



**EFFECT OF INVESTMENT DECISIONS ON FINANCIAL PERFORMANCE OF DEPOSIT-TAKING SAVINGS AND CREDIT COOPERATIVE SOCIETIES IN NAIROBI COUNTY, KENYA**

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**Morwabe, B. K.,<sup>1\*</sup> & Muturi, W.<sup>2</sup>**

<sup>1\*</sup>Msc. Candidate, Jomo Kenyatta University of Agriculture & Technology [JKUAT], Kenya

<sup>2</sup> Professor, Ph.D, Lecturer, Jomo Kenyatta University of Agriculture & Technology [JKUAT], Kenya

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**ABSTRACT**

*The general objective of the study was to establish effect of investment decisions on financial performance of DT-SACCOs in Nairobi County, Kenya. Secondary data for five years that is 2014-18, for 43 DT-SACCOs was collected from SASRA and financial statements of specific DT-SACCOs; this data was analyzed using SPSS version 25. Specific objectives of study included: assessing effect of FOSA, Government Securities, Fixed Deposit Account and Shares investment decisions on financial performance of DT- SACCOs within Nairobi County. ROA was used as a measure for financial performance. Descriptive research design for a quantitative time series data was adopted using a census technique. Hypotheses were tested using correlation and regression analysis. Results indicated that FOSA have positive significant association with financial performance of DT-SACCOs. Secondly, Government securities indicated a positive significant and moderate relationship on financial performance of DT-SACCOs. Fixed deposit account had a significantly positive but low influence on financial performance of DT-SACCOs. Shares had a positive significance and substantial influence on financial performance of DT-SACCOs. The study found out that the model containing FOSA Activities, government securities, fixed deposit account and shares as investment decisions had a strong influence on changes in DT-SACCOs profitability. The study highly recommended that, management should follow a disciplined investment approach; they should follow some degree of professionalism in coming up with investment decisions, this would boost deposit SACCOs financial profitability.*

**Key Words:** FOSA, Government Securities, Fixed Deposit Account, Shares investment

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## INTRODUCTION

Cooperative sector is an integral economic growth contributor as it intermediates between depositors and borrowers. This sector also extends financial assistance to customers, mainly the poor who are its target group (Feather & Meme, 2019). Towards this achievement, cooperatives perform three main activities which include receipt of savings from members, issuance of credit to help them better their living standards and advice to members on where and when to invest for better utilization of the borrowed credit. The borrowed amount is required to be used in the progression of the contemplated scheme (Mwakajumilo, 2011).

In Kenya, cooperatives have gone through two critical cycles, state control period and economic liberalization era. State control period which elucidates the origin and growth of cooperatives enhanced the government's social economic policies. They were later interfered with state politics. It is this interference that necessitated economic liberalization of cooperates in the 1990s, with the argument that the success of cooperatives relied on the market principles. Later, new policies, which could enable self-controlled and democratically organized cooperatives, were introduced (Wanyama, 2016).

Essentially, cooperatives were created to contain poverty, but ever since the government started dominating in its management by coming up with legal provisions, its real intended purpose has been assumed, the real targeted members have taken over the passive role. Ensuring genuine membership and management by members can bring back the intended purpose of poverty alleviation (Sizya, 2001). In addition, getting to the solution on how to improve members' living standards is important (Gunga, 2013). In ensuring the viability of cooperatives, (Stalebrink and Sacco 2006) have championed the need to secure the principle of maintaining sufficient liquidity levels to cater for current obligations and producing investment income equal to market yields.

Members' savings are the major source of funds in SACCOs which are used by SACCOs in various investments such as loan to members, financial and liquid investments. While undertaking all these investments, managers should ensure safety and good returns for their money (Auka & Mwangi, 2013). Investment decisions by experts are crucial; they add value to cooperatives' credibility rating by the agencies. (Badertscher, Shroff & White, 2013) observed that investment experts are better positioned in advising customers on what to invest due to projects' irreversible nature and suggested that, an investment should be undertaken when the cost of postponing the project is likely to be greater than its current value.

Financial performance is the combination of short and long term decisions and techniques with same target of enhancing growth of an organization; this is so by ensuring returns on capital exceed cost of capital, performance measures are used in computation of performance of organizations (Esokomi & Mutua, 2018). Performance measures refer to the degree in which an activity has been accomplished by maintaining quality. It is also a measure of how efficient the firm has employed its scarce resources to come up with gains (Kiaritha, 2015). This measure shows if an institution has made use of its assets efficiently to create revenue which enhances financial soundness of a firm. There are a number of financial indicators categorized into; profitability, liquidity, leverage and efficiency ratios. Companies prefer use of profitability ratios, some of them include; return on assets, return on equity and profit after tax ratios (Hadi, 2019).

