2	=	0.0375

FD	Coef.	Het-corrected Std. Err.	z	P>|z|
BS	0.127	0.084	1.500	0.133
BC	-0.631	0.207	-3.050	0.001
BI	-0.430	0.350	-1.230	0.219
BE	-0.645	0.257	-2.510	0.012
BT	0.017	0.006	2.690	0.009
RPT	0.087	0.023	3.820	0.000
FR	-0.150	0.098	-1.530	0.125
_cons	-0.851	2.027	-0.420	0.673

FD = Financial Distress, BS= Board Size, BC = Board Composition, BI = Board Independence, BE = Board Average Level of Education, BT = Board Tenure, RPT = Related Party Transactions, FR = Firm Revenue

From table 4.25, it can be noticed that board composition and board education have negative and significant effect on financial distress. Board tenure and related party transaction have positive and significant effect on financial distress. Further, the joint effect model has an overall p value of 0.0375 (significant at the 5% level), which implies that the independent, moderating, and intervening variables are jointly useful in explaining the dependent variable. The empirical model for this relationship can be expressed as:

$$FD = -0.851 + 0.127BS - 0.631BC - 0.430BI - 0.645BE + 0.017BT + 0.087RPT - 0.150FR$$

Where:

FD = Financial Distress

BS= Board Size

BC = Board Composition

BI = Board Independence

BE = Board Average Level of Education

BT = Board Tenure

RPT = Related Party Transactions

FR = Firm Revenue

Consequently, the null hypothesis of no joint effect was rejected in favor of the alternative that Board characteristics, related party transactions, and firm Revenue have a significant effect on financial distress of Deposit Taking SACCOs in Nairobi County.

4.8 Control Effect of External Borrowing on Financial Distress

This part addresses the fifth objective of the study, which was to establish the impact of external borrowing on financial distress of deposit taking SACCOs in Nairobi County. The study focused on the issue of whether the levels of external borrowing had a control effect on financial distress.

4.8.1 Diagnostic Testing

Diagnostic tests are pre estimation procedures that evaluate whether the assumptions of Ordinary Least Squares (OLS) panel regression analysis are up held.

Testing For Multicollinearity

The test for multicollinearity indicated that the independent, moderating, intervening, and control variables did not have a strong linear relationship, and could be jointly included as regressors in the same model. This is deduced from the fact that all VIFs were less than 10.

Table 4.26

Multicollinearity test

Variable	VIF	Tolerance
Board Size	1.05	0.8991
Board Composition	1.02	0.9632
Board Independence	1.01	0.9713
Board Average Level of Education	1.01	0.9796
Board Tenure	1.03	0.944
Related Party Transactions	1.04	0.9266
Firm Revenue	1.19	0.7046
External Borrowing	1.17	0.7316
Mean VIF	**1.13**	

4.8.2 Testing for Serial Correlation

The Wooldridge test for autocorrelation had a p value of 0.487, which was not statistically significant. This confirms that there was no presence of autocorrelation. Table 4.27 shows the results of the Wooldridge test for autocorrelation.

Table 4.27

Wooldridge Test for Autocorrelation

Wooldridge test for autocorrelation in panel data
H0: no first-order autocorrelation
F(1, 41) = 8.757
Prob> F = 0.487

4.8.3 Testing for Heteroscedasticity

The likelihood Ratio Test for Heteroscedasticity was statistically insignificant too, an indication that there was no heteroscedasticity in the model. This is evident in table 4.28.

Table 4.28

Likelihood-Ratio Test for Heteroscedasticity

Likelihood-ratio test	LR chi2(41)	=	18.66
(Assumption: nested in hetero)	Prob> chi2	=	0.158

4.8.4 Model Specification

After ascertaining that the main assumptions for panel data analysis were met, the study undertook a model specification procedure using the Hausman Specification Test. Essentially, this step was necessary in order to guide the study in making a decision on whether to fit the panel regression model using the fixed effects or random effects specification.

The results of the Hausman specification test are shown in table 4.29.

Table 4.29

Hausman Specification Test

	(b) **Fixed**	**(B)** **Random**	**(b-B)** **Difference**	**sqrt(diag(V_b-V_B))** **S.E.**
External borrowing	.0538558	0.011833	0.0420232	0.0284492
	b = consistent under Ho and Ha; obtained from xtreg			
	B = inconsistent under Ha, efficient under Ho; obtained from xtreg			
	Test: Ho: difference in coefficients not systematic			
	chi2(1) = (b-B)'[(V_b-V_B)^(-1)](b-B)			
		=		
		2.18		
	Prob>chi2 = 0.1396			

Table 4.29 shows that the p value of the Hausman specification test was not statistically significant at the 5% level. Based on this outcome, the panel regression model was thus fitted using the random effects specification.

