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## **INFLUENCE OF MONETARY POLICY ON FINANCIAL PERFORMANCE OF DT SACCOS IN KENYA**

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### **ABSTRACT**

**Purpose of the study:** The purpose of this paper was to establish the effect of the monetary policy on financial performance of deposit taking savings and credit cooperative societies in Kenya.

**Statement of the problem:** Monetary policy is one of the principal economic management tools that the government uses to shape economic performance. The government through the Central Bank uses monetary policy tools like open market operations, central bank rate and cash reserve ratio for commercial banks with the objective of managing multiple monetary targets. Hence the monetary policy is a key interest rate driver in financial intermediation industry that affect interest rate spread in DTS. The monetary policy therefore affects the return on assets, investment decisions and dividend policy which are part of financial performance indicators of the deposit taking SACCOS. The DTS that fail to appreciate the influence of the monetary policy on the economy are likely to experience decline in their financial performance.

**Research Methodology:** The study used stratified random sampling technique to identify a sample of 74 deposit taking SACCOS in Kenya. Secondary data was obtained from DTS annual audited financial reports. The study employed descriptive analytical statistical methods such as mean, variances and standard deviations while inferential statistical methods used were Pearson moments of correlation and fixed effect panel regression analysis.

**Research Findings:** The regression results revealed that monetary policy had a positive coefficient of 1.09 and p-value of 0.226.

**Conclusion:** The study concluded that at 5% significant level, there was statistically insignificant relationship between monetary policy and financial performance of DT SACCOS in Kenya.

**Recommendations:** The study recommended the deposit taking SACCOS to take proactive measures aimed at ensuring external borrowing is reduced to bare minimum so as to obviate the risks associated with interest rate changes caused by monetary policy. They should consider venturing in low risk government securities.

**Keywords:** *Monetary Policy, Interest Rate, Deposit Taking SACCOS, Central Bank of Kenya, Financial Performance*

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## 1.0 INTRODUCTION

Interest rates in the economy are affected by factors like demand and supply of money, monetary policy, inflation rates, credit risk, liquidity risk and economic growth. The financial intermediaries in Kenya have in the last decade witnessed drastic changes emanating mainly from variability of interest rates in the sector. According to Irungu (2012), interest rate charged to borrowers rose to highs of up to thirty percent and above in 2012 while interest rate earned by savers remained relatively low. Despite the rise in the interest rate levied by financial intermediaries like commercial banks and micro-financial institutions, the deposit taking SACCOs maintained the interest rate charged to members loans. Gilchris, (2013) averred that although it is difficult to determine the direction of the relationship between interest rates and profitability, studies confirm that interest rates instability affects performance of financial institutions, though other studies give contradictory findings. The Central banks as lenders of last resort have their borrowed funds repaid at a monetary policy rate. This makes monetary policy a powerful government regulatory tool for determining other interest rates in the economy. Corbitt (2012) argued that interest rate is an economic tool used by the Central Bank to control inflation and to boost economic development.

The success of a DTS business is dependent upon the health and prosperity of the economic environment. Economic influencers of interest rates can positively or negatively influence performance of DTS. When interest rates rise, banks charge more for business loans (Berger, Klapper & Turk-Ariss, 2009). In a high interest rate regime, DTS use more of their earnings to pay interest on borrowed loans from banks, which decreases their profits. Low-interest loans can fund growth of DTS and increase profitability because they are able to generate income from new ventures to pay for the loan interest and remain with surplus. Through the monetary policy, the Central Bank controls either the cost of very short-term borrowing or the monetary base, often targeting an inflation rate or interest rate to ensure price stability and general trust in the currency. Monetary policy is one of the intervention measures which have the objective of promotion of economic growth and development, full employment, price stability (low level of inflation), healthy balance of payment, exchange rate stability and general economic stability. Monetary policy is used by central banks to control the amount of liquidity in the economy (Stein, 2012).