Return on Assets (ROA) depicts how efficient the company uses its assets in returns generation. It's a ratio of total income and total assets of a firm. High ratios are desirable; they indicate great use of assets to generate returns conversely low ratios show poor use of assets. This ratio shows how best the

company's assets have been used to generate revenue (Hadi, 2019)

Cooperatives were started in Kenya in the year 1908 and were only associated with the whites. The Kenyan government started controlling SACCOs in 1945 after the passing of the Co-operative Ordinance Act (Njenga and Jagongo). Africans were not allowed to take part as the colonialist considered them illiterate. They were commenced with a purpose of helping the whites market their farm products. It's until 1940s that the whites allowed the spread of SACCOs to enable growth. The Europeans allowed Africans to participate in the year 1946, this resulted to enactment of the new Co-operative Societies Ordinance, and a department was created under the registrar of companies with a goal of boosting farm products (Muriuki & Ragui, 2013).

In Kenya SACCOs were first registered in the year 1964, this is a year later after Kenya attained its independence. More SACCOs were then formed in relation with residence, churches and job occupations, in 1969 the Kenya government came up with more rules that restricted the formation basis to some secure crop. In 1973 the Kenya Union of Credit Cooperative Societies was formed to look at SACCOs' organization (Muriuki, 2010).

Profitable SACCOs can are in a position to withstand economic turmoil in comparison to the poor performing SACCOs. Financial performance evaluation is measured using the financial tools. A better performing organization paints a picture of how well an organization uses its assets, stakeholder's equities, expenses, revenues and liabilities. This information benefits the managements, investors, depositors and regulators (Jha & Hui, 2012).

### **Statement of the Problem**

SACCOs contribute immensely to the growth of the economy In Kenya; they promote the saving culture for its members and provide them with loans at a low

interest rate to better their living standard. SACCOs' undesirable performance has been witnessed; deposit-taking SACCOs are continually facing stiff competition from other deposit-taking institutions in Kenya, particularly commercial banks (Mugo, Muathe & Waithaka, 2019; Odhiambo, 2019). Banks have gone to an extent of issuing unsecured loans to their clients and non-clients; this non-price competitive tool has posed a challenge on SACCOs' performance.

To be financially sound these institutions have opted venturing into other investments (Munene, Ndambiri & Wanjohi, 2019). However it is not clear which of these investment decisions lead to desirable financial performance of these SACCOs hence the study. Research on investment decisions and their relationship with profitability have been focused on other companies with limited mix research results on DT-SACCOs; hence the research focused on them.

Musau (2016) associated venture options and performance in SACCOs; a positive relationship was reported for restoration, variegation and innovative decisions with returns while a negative association with replacement. Hussein (2017) associated investment with commercial banks' returns; the outcome indicated insignificant negative relationship between investment in government securities, properties and profitability. Mella (2016) study on pension funds' performance in relationship with FOSA investment established that FOSA were most preferable due to the high returns, this is contrary to the work of Odhiambo (2015) which indicated a negative relationship between FOSA and financial performance of SACCOs. Rop, Kibet & Bogonko, (2016) established that government securities positively impacted commercial banks performance. Jepkorir, Muturi & Ndegwa (2019) established that inefficiency of capital management affected performance of SACCOs. Other variables such as Investment in Fixed Deposit Account, shares have been left out, there are mixed results on Government Securities and FOSA on financial performance. This

study covered these variables in relation to financial performance and narrowed down into deposit-taking SACCO societies since a number of studies have covered other companies and SACCOs but not particularly DT-SACCOs even with the unimpressive performance witnessed in such Deposit taking institutions.

### **Objectives of study**

The general objective of the study was to assess the effects of investment decisions on financial performance of deposit-takings SACCOs in Kenya. The specific objectives were;

- To determine how investment in FOSA affect financial performance of DT-SACCOs in Kenya
- To determine how investment in Government Securities affect financial performance of DT-SACCOs in Kenya
- To determine how investment in Fixed Deposit Account affect financial performance of DT-SACCOs in Kenya
- To determine how investment in Shares affects financial performance of DT-SACCOs in Kenya

## **LITERATURE REVIEW**

### **Keynesian Theory of Investment**

The Keynesian investment theory was developed by Maynard Keynes in 1936. It posits that investment is driven by interest rate and Marginal efficiency of capital (MEC) (Arrow, 2017). MEC is the discount rate which could make the present value from expected returns of a capital asset equal to the price of supply. It is used in ranking projects from the most viable to the least. The MEC rule is to accept projects on condition that MEC exceeds interest rate. Low interest rates attract investments as firms can borrow at low rates since savings will only give low returns (Fuller, 2013).