4.8.5 Model Fitting

The empirical model for testing hypothesis five of the study was fitted using a random effects panel regression specification. Results of fitting this model are depicted in table 4.30

Table 4.30

Random Effects Panel Regression Model for Testing Hypothesis Five

Random-effects GLS regression

Random-effects GLS regression		Number of obs	=	294
Group variable:	saccoid	Number of groups	=	42
R-sq:		Obs per group: min	=	7
		avg	=	7
within =	0.0394	max	=	7
between =	0.5917	R-squared	=	0.7385
overall =	0.5488	Wald chi2(5)	=	13.21
corr(u_i, X) = 0 (assumed)		Prob>chi2	=	0.0350

FD	Coef.	Std. Err.	z	P>|z|
BS	0.21	0.11	1.88	0.06
BC	-0.75	0.10	-7.44	0.00
BI	0.63	0.44	1.41	0.16
BE	-0.50	0.12	-4.25	0.00
BT	-0.02	0.00	-4.45	0.00
RPT	0.10	0.02	5.89	0.00
FR	0.22	0.15	1.49	0.14
EB	0.12	0.12	0.97	0.31
_cons	-0.70	2.30	-0.30	-0.76

FD = Financial Distress, BS= Board Size, BC = Board Composition, BI = Board Independence, BE = Board Average Level of Education, BT = Board Tenure, RPT = Related Party Transactions, FS = Firm Revenue, EB=External Borrowing

The panel regression results with the control variable (external borrowing) shows that board composition, board education and board tenure have a statistically significant and negative

effect on financial distress. Board size has a statistically significant and positive effect on financial distress. The intervening variable measured by related party transactions has a statistically significant and positive effect on financial distress.

These findings are supported by Fiorillo (2006) who conducted a study on the influence of wholesale loaning of Uganda's credit cooperatives established that external financing increased the liquidity of the institutions but also increased the costs of borrowings. Sturm and Nuesch (2019) while undertaking a study intended to establish the moderating role of external financing on the association of sturdy voting rights and internal capital allocation efficiency, came to a conclusion that the moderating effect of external financing was not significant. Harelimana (2017) holds a similar opinion.

However, Shibutse et al., (2019) hold the opinion that external financing is significantly and negatively related to the fiscal performance of deposit taking savings and credit cooperatives. The study therefore concludes that savings and credit cooperatives ought not to borrow funds for creation of loan portfolios as this will increase leverage while reducing financial performance. This in turn will lead to financial distress of SACCOs.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the study, conclusions of the findings, and the policy recommendations drawn from the study findings.

5.2 Summary of findings

This research was majorly aimed at investigating the relationship between board characteristics and financial distress of deposit taking SACCOs in Nairobi County. Further, the research focused on the moderating influence of related party transactions on the association of financial distress with board characteristics of deposit taking savings and credit cooperatives in Nairobi County. Additionally, it examined the intervening influence of firm Revenue on financial distress of deposit taking SACCOs in Nairobi County and also the joint effect of board characteristics, related party transactions, firm Revenue and financial distress of deposit taking savings and credit unions in Nairobi County. Finally, this study established the control effect of external borrowing on financial distress of deposit taking SACCOs in Nairobi County.

Considering the relationship between board characteristics and financial distress of deposit taking SACCOs in Nairobi County, the study established that all indicators of board characteristics to have a significant influence on the level of financial distress in deposit taking SACCOs in Nairobi County. Pertaining the moderating influence of related party transactions on the relationship amid board characteristics and financial distress, this study found out that related party transactions have a moderating influence on the association of board characteristics with financial distress in deposit taking SACCOs in Nairobi County. However, no significant intervening effect by firm Revenue was established on relationship between board characteristics and financial distress in deposit taking SACCOs in Nairobi

County. Moreover, board characteristics, related party transactions, and firm Revenue were found to exhibit a statistically significant joint effect on financial distress of deposit taking SACCOs in Nairobi County. Finally, the research found no influence of external borrowing on financial distress of deposit taking SACCOs in Nairobi County.