Monetary policy works largely via its influence on aggregate demand in the economy. It has little direct effect on the trend path of supply capacity. Rather, in the long run, monetary policy determines the nominal or money values of goods and services. Monetary policy in essence determines the value of money. According to Bagus and Howden (2011) monetary policy involves the regulation of money supply and interest rate by the central bank in order to control inflation and stabilize currency. It is also a major economic stabilization weapon, which involve measures designed to regulate and control the volume, cost availability and direction of money and credit in an economy to achieve some specified macroeconomic policy objective. Understanding the link between interest rate and deposit taking SACCOs profitability is important for evaluating the effect of monetary policy stance as captured by the interest rate structure.

Expansionary monetary policy increases money supply with a resultant effect of lowering the rate of interest. Deposits taking SACCOs under this policy are able to access funds at low interest rates in the money market which they not only invest in profitable activities but also improve on their liquidity position (Sebhatu, 2012). In contractionary policy, the money supply decreases and hence loans become expensive, level of investment declines and bank deposits become attractive compared to deposit taking SACCOs because they are able to offer better returns on savings (Getachew, 2017). The contractionary and expansionary monetary policy drive the interest rates

charged by the financial intermediaries. Deposit taking SACCOs not only rely on members deposits to service loan requirements, but they also borrow from banks when the funds available to them are inadequate to meet their members loan demands (Mumanyi, 2014). Monetary policy transmission mechanism directly and indirectly impact on the financial performance of deposit taking SACCOs (Watkins, 2012). The monetary policy in the economy is evaluated by the cash reserve requirement, central bank reference rate, open market operations, amount of funds invested in government securities, and selective credit control (Bhaumik, Dang & Kutan, 2011).

## **1.2 RESEARCH PROBLEM**

Deposits taking SACCOs play a key role in allocating loan products at comparatively lower interest rates to low and middle income class in the economy. They achieve their mandate by pooling members deposits and occasionally borrowing from external sources for investment in capital projects and to satisfy members loan demand. The deposit taking SACCOs experiencing liquidity challenges not only occasionally borrow from external sources to service members loan demands but also do so for investment in profitable capital projects. The monetary policy adopted by the CBK affects the cost of credit in the money market. The interest rate spread on borrowed funds fluctuates in DTS depending on monetary policy adopted by the CBK which consequently has an impact on financial performance. The monetary policy therefore affects the return on assets, investment decisions and dividend policy which are part of financial performance indicators of the deposit taking SACCOs. The DTS that fail to appreciate the influence of the monetary policy on the economy are likely to experience decline in their financial performance. Zaman, Arslan, Sohail and Malik (2015) carried out a study on the impact of monetary policy on financial performance: evidence from banking sector of Pakistan. The study enlightened the monetary policy effect on banking sector stability and performance by investigating the causal relationship between interest rate imposed by state bank of Pakistan and banks financial performance measured by ROA and ROE. This study has therefore focused on assessing the influence of monetary policy on financial performance of deposit taking SACCOs in Kenya.

## **1.3 RESEARCH OBJECTIVE**

The study sought to establish the effect of monetary policy on financial performance of deposit taking savings and credit cooperative societies in Kenya.

## **2.0 LITERATURE REVIEW**

### **2.1 Monetary Theory**

Monetary theory was proposed by Lukas in 1972. The theory provided foundation for models of economic fluctuations in which money was the fundamental driving factor behind movements in real output. The monetary theory holds that changes in money supply are the main drivers in changes in economic growth. The monetary theory is more about how the nominal supply of money adjust to the real demand for money (Thornton, 2014). When the monetary theory works in practice, central banks which control the levers of monetary policy can exert much power over economic growth rates. Monetary theory assumes that the volume of money is exogenously determined. The monetary theory assumption that velocity of circulation of money is constant and is not affected by the changes in the quantity of money or the price level is unrealistic.

According to Kaytaz and Gul (2014), the velocity of money depends upon demographics, trade activities, and habits of people, interest rates and facilities of investments. Monetary theory is relevant to this study because it relates amount of money in circulation with price level of goods and services. The variation in money supply leads to a proportionate change in the price levels

which directly influence the purchasing power of the deposit taking SACCOs and the cost at which they can get funds in the money market (Haushofer & Shapiro, 2016). Thus, rise or fall in demand for money affects the cost of credit in the economy and hence the financial performance of deposit taking SACCOs (Okiro & Ndungu, 2013).