Firms have a target of maximizing returns; this is possible by considering suitable investments due to their irreversible nature (Arrow, 2017). Marginal

efficiency of capital decrease with the level of investment; this is because most of the projects with great opportunities are given a first hand at the earlier stages. The theory has been criticized in its consideration of supply price as an ex-ante decision; this is untrue as it requires an investor to have knowledge on the other investors' intentions in the industry to be aware of the supply price (Chick, 2002) The theory will be important in guiding SACCOs on the best time to borrow and invest or when to deposit their money and postpone their investment until its profitable.

### **Tobin's Q Theory of Investment**

This theory was developed by Tobin in 1969; it posits that investment should be made only if the average Q is not less than one, (Eklund, 2013). Average Q is the ratio between market value of assets and its replacement cost. At the equilibrium point Q is expected to be zero suggesting that the difference between instatement cost of capital and restoration cost of capital is zero. When the market value surpasses the company's recorded assets, Q becomes greater than one. This indicates that the assets are worthy more than the price they paid encouraging investment, hence firms will issue there Shares.

When Q is less than one, investment is discouraged as the market value is less that the unmeasured assets of the company indicating undervaluation of assets; thus the assets will not earn better returns (Yoshikawa, 1980).The challenge with this theory is computation of Q since it is only the average Q that can be easily arrived at (Musau , 2016). This theory will be of benefit in this research as it will be used in comparison of amount invested and the DT-SACCOs profitability before settling on the project to undertake.

### **Modern Financial Portfolio Theory**

The theory was suggested by Harry Markowitz in 1959. It states that, investor's choice of portfolio is



geared towards maximization of returns for a given risk, he came up with a given set of assets and the risk attached, standard deviation of expected return is the measure of asset risk (Markowitz, 1991). Risk tolerance levels differ from one investor to the other and this triggers different choice on set of assets to invest in (Cardozo, 1985). It is the return level that motivates the investors on which risk to bear. Choice of different assets within the efficient frontier bearing different risks is a way of diversifying the risks involved. Contribution from each asset is aggregated to come up with the total portfolio (Ball, 1969). Each asset provides a certain expected future return depending on the risk involved (Gold, 1995). The mix of assets depends on the risk fuzzy nature of the managers; diversification is a way of hedging risk which results to non-interest income (Rossi, Schwaiger & Winkler, 2009).

Wallen Buffet challenges this theory arguing that, great returns can be as a result of managerial skills rather than the investment skills or a combination of both (Rani, 2012). This theory will shed light on the asset choice in minimization of investment risk, enabling desirable performance of financial institutions.

### **Pecking Order Theory**

Pecking order theory was first proposed by Donald in 1961 and later modified by Myers Steward and Nicholas Majluf in 1984. They observed that firms prefer internal funding which includes retained earnings and depreciation expenses to external funding like debt and equity (Goyal, Rahman & Kazma, 2013).

Firms seek external funding only if there is undue demand for funds as a result of bulges during extreme financial distress. This theory is entirely plausible from the look at heavy reliance of internal funds by firms. Managers try as much to avoid external funding for fear of facing capital market discipline. The Pecking order theory's key idea the

hierarchical nature of funding, if there is need for external funding safest securities are first issued, followed by hybrid securities such as convertible bonds and lastly equity as a last resort (Wahome, Memba & Muturi, 2015)

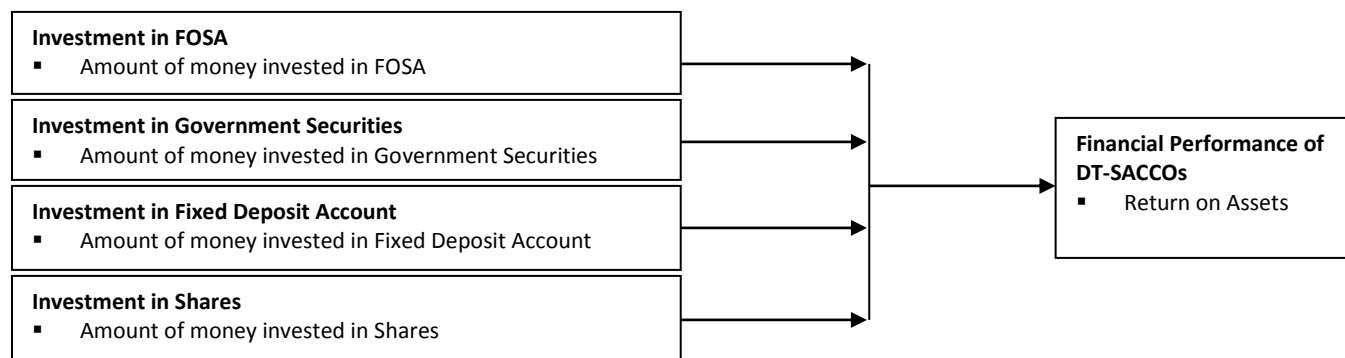
According to this theory, choice of finance is driven by adverse selection problem, it suggests that managers have a know-how on the firms' prospectus due to insider information than investors do, issue of shares may signal over valuation explaining the over reliance on debt over equity. Suppose there are three sources of finance namely: retained earnings, equity and debt ; retained earnings being an internal source of funds are not in any way associated with adverse selection problem while equity has more of this problem than debt. Both require adverse selection premium but equity needs more. From the investors point of view equity is riskier than debt for this reason they will demand high Return On Equity (Zoppa & McMahon, 2002).