5.3 Conclusions

Grounded on the study outcomes and discussion of the results, this research concludes that board characteristics have an implication on financial distress of deposit taking SACCOs in Nairobi County. Further, the research determines that related party transactions have a moderating influence on the association of board characteristics and financial distress of deposit taking SACCOs in Nairobi County. However, this research concludes that firm Revenue has no intervening effect on the relationship between board characteristics and financial distress of deposit taking SACCOs. Further, the study concludes that there is a significant joint effect of board characteristics, related party transactions, and firm Revenue on financial distress of deposit taking SACCOs in Nairobi County. Finally, the control influence of external borrowing on financial distress is concluded to be absent.

5.4 Policy Recommendations

As informed by the foregoing argument, the research makes recommendations as follows: SACCOs need to have lean boards, since board size was found to have detrimental effects on financial distress. Board composition should also be improved to increase the number of female board members, due to the fact that that this helps in forestalling financial distress. Additionally, there should be more inclusion of independent members on SACCO boards since this indicator has an inverse relationship with financial distress. Further, there should be deliberate inclusion of members with high and relevant education credentials, since this attribute was found to be helpful in curtailing financial distress. Moreover, it was established that board tenure had a positive association with financial distress. Therefore, SACCO boards

should have term limits for their members to allow fresh members periodically, who are likely to inject new ideas into the boards' decision making mechanism.

The study further recommends that related party transactions should be kept at a bare minimum, since they were found to have a significant moderating influence on the association of board characteristics with financial distress of Deposit taking SACCOs in Nairobi County. Essentially, regardless of how impressive the characteristics of the board are, the firm will still be at risk of getting financially distressed if there are high levels of insider lending.

Since firm revenue is not found to intervene the association of board characteristics and financial distress, the study recommends that SACCOs should focus on forming boards with desirable characteristics, regardless of their respective revenue amounts, because firm revenue has no bearing on the relationship between board characteristics and financial distress. However, the effect of firm revenue on financial distress is statistically significant, when it is jointly considered with board characteristics and related party transactions.

The study recommends that external borrowing can be considered to bail out SACCOs out of financial distress but there should be set limits as well as a well-established SACCO funding system by the regulator as policy measures since it has no significant control effects on SACCO's level of financial distress.

The regulator may come up with a tool based on Altman's Z score models to establish financial distress in SACCOs in order to offer timely advice to alleviate more distress and consequent bankruptcy which may lead to closure of SACCOs.

5.4.1 Contribution to knowledge

The basic goal of the research was to establish the relationship between board characteristics and financial distress of deposit taking SACCOs in Nairobi County, to establish the

moderating effect of related party transactions and the intervening effect of firm revenue on this relationship. The study also established the control influence of external borrowing on the Said relationship and this contributed immense knowledge as discussed.

(i) Conceptual Contribution: The current study has included an interplay of upper echelons, agency, stewardship and stakeholder theories jointly to establish a joint relationship after establishing the influence of independent variables on the dependent variable, the influence of the moderating variable on the relationship and the influence of the intervening variable on the relationship between board characteristics and financial distress of SACCOs in Kenya. When related party transactions are not carefully managed then they are likely to increase financial distress and vice versa. Firm revenue should be managed carefully and diversification of revenue streams should be embraces, but as per the findings even firms with high revenue levels are likely to fall into financial distress considering that the firm revenue was found to intervene the relationship. Therefore in the formation of the board of directors. Board characteristics should be carefully considered as advised in objective one. External borrowing should be prudently considered since its cost is an allowable expense and can cushion SACCOs from experiencing financial distress. Unlike past studies, this thesis established that even when the intervening variable had no significant influence on the relationship between board characteristics and financial distress of SACCOs, the relationship as significant when tested jointly with other variables.

(ii) Contextual Contribution: The current study analyses the relationships among RPT, Firm revenue, board characteristics, external borrowing and financial distress variables in Nairobi domiciled DT SACCOs and generalizes to other SACCOs in Kenya. Nairobi County is home to the highest number of deposit taking SACCOs in Kenya the SACCOs are spread across all sectors of the Kenyan economy.

(iii) Methodological Contribution: The current study employed panel data analysis technique to analyze the relationships among RPT, Firm revenue, board characteristics, external borrowing and financial distress variables in Nairobi domiciled DT SACCOs unlike past studies. Employing panel data analysis allows for more accurate results which in turn supports more accurate predictions. Panel data analysis also helps in capturing complex situations and has greater control on the impact of omitted variables. Panel data analysis helps in uncovering dynamic relationships.

5.5 Areas for Further Research

This research mainly focused on the relationship between board characteristics and financial distress on deposit taking SACCOs in Nairobi County. Since it didn't incorporate SACCOs from the rest of the country, future researchers can contemplate examining this relationship from a country wide scenario.