## 2.2 Empirical Review

Zaman, Arslan, Sohail and Malik (2015) carried out a study on the impact of monetary policy on financial performance: evidence from banking sector of Pakistan. The study enlightened the monetary policy effect on banking sector stability and performance by investigating the causal relationship between interest rate imposed by state bank of Pakistan and banks financial performance measured by ROA and ROE. The study focused in depth on monetary policy impact on performance of banking industry of Pakistan by studying monetary transmission over five-year period that ended in 2011 using interest rate. By using correlation analysis and ordinary least square regression, the study revealed that interest rate taken as measure for monetary policy has significant inverse relationship on firm financial performance, which was measured by ROA and ROE. Zaman *et al.*, (2014) study also established that the monetary policy had the significant relation with firm value.

Akalpler and Duhok (2018) investigated the relationship between monetary policy and economic growth in the perspective of developing economy with the main focus on Malaysia. The study concentrated on interaction between interest rates, inflation, money supply and growth in GDP. The research using quantitative analysis established that there was a positive relationship between economic growth and inflation. It was found that inflation, interest rate and money supply cause the economy to grow. One percent change in inflation was found to cause seventy seven percent change in the level of economic growth. Kumar, Acharya and Ly (2020) investigated the relationship between monetary policy and bank profitability in New Zealand using the generalized method of moments (GMM) estimator. The study sample comprised of 19 banks from New Zealand over the period 2006–2018. The results suggested that an increase in short-term rate leads to an increase in the profitability of banks, while an increase in long-term interest rates reduces bank profitability.

According to Laopodis (2013) the monetary actions can propagate the real sector if they are properly transmitted into the macro-economy through various channels like consumption, interest rate and wealth effect. Monetarists strongly believe that monetary policy exerts greater impact on economic activity, arguing that unanticipated change in the stock of money affects output and growth (Abata, Kehinde & Bolarinwa, 2012). The study by Laopodis (2013) established that while stock markets of 12 African countries were positively affected contemporaneously by their respective monetary policy through the interest rate channel, there was no evidence of the reverse action. Negative supply of money affects stock market positively because positive market shock negatively affects growth in money supply.

Gertler and Karadi (2011) established that monetary policy actions affect stock prices which are linked to the real economy through their influence on consumption and investment spending. In a multi-country study of Stock market response to monetary and fiscal policy shocks in Germany, UK and US, Chatziantoniou, Duffy and Filis (2013) reported that while innovations in monetary policy instruments greatly affect stock market performance, stock prices largely reflect economic developments. In that regard, stock market performance not only responds to monetary policy decisions, but also provides feedback to Central banks regarding the private sector's expectations about the future course of key macroeconomic variables.

Mulwa (2015) using descriptive research design did a study on the effect of monetary policy on the financial performance of commercial banks operating in Kenya and regulated by the Central Bank of Kenya as at 31st December 2014. The study used secondary data from websites of financial statements of commercial banks and publications from the Central bank of Kenya. Descriptive and inferential statistics were used to establish the relationship between monetary policies tools and the financial performance of commercial banks in Kenya. The study observed that the monetary policy is one of the principal economic management tools that the government uses to shape economic performance. The study concluded that monetary policy tools employed by the central bank of Kenya do not have a significant effect on the financial performance of commercial banks in Kenya. Among other recommendations, the study observed that commercial banks should focus on monetary policy changes to the extent of complying with the Central bank guidelines and adjusting their variables accordingly.

### 3.0 RESEARCH METHODOLOGY

The study used a descriptive survey research design. Stratified random sampling technique was applied on a population of 528 top managers in 176 deposits taking SACCOs in Kenya. Secondary data was obtained from annual audited financial reports from SACCOs, the government and semi-autonomous government agencies (SAGAs). Monetary policy proxy measure was the amount invested in government securities while the DT SACCOs financial performance was measured by return on assets. Primary data was collected through self-administered semi-structured questionnaires. Validity and reliability of the data collection instruments was established by a pilot study which was conducted using 22 questionnaires in 7 DTS that were randomly sampled from the Western region stratum. Validity was determined by use of content validity index while reliability of the questionnaire was tested by the Cronbach's Alpha correlation coefficient. The descriptive analytical statistical methods employed were frequency tables, mean, variances and standard deviation. The inferential statistical tools used were product moment correlation coefficient and fixed effect panel regression analysis.