### **Wreckers Theory of Financial Distress**

The theory emanated from works of Campbell, Hilscher, and Szilagyi in the year 2005 (Meeme 2015). It argues that shares of financially distressed firms immensely underperform those of stable firms. It's always anticipated that the financially health firms could do better as distressed firms are highly geared therefore riskier. It seeks to justify the gains that may rise out of the financial distressed firms benefiting the shareholders (Von, 2005). Some investors may be aware of the low returns from the distressed stock but still maintain them. The benefits to shareholders in financial distressed firms are as a result of purchase of the company's assets at bargain prices. These benefits are even greater when the changes of a firm resurrection are too minimal, for this reason a good number of owners prefer holding rather than selling the distressed stock (Campbell, Hilscher, & Szilagyi 2008).

Negative excess returns should not be attributed to market inefficiency or irrational markets; these returns can be shown by equilibrium in results under t market efficient conditions where the owners will claim them as in kind returns. This theory paints a picture of affirm being hit by continuous shocks resulting credit risks due to defaults that result to

credit crunch (Sporta & Ochogo 2018) Since financial distress results to high non-performing loans the bank runs. Financial institutions with low asset quality may have to lower their risks weighted assets and employ stringent policies as they construct their capital during financial distress.



**Independent Variables**

**Dependent Variable**

**Figure 1: Conceptual Framework**

**Empirical Literature Review**

Matumo, Njoroge and Maina (2013) associated saccos’ performance with front office service activity in Tharaka Nithi county, Kenya. Descriptive research design was adopted; the target population was three saccos. Secondary data was collected for six years; Correlation of data was used in data analysis. The study indicated that FOSA ha a positive significant effect on SACCOs performance

Njuguna and Makori (2015) Looked at how FOSA influence financial performance of savings and credit co-operative societies. The study employed descriptive research design, primary data was collected. The target population was 388 respondents; cluster sampling was used to acquire a sample size of 116. Data was analyzed using qualitative and quantitative analysis. Results indicated that front office service activities had a positive and significant effect on financial performance of SACCOs.

Odhiambo and Ochieng’ (2018) associated front office service activity products with financial performance of savings and credit cooperative societies in Kenya. Content analysis statistics method was used on data from the earlier articles that contained data on the same. Research results indicated that, FOSA provided services and products that met the savers’ requirement; as a result, it increased the customer base positively influencing SACCO’s returns.

Kipkorir et al., (2016) evaluated SACCOs’ profitability looking at various investments in Baringo County. The predictor variables were; Loans to members, government securities, FOSA and real estate on profitability of the registered SACCOs. A descriptive survey design was used targeting 316 members from the 73 registers SACCOs. Stratified sampling was adopted in coming up with a sample size of 177 correspondents. Primary source of data was used. Descriptive and inferential statistics were employed in analysis of the collected data. It was noted that the above factors had a perfect influence on performance

of SACCOs with FOSA activities leading followed by lending to members then lending to the government, and real estate lagged behind.

Odhiambo (2015) examined Kenya commercial banks returns focusing at the real estate as an investment. Information for 9 such institutions banks was collected over 5 year duration. Panel data analysis was used on the collected data. Results showed that financial performances of these institutions were not significantly affected by such an investment. Factors which were found to significantly contribute to profitability include; operational expenses, size and market structure, the study concluded that profitability of these institutions is not affected by real estate investment.

Rop, Kibet and Bogonko (2016) associated financial soundness of commercial banks with investment diversification in Kenya targeting the commercial banks. A positive relationship was noted between government securities, insurance investment, and real estate investment and buying of Shares with financial performance of commercial banks in Kenya. Purchase of Shares was noted as the best investment others in that order included real estate, insurance and lastly government securities ventures.

Shrestha (2018) looked at investors' interest in the government securities in Nepal. Descriptive and analytical research design was employed with a target population being all the government securities investors. Judgmental sampling was used to choose investors and a sample size of 200 was achieved. The outcome indicated that both the poor and the rich were interested in the government investment. A conclusion was drawn that; income is the major factor in the government securities investment.