A similar study may be conducted using different parameters to measure board diversity and incorporating the level education at lower levels below the diploma level studied in this research.

Further, future researches can also expand the body of knowledge by considering other firms, not necessarily SACCOs, in order to have a fuller picture on the association of board characteristics and financial distress.

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APPENDICES

APPENDIX I: LETTER OF INTRODUCTION

Munene Halldess Nguta
P.O. Box 3158 - 60200
MERU

E-mail: hmunene@must.ac.ke

15th January, 2020

The Chief Executive Officer,
Sacco Societies Regulatory Authority,
Capital Hill,
P.O. Box 25089 - 00100
NAIROBI

Dear Sir/Madam,

RE: REQUEST TO CONDUCT RESEARCH USING SECONDARY DATA IN YOUR CUSTODY

I am Munene Halldess Nguta, a Ph.D Student at Kenya Methodist University undertaking research on "Influence of Corporate Governance on Financial Distress in SASRA regulated SACCOs in Kenya".

I kindly request to be granted permission to collect secondary data of SACCOs based in Nairobi County from your data base.

Please be assured that all information gathered through this data collection sheet will be treated with utmost confidentiality and will be exclusively used for academic research.

Due to some challenges, I was not able to collect this data earlier.
Thank you.

Yours Sincerely,

MUNENE HALLDESS NGUTA
REG. NO. BUS-4-0267-1/2015

APPENDIX II: CLEARANCE LETTER

Kenya Methodist University

P.O. Box 267-60202
Meru, Kenya
Email: info@kemu.ac.ke

Tel: (+254-020) 2118423-7, 064-30301/31229
Fax:(+254-064) 30162
website: www.kemu.ac.ke

March 16, 2018

Executive Secretary
National Council for Science and Technology
P.O Box 30623 -- 00100
NAIROBI

Dear Sir/ Madam

RE: MUNENE HALLDESS NGUTA – BUS-4-0267-1/2015

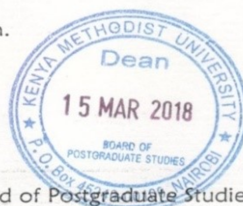
This is to confirm that the above named is a bona fide student of Kenya Methodist University pursuing a Doctor of Philosophy Business Administration and Management.

Halldess is undertaking a research study on "**Influence of Corporate Governance on Financial Distress in Sasra Regulated Sacco's in Kenya**". To successfully complete her research work, she requires relevant data in her area of study.

In this regard, we kindly request your office to issue her a research permit to enable her collect the data for her academic research work.

We thank you in advance for your cooperation.