### 4.0 RESEARCH FINDINGS

#### 4.1 Reliability Test

The study assessed the constructs of monetary policy to establish the reliability of the constructs and the Cronbach alpha results are shown in Table 1.

**Table 1: Reliability Results**

Scale	Number of Test Items	Cronbach's Alpha Value	Acceptability
Monetary Policy	4	0.856	Acceptable

**Source: Data Processed**

Monetary policy with four items of measurement had a Cronbach's alpha value which was greater than 0.70 as illustrated in Table 1. This implied that the instrument and constructs used to measure monetary policy were reliable and had internal consistency.

#### 4.2 DT SACCOs Source of Income

The researcher sought to establish the SACCOs' main source of capital. This was based on the logic that if DT-SACCOs' main source of capital is from borrowing, then their performance is



more likely to be affected by the monetary policy interest rate driver. The outcome of DT SACCOs Source of income is summarised in Table 2

**Table 2: Source of Capital for SACCOs**

Source of Capital	Frequency	Valid Percent
Members Share	75	41.5
Borrowing	37	20.4
Capitalized Income from lending	69	38.1
<b>Total</b>	<b>181</b>	<b>100</b>

**Source: Data Processed**

As shown in Table 2 majority of the respondents indicated that 75(41.4%) of DT-SACCOs source of capital came from members share contributions, 69(38.1%) was from capitalized income from lending activities while 37(20.4%) was sourced from borrowing. This assertion appeared prudent and logical because generally, interest rates drivers affect cost of credit among financial intermediaries. Restricted external borrowing relative to the members’ shares was found to be due to deposit taking SACCOs shifting funding strategies in line with prudential norms.

**4.3 Respondents Perception on Monetary Policy**

The paper purposed to establish how the DT SACCOs managers perceive monetary policy and how they use the knowledge on monetary policy to inform DT SACCOs performance strategy. The responses on effect of monetary policy is presented in Table 3

**Table 3: Responses on Effect of Monetary Policy**

Statement	SA%	A%	N%	D%	SD%	Mean	Std.
The SACCO’s accessibility to funds is affected by CBK cash reserve requirements.	23.30	22.00	13.26	19.34	22.1	2.96	1.49
The SACCO’s accessibility to funds is affected by Central bank reference rate.	14.97	40.39	30.94	10.94	2.76	4.16	0.96
The SACCO’s accessibility to funds is affected by open market operations of the CBK.	24.98	33.15	18.23	20.99	2.65	4.23	1.27
The SACCO’s accessibility to funds is affected by its investment policy in government securities.	25.97	21.55	20.43	14.92	17.13	3.98	1.36
<b>Aggregate</b>						<b>3.83</b>	

**Source: Data Processed**

Table 3 revealed that 45.3% of the respondents agreed that the SACCO’s accessibility to funds affected the CBK cash reserve requirements (Mean =2.96, Std = 1.49). However, 41.44% of the respondents disagreed that the SACCO’s accessibility to funds was affected by CBK cash reserve

requirements. This was reflected by the mean average of 2.96 which indicated that the responses were fairly balanced. This could be attributed to the regulatory role of the CBK over financial intermediaries through the monetary policy. Additionally, the results revealed that 55.36% of the respondents agreed with the statement that SACCO's accessibility to funds was affected by the CBK reference rate (Mean = 4.16, Std = 0.96). The respondents who disagreed with the statement were 13.70% while those who were neutral were 30.70%. The results therefore implied that the CBK reference rate influences the SACCO's accessibility to funds particularly the SACCO's whose source of funding is borrowing. In that sense, DT- SACCO's who borrow and transact with banks to fund their operations do feel the impact of CBK reference rate.

The respondents who agreed that DT SACCOs' accessibility to funds is affected by the open market operations of the Central Bank of Kenya were 58.13% (Mean = 4.23, Std = 1.27). The results were in tandem with the notion of Laopodis (2013) who asserted that the monetary policy actions can propagate the real financial sector stability if they are properly transmitted into the macro-economy through various channels like consumption, interest rate and wealth effect. Since CBK is the main financial and banking sector regulator, its operations could have a domino effect on SACCOs operations and performance.