Mella (2016) studied pension funds' financial soundness looking at real estate as an investment in Kenya. A descriptive survey research design was used; all pension funds that had been directed towards real estate investment were part of the study, making a

sum of 48 by Dec 2015. Multiple regression model as a tool for data analysis was used. Results revealed such an investment contributed positively in return on equity. Offshore investments positively influenced pension funds' performance as international investments increased the returns although in a small percentage. Treasury bills and bonds and fixed deposits had a very strong positive relationship with performance of pension funds this is due to their liquid nature hence attracting low returns due to low risk attached to them and their susceptibility to inflation. Equity posed a negative influence of pension funds' returns as they are too risky and performed poorly during the study period. The study recommended that most of the pension funds should be directed towards real estate investment due to its high returns; they are less volatile and offer stable cash flow and are best when it comes to diversification of the portfolio, the study was however prone to some limitations such as; the value of property investment keeps changing over the years hence a five year period might not reflect the effects of real estate investment on financial performance for a longer period could be useful as will capture different economic variations such as booms and depressions.

Parimalakanthi & Kumar (2015) evaluated on the investment preference and individual attitude in Coimbatore City, India. Friedman test, Garratt ranking and factor analysis were used to analyze the primary collected data. Investment avenues investigated were; corporate bonds, government securities, savings account, fixed deposit account, Shares, gold and silver, chit funds, commodities, insurance policies and real estate Activities. The study established that investors prefer bank deposits closely followed by investment in Gold and silver.

A study on sustainability of universities in relationship to investment strategies was conducted by Chumba, Muturi & Oluoch (2019). Descriptive and cross-sectional survey analysis was adopted. Primary and



secondary data were used in the study; all the 71 universities were used as study population targeting 142 respondents that is, 71 vice-chancellors and 71 financial officers from each university. The study established that universities had greatly invested in real estate investment followed by investment in Shares. Low investment levels were observed in fixed deposit account followed by investment in catering services.

## METHODOLOGY

Descriptive research design was employed in the study. It described the specific phenomena used in a research; it was used to describe FOSA investment, investment in government securities, investment in fixed deposit account and investment in shares in relationship with financial performance. It revealed the effects of variables under study. The target population of study comprised all the 43 registered DT-SACCOs within Nairobi. Census design was used in all the 43 DT-SACCOs under study.

The required data was extracted from the secondary sources and were used to establish the relationship that existed between the dependent and independent variables. Data was collected for a period of 5 years that is 2014-18. A descriptive research design was employed. Correlation and regression analysis was used in the study.

## RESULTS

The descriptive statistics gives a representation of the mean, minimum and maximum values of variables presented along with standard deviations. Table 1 below shows the statistics of the variables used. An output of all the variables was extracted using SPSS software for a five year time frame (2014 to 2018) on an annual basis. The research aimed at finding out if any relationship between investment decisions and performance of deposit taking SACCOs. The table below gives a summary of descriptive statistics.

**Table 1: Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
ROA	215	-0.270	0.678	0.006	0.061	-.654	.166
FOSA	215	45.000	5673.000	1318.900	1005.414	0.623	.166
Govt securities	215	127.010	1628.260	479.958	187.574	0.128	.166
Fixed deposit	215	36	5023	2586.824	1456.324	-.057	.166
Shares	215	72.834	16612.784	4331.719	3149.211	0.475	.166
Valid N (listwise)	215						

The highest value for financial performance is 67.8% while the lowest value was -27%. The following measure of central tendency was exhibited; a mean of 0.006. Also, the value of the standard deviation depicts variability in the financial performance of  $\pm 6.1\%$ . The data in the series exhibits a normal distribution because the skewness value of -0.654 lies within the range of -0.8 to + 0.8. This implied that deposit-taking SACCOs in Nairobi County are generally profitable because their average ROA is

positive even after factoring in the aspect of standard deviation.

From the descriptive results, the findings further revealed that the highest value of the FOSA was 5.673 billion while the lowest value is 45 million. The following measure of central tendency was exhibited; a mean of 1.318 billion. Also, the value of the standard deviation depicts variability in the FOSA investment of  $\pm 1.005$  billion. The data in the series exhibits a normal distribution because the skewness

value of 0.623 lies within the range of -0.8 to + 0.8. This implies that the FOSA of deposit-taking SACCOs in Nairobi County is moderate going by the mean ratio. However, the great variability in the ratio displayed by the standard deviation indicates that the various deposit-taking SACCOs have varying levels of investment in FOSA.