Yours faithfully,

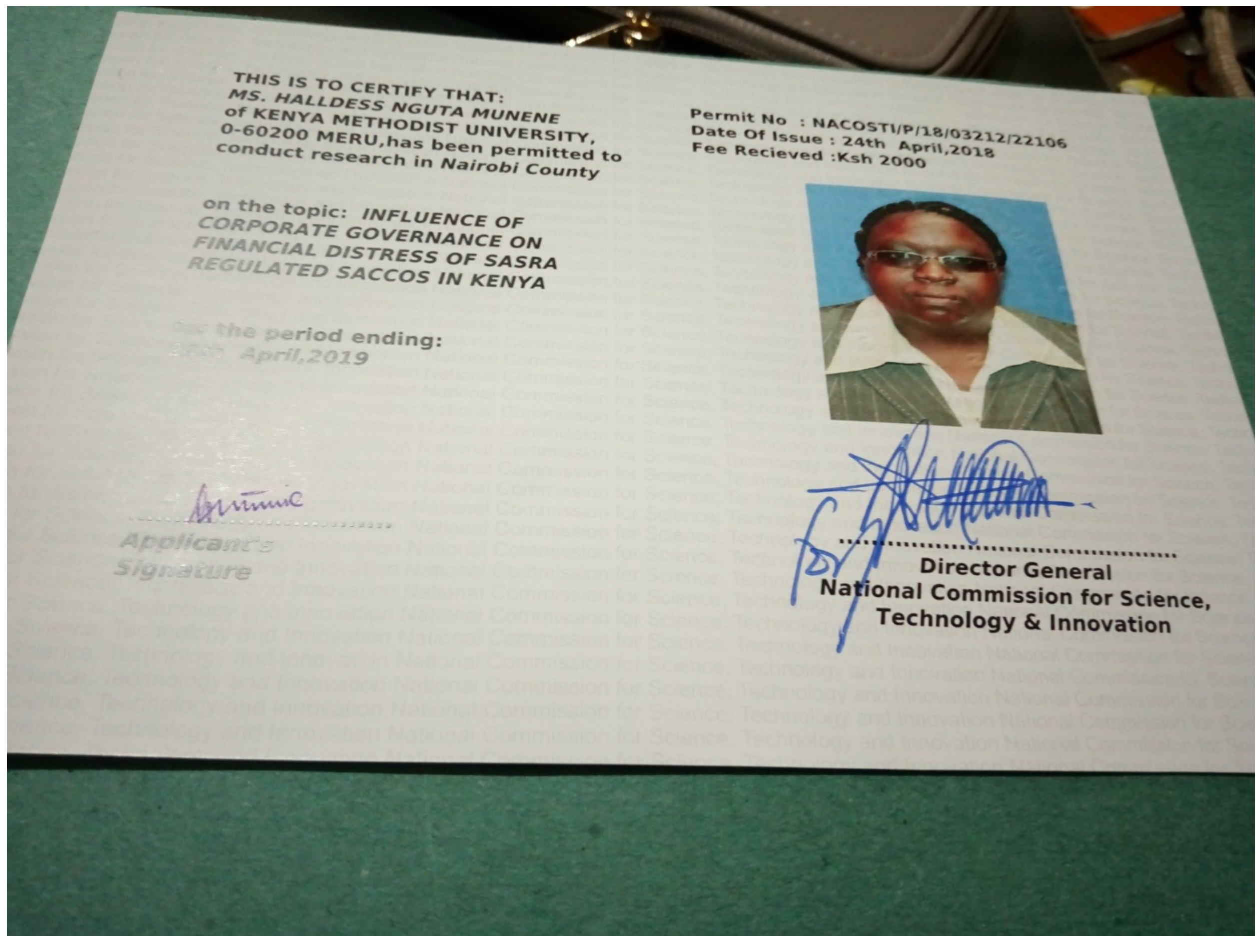


Dr. Evangeline Gichunge
Associate Dean, Research Development & Board of Postgraduate Studies

Nairobi Campus:Koinange Street, P.O Box 45240-000100 Nairobi ~ Tel. +254-20-2118443/2248172/2247987/0725-751878. Fax +254-20-2248160. Email:nairobicampus@kemu.ac.ke
Nakuru Campus: Mache Plaza, 4th Floor. P.O Box 3654-20100,Nakuru, Tel +254-51-2214456 Fax 051-2216446, Email: nakurucampus@kemu.ac.ke
Mombasa Campus: Former Oshwal Academy, P.O. Box 89983, Mombasa. Tel:+254-412495945/8, Fax 041-2495946. Email mombasacampus@kemu.ac.ke
Nyeri Campus: Sohan Plaza, 4th Floor. Tel: +254-61-2032904. Fax 254-61-2034100, Email. nyericampus@kemu.ac.ke

The Future is Here!

APPENDIX III: RESEARCH PERMIT



THIS IS TO CERTIFY THAT:
MS. HALLDESS NGUTA MUNENE
of KENYA METHODIST UNIVERSITY,
0-60200 MERU,has been permitted to
conduct research in *Nairobi County*

on the topic: ***INFLUENCE OF CORPORATE GOVERNANCE ON FINANCIAL DISTRESS OF SASRA REGULATED SACCOS IN KENYA***

for the period ending:
24th April,2019

Permit No : NACOSTI/P/18/03212/22106
Date Of Issue : 24th April,2018
Fee Recieved :Ksh 2000

Applicant's Signature

Director General
National Commission for Science,
Technology & Innovation

APPENDIX IV: DATA COLLECTION SHEET

Variables and indicators	**2012**	2013	2014	2015	2016	2017	2018
Independent Variable (Board Characteristics)							
Number of Board Members							
Number of Board Members of either Gender							
Number of Board Members who are independent (are not insiders and are not affiliated with firm in any way except their directorship)							
Level of education of board members							
Tenure of the board members (YRS)							
Intervening Variable (Firm Size)							
Total Revenue of SACCO (KES)							
Moderating Variable (related party transactions)							
Total value of loans to related parties (KES)							
control variable(Interest Rate Capping)							
Total number of all disbursed loans							
Dependent Variable (Altman's Z Score)							
Current assets (KES)							
Current liabilities (KES)							
Total assets (KES)							
Retained earnings (KES)							
Earnings before interest and taxes (KES)							
Book value of equity (KES)							
Total liabilities (KES)							