Table 3 also shows that majority (47.52%) of the respondents indicated that they agreed with the statement that SACCO's accessibility to funds was affected by the deposit taking SACCOs' investment policy on government securities (Mean = 3.98, Std = 1.36) while 32.05% of the respondents disagreed while 20.43% were neutral. The results indicated that more respondents opined that SACCOs investment policy in government securities affected their financial performance. This finding echoed that of Zaman, Arslan, Sohail and Malik (2015) who carried out a study on the impact of monetary policy on financial performance: evidence from banking sector of Pakistan. They established that the monetary policy had a significant relation with the firm value. This implied that policies on investment in government securities influence the investment orientation of the DT-SACCOs hence affecting their accessibility to funds.

#### 4.4 Correlation Results

The study conducted a correlation analysis between monetary policy and financial performance of DT SACCOs as shown in Table 4. This was done using secondary data obtained from the DT SACCOs audited financial statements and reports.

**Table 4: Correlation between Monetary Policy and Financial Performance of SACCOs**

		Monetary Policy
<b>Financial Performance of DT SACCOs</b>	Pearson Correlation	0.156**
	Sig. (2-tailed)	0.001
<b>Valid N</b>		<b>74</b>

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

As shown in Table 4, at 95% confidence level, the monetary policy had a correlation value of 0.156 with financial performance. This correlation coefficient value was between 0.1 and 0.3 indicating a weak positive correlation between monetary policy and financial performance. The results further showed that monetary policy had p-value of 0.001 with ROA at 95% level of confidence. The relationship was tested at 95% level with a 2-tailed test where the probability value was found to be less than 0.05 indicating that monetary policy relationship ROA was significant. The results were consistent with those of Zaman, Arslan, Sohail and Malik (2015) who found out that monetary policy had significant inverse relationship on firm financial performance as measured by ROA and ROE. This is plausible in the sense that if monetary policy affects the banks negatively, deposit taking SACCOs will benefit from the customers who will shift from the commercial banks.

#### 4.5 Fixed Effect Model Results

Both fixed effect and random effects model were conducted. The Hausman test was used to establish the relevant model to the study. The fixed effects model was found appropriate and findings of the model are shown in Table 5.

**Table 5: Fixed Effects Model**

<b>Number of Observation</b>		370				
<b>Number of Panels</b>		74				
<b>R-sq – within</b>		0.2231				
<b>Between</b>		0.227				
<b>Overall</b>		0.1534				
<b>F (4,291)</b>		20.89				
<b>Prob&gt;F</b>		0.226				
<b>Financial Performance</b>	<b>Coef.</b>	<b>Robust. Std.err</b>	<b>T</b>	<b>p&gt; t </b>	<b>[95% Conf. Interval]</b>	
<b>Monetary Policy</b>	1.096113	.8982103	1.22	0.226	-0.6936103	2.885836

**Source: Data Processed**

As shown in Table 5, the F-statistic was 20.89 and its respective p-value was 0.226 which is greater than 0.05 hence the independent variable was a insignificant predictor of dependent variable. The R-square of 0.1534 implies that the independent variable explain 15.34 percent variation in dependent variable (ROA).

The regression coefficient of 1.096 and the confidence interval lied between -0.69 and 2.88 implying that a unit increase in monetary policy, DT SACCO performance will increase by 1.096. The confidence intervals give more realistic range at which the DT SACCO performance will increase or decrease after a unit increase in monetary policy. For instance, an expansionary monetary policy will lead to an increase in DT SACCOs financial performance by a range of -0.69 to 2.88. The relationship between monetary policy and financial performance of DT SACCOs is statistically insignificant at p-value of 0.226. This could be attributed to lack of specification on whether the monetary policy that was applied was contractionary or expansionary.



#### 4.6 Post Estimation Tests

Post estimation test were conducted to establish whether the fixed effects model violated the assumptions of regression which could have rendered the results spurious. The study therefore tested for presence of heteroscedasticity and autocorrelation.

Heteroscedasticity occurs when the variance of the error terms is not the same across all the observations (Kousmanen, 2014). Heteroscedasticity is a symptom of model misspecification or unrealistic model of disturbances. The presence of heteroscedasticity causes biased and inconsistent estimation which leads to over or underestimation standard errors. The presence of heteroscedasticity in panel data is ascertained using modified Wald test in fixed effects regression model.