The highest value of investment in government securities is 1.628 billion, while the lowest value is 127 million. The following measure of central tendency was exhibited; a mean of 479.958 million. Also, the value of the standard deviation depicts variability in the value at risk of  $\pm 197$ . The data in the series exhibits a normal distribution because the skewness value of 0.128 lies within the range of -0.8 to + 0.8. This implies that the investment on government securities of deposit-taking SACCOs in Nairobi County is moderate going by the mean value. However, the great variability in the value displayed by the standard deviation indicates that the various deposit-taking SACCOs have varying levels of investment in government securities.

The highest value of investment in fixed deposit is 5.023 billion, while the lowest value is 36 million. The following measure of central tendency was exhibited; a mean of 2.67 billion. Also, the value of the standard deviation depicts variability in the fixed deposit investment of  $\pm 1.46$  billion. The data in the series exhibits a normal distribution because the skewness value of -0.057 lies within the range of -0.8 to +0.8. The great variability displayed by the standard deviation indicates that the various deposit-taking SACCOs have varying levels of fixed deposit investments.

The final results from the findings point out that the highest value of investment in shares is 16.612 billion, while the lowest value is 72.8 million. The following measure of central tendency was exhibited; a mean of 4.33 billion. Also, the value of the standard deviation depicts variability in the variable of  $\pm 2.21$

billion. The data in the series exhibits a normal distribution because the skewness value of 0.475 lies within the range of -0.8 to + 0.8. This implies that the investment on shares by deposit-taking SACCOs in Nairobi County is moderate going by the mean ratio. However, the great variability in the ratio displayed by the standard deviation indicates that the various deposit-taking SACCOs have varying levels of shares investment.

### **Correlation Analysis**

Correlation analysis establishes whether there exists an association between two variables lying between (-) strong negative correlation and (+) perfect positive correlation. Pearson correlation was employed to analyze the level of association between return on assets and investment decisions. The study employed a Confidence Interval of 95 percent as it is the most utilized in social sciences. A two tailed test was utilized. Table 2 shows the correlation analysis outcome.

A correlation is referred to be significant when its significance level is less than 0.05; at a 95 percent degree of confidence. Table 2 therefore reveals that Investment in front office service ( $r = .177$ ,  $p = .000$ ) has a positive but not very strong significant correlation with the financial performance of deposit taking SACCOs.

Secondly, Investment in government securities from table 2 indicated that, a moderately strong positive and significant correlation existed with financial performance of deposit-taking SACCOs'. ( $r = .346$ ,  $p = .000$ ) existed. In social science research situations, a correlation is considered significant when its significance level is less than 0.05.

Further, Investment in shares was also noted to have a strong positive and significant association with performance of deposit taking SACCOs as evidenced in table 2. The p value is 0.004 this is less than 0.05; therefore the relationship is statistically significant.

The correlation is at 50.1 percent indicating a strong correlation.

Fixed deposit was found to have a positive and significant association with performance as evidenced

in table 2. The p value is 0.018 this is less than 0.05; therefore the relationship is statistically significant. The correlation is at 11.1 percent indicating a weak correlation.

**Table 2: Correlation Analysis**

		ROA	FOSA	Govt security	Fixed deposit	Share
ROAs	Pearson Correlation	1				
	Sig. (2-tailed)					
FOSA	Pearson Correlation	.177**	1			
	Sig. (2-tailed)	0.000				
Govt security	Pearson Correlation	.346**	-0.05	1		
	Sig. (2-tailed)	0.000	0.288			
Fixed deposit	Pearson Correlation	.111*	-0.025	0.054	1	
	Sig. (2-tailed)	0.018	0.595	0.25		
Share	Pearson Correlation	0.501	0.042	-0.036	0.006	1
	Sig. (2-tailed)	0.004	0.369	0.449	0.906	

\*\* Correlation is significant at the 0.05 level (2-tailed).

**Regression Analysis**

A regression analysis was performed between financial performances against the four independent

variables selected for this study. The regression analysis was performed a 5% level of significance. The F critical value was compared against the F calculated.

**Table 3: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.765	.585	.573	.08986	1.937

a. Predictors: (Constant), Ln shares, Ln Fixed deposit, Ln Government securities, Ln FOSA  
b. Dependent Variable: ROA

From the output in table 3, the R<sup>2</sup> value was .585, implying that 58.5% of the deviations in deposit-taking SACCOs’ financial performance is caused by changes in investment in government securities, FOSA Activities, shares and fixed deposit. Other variables not incorporated in the model explain 41.5% of the variations in deposit-taking SACCOs’ financial performance. The correlation coefficient (R)

value of .765 showed that there exist a strong relationship between the independent variables included in the study and financial performance.

Table 4 provided the outcomes of the ANOVA, F-test was carried out to establish the significance of the overall model. The formulae for calculating the critical value for the F test is;

$$F = (SSE_1 - SSE_2 / m) / SSE_2 / n-k$$

Where;  
 SSE = Residual sum of squares,  
 m = Number of restrictions  
 k = Number of independent variables.

A critical value of 2.37 was obtained from the F-Test tables. The F statistic indicated in the study findings was greater than the critical value, thus the overall model is significant to predict financial performance.

**Table 4: ANOVA**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	3.008	4	0.752	20.183	.000 <sup>b</sup>
	Residual	16.58	210	0.037		
	Total	19.588	214			

a. Dependent Variable: ROA

b. Predictors: (Constant), Ln shares, Ln Fixed deposit, Ln Govt securities, Ln FOSA

The research used t-test to determine the significance of each individual variable employed in this research as a predictor of performance of deposit-taking SACCOs in Kenya. The p-value was utilized as an indicator of the significance of the relationship between the response and the predictor variables. At

95% level of confidence, a < 0.05 p value was interpreted as an index of statistical significance of the concepts. Therefore, a p-value > 0.05 depicts a statistically insignificant association between the dependent and the predictor variables. The outcomes are demonstrated in table 5.

**Table 5: Model Coefficients**

Model		B	Std. Error	T	Sig.
1	(Constant)	0.828	0.119	6.976	0.000
	Ln FOSA	0.336	0.093	3.599	0.001
	Ln Govt securities	0.182	0.087	2.089	0.040
	Ln Fixed deposit	0.014	0.002	9.057	0.000
	Ln shares	0.263	0.055	4.782	0.000

The Coefficients were used as an indicator of the magnitude and direction of the relationship between the independent variables and the response variable. The T values were used to establish the significance of the relationship of the independent variable to the dependent variable. The values obtained are contrasted to the critical values. A confidence interval of 95% and a two tailed T test critical value of ± 1.960 were obtained from the T test tables. A T test value that lies out of this range is significant.

The results revealed that FOSA, government securities investment, fixed deposit account and share investment have positive and significant influence on financial performance. This implies that a unit increase in FOSA, government securities

investment, fixed deposit account and investment in shares would lead to a 0.336, 0.182, 0.014 & 0.263. The regression equation below was thus estimated:

$$Y_i = 0.828 + 0.336X_1 + 0.182X_2 + 0.014X_3 + 0.263X_4$$

Where;

Y<sub>i</sub> = Return on Assets

X<sub>1</sub> = FOSA investment

X<sub>2</sub> = Government securities investment

X<sub>3</sub> = Shares investment

#### Interpretation of Research Findings

The researcher was seeking to determine the influence of investment decisions on the deposit-taking SACCOs' financial performance. FOSA

investment, investment in government securities, fixed deposit investments, and investment in shares were the predictor variables in this study while financial performance of deposit-taking SACCOs measured by ROA was the dependent variable. The adequacy of the overall model in predicting financial performance was examined. The influence of each predictor variable on the dependent variable was also examined with respect to strength and direction.

The research findings from the ANOVA table revealed that, the overall model was statistically significant. This implied that government securities, FOSA Activities, shares and fixed deposit investments are good predictors of financial performance.

FOSA investment was characterized by the value of funds invested in FOSA in each of the 5 years under consideration. The Pearson's correlation coefficient between FOSA and financial performance of quoted banks revealed a weak positive and significant correlation between the two variables. The multiple linear regressions exhibited significant relationship between FOSA investment and financial performance of deposit-taking SACCOs. This implies that FOSA has a significant impact on financial performance.

Matumo, Njoroge and Maina (2013) associated SACCOs' performance with front office service activity in Tharaka Nithi County, Kenya. Descriptive research design was adopted; the target population was three SACCOs. Secondary data was collected for six years; Correlation of data was used in data analysis. The study indicated that FOSA has a positive significant effect on SACCOs performance

Njuguna and Makori (2015) Looked at how FOSA influence financial performance of savings and credit co-operative societies. The study employed descriptive research design, primary data was collected. The target population was 388 respondents; cluster sampling was used to acquire a sample size of 116. Data was analyzed using qualitative and quantitative analysis. Results

indicated that front office service activities had a positive and significant effect on financial performance of SACCOs.

Investment in government securities was characterized by value of funds invested on government securities by deposit-taking SACCOs in each of the last five years under consideration. The Pearson's correlation coefficient between government securities investment and financial performance of revealed a moderate positive and significant correlation between the two variables. The multiple linear regressions exhibited a significant relationship between investment in government securities and financial performance of deposit-taking SACCOs in Nairobi County, Kenya. This implies that investment in government securities has a significant impact on financial performance.

The study concurs with Rop, Kibet and Bogonko (2016) who associated financial soundness of commercial banks with investment diversification in Kenya targeting the commercial banks. A positive relationship was noted between government securities, insurance investment, and FOSA investment and buying of Shares with financial performance of commercial banks in Kenya. Purchase of Shares was noted as the best investment others in that order included FOSA Activities, insurance and lastly government securities ventures.

Fixed deposit investment was measured by total investments in fixed deposit in each of the five years under consideration. The Pearson's correlation coefficient between fixed deposit and financial performance of deposit-taking SACCOs revealed weak, positive and insignificant correlation between the two variables. The multiple linear regressions exhibited an insignificant relationship between fixed deposit investment and financial performance of deposit-taking SACCOs. This implies that fixed deposit investment has no significant impact on financial performance.



The study findings differ with that conducted by Mella (2016) who studied pension funds' financial soundness looking at FOSA as an investment in Kenya. A descriptive survey research design was used; all pension funds that had been directed towards FOSA investment were part of the study, making a sum of 48 by Dec 2015. Multiple regression model as a tool for data analysis was used. Results revealed such an investment contributed positively in return on equity. Offshore investments positively influenced pension funds' performance as international investments increased the returns although in a small percentage. Treasury bills and bonds and fixed deposits had a very strong positive relationship with performance of pension funds this is due to their liquid nature hence attracting low returns due to low risk attached to them and their susceptibility to inflation. Equity posed a negative influence of pension funds' returns as they are too risky and performed poorly during the study period.

Investment in shares was measured by the total value of funds investment in shares in each of the 5 years under consideration. The Pearson's correlation coefficient between shares and financial performance revealed a moderate positive and significant correlation between the two variables. The multiple linear regressions exhibited a significant positive relationship between shares and financial performance of deposit-taking SACCOs. This implies that shares have a significant impact on financial performance, an increase in shares leads to increased financial performance.

The study findings are in agreement with the study conducted by Rop, Kibet and Bogonko (2016) that associated financial soundness of commercial banks with investment diversification in Kenya targeting the commercial banks. A positive relationship was noted between government securities, insurance investment, and FOSA investment and buying of Shares with financial performance of commercial banks in Kenya. Purchase of Shares was noted as the

best investment others in that order included FOSA Activities, insurance and lastly government securities ventures.

## **CONCLUSION**

The study concluded that the selected investment decision variables had a strong positive effect of 58.8 on financial performance for the period 2014-2018. It further indicated varying degree between the independent variable and predictor variable. From the variable with the highest influence to the least in their correlation can be ranked as, shares, government securities, FOSA and fixed deposit account. The aim of the research to establish the contribution of selected investment decisions on financial performance was therefore laid to rest.

From the multiple regression, investment in FOSA government securities and shares were found to have a substantial effect on financial performance, there p values were less than 0.05. Investment in fixed deposit account was found to have an effect on financial performance but insignificant. The study concluded that an increase in government securities, shares and FOSA could lead to relatively high financial performance but an increase in fixed deposit account investment could decrease the financial performance.

From the outcome of ANOVA F-test, value calculated was 20.184; this is less than the critical value obtained from F-test test which was 2.84. The study concluded that the overall model is significant to predict financial performance.

## **RECOMMENDATIONS**

Since FOSA investment indicated a significant positive relationship in DT-SACCOs profitability managers should expand their investment decisions to accommodate FOSA for the organization to achieve better performance. FOSA services should be relatively lower compared to bank charges to enhance huge customer base. DT-SACCOs should take an initiative of creating awareness of these services.

The results indicated that government securities had a significantly positive association with financial performance, Managers should invest their capital in government securities as the study proved it worthy and most effective; it's a safer way of investment as its risk is relatively low. Due to competition of customers from other financial resources, DT-SACCOs should be investment cautious. Better investments will enhance financial soundness of these institutions. Most of these institutions have greatly invested in loans to members, although they are unable to satisfy their members borrowing needs hence seek banks help for this purpose. Investment in government securities is viable, funds should be directed to undertake such projects, this will enable them have a 'health' competition with other financial institutions.

Investment in Fixed deposit accounts turned to be positive and significant, this form of investment rewards investors with a higher interest rate than regular saving accounts. These returns vary with the maturity period. Managers should undertake this investment option as its returns are favorable; it

attracts less or no risk at all, hence there is an assurance of returns. Financial managers should direct the institutions' resources to shares investment as it will increase its profitability.

They should follow disciplined investment approach and avoid market timing. Should ensure that they are competitive enough in the market; be sensitive enough to economic changes which might render them irrelevant due to financial crises. Investment decisions are quite imperative in determining the performance of SACCOs. The research study was initiated with a strong need to contribute to the knowledge and stimulate further research.

#### **Suggestion for Further Study**

Further study may be performed to investigate DT-SACCOs financial performance and other variables such as operational efficiency, liquidity position, loan default among others. This study was conducted only on 43 DT-SACCOs. A further study should be conducted to establish if there is a substantial change in findings.

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