**Table 6: Wald Test for Heteroscedasticity**

chi2 (75)	34030.75
Prob>chi2	0.00001

#### Source: Data Processed

The null hypothesis of modified Wald test is homoscedasticity (or constant variance). From the Table 6, the Chi-square was 34030.75 and its respective probability value was 0.00001 which was less than the critical value of 0.05. Therefore, the study rejected the null hypotheses and concluded there is presence of heteroscedasticity. This implied that the standard errors in the fixed effects model are not accurately computed hence inflating or deflating the size of T-statistics rendering the model spurious. To address this problem, fixed effects model with robust-standard errors was conducted.

Autocorrelation (also called serial correlation) occurs when the error term observations in a regression are correlated. Serial correlation reduces the standard errors of the coefficients and raises the value of R-squared. To detect autocorrelation in panel data, Woodridge test is used. The Woodridge null hypothesis states that there was no first order autocorrelation. Table 7 shows the summary of results.

**Table 7: Woodridge Test of Autocorrelation**

F( 1, 73)	0.054
Prob > F	0.8171

#### Source: Data Processed

As shown in Table 7, the F-statistic is 0.054 and its respective probability value is 0.8171 which is more than the critical value of 0.05. The study therefore, failed to reject the null hypothesis and therefore concluded that the data does not suffer from first-order autocorrelation.

### 5.0 CONCLUSION

The primary data results depicted that monetary policy had slight influence on DT SACCOs' accessibility to funds. However, the secondary data results implied that there is no significant nexus between monetary policy and financial performance of DT-SACCOs. The paper established that though the correlation between monetary policy and financial performance was positive, its effect on financial performance of DT-SACCOs was insignificant. The findings were in tandem with the monetary policy theory which provided foundation for models of economic fluctuations in which money was the fundamental driving factor behind movements in real output. The insignificant relationship between monetary policy and DT SACCOs performance could be partly attributed to the study inability to specify the type of policy, whether it is contractionary or expansionary. In practice, when the monetary theory works, the Central Banks which control the levers of monetary policy can exert much power over

economic growth rates. The study established that DT-SACCOs received considerable funds for their loaning activities from borrowings. The study concluded that at 5% significant level, there was statistically insignificant relationship between monetary policy and financial performance of DT SACCOs in Kenya.

## **6.0 RECOMMENDATIONS**

The study recommended that deposit taking SACCOs should take proactive measures aimed at ensuring external borrowing is reduced to bare minimum so as to obviate the risks associated with fluctuations in volume of money circulation in the economy. In this regard, DT SACCOs should strive to focus on improving mobilization of deposits by DT-SACCOs to ensure that all their assets are as much as possible financed by internally generated funds, and that the DT-SACCOs system is capable of generating sufficient internal liquidity capable of facilitating borrowing and lending among the DT-SACCOs themselves. Like other financial institutions, deposit taking SACCOs should consider venturing in low risk government securities. As a precursor towards the establishment of a central liquidity facility for the DT-SACCO system, participation of the national payment system, and the operationalization of inter-borrowing among DT-SACCOs, it is imperative that deposit taking SACCOs are sensitized to increase their investment in government securities which are in most cases the acceptable statutory collateral for such initiatives as liquidity support for the government.

## REFERENCES

- Akalpler, E., & Duhok, D. (2018). Does Monetary Policy affect Economic Growth? Evidence from Malaysia. *Journal of Economic and Administrative Sciences*, 34(1), 2-20.
- Adesina, J. B., Nwidobe, M., & Amadi, A. N (2018). Monetary Policy and Financial Performance of Nigerian Deposit Money Banks. *Asian Economic and Financial Review* 8(7), 853-869
- Bagus, P., & Howden, D. (2011). Monetary Equilibrium and Price Stickiness: Causes, Consequences and Remedies. *The Review of Austrian Economics*, 24(4), 869-883.
- Bhaumik, S., K., Dang, V., & Kutan, A., M. (2011). Implications of Bank Ownership for the Credit Channel of Monetary Policy Transmission: Evidence from India. *Journal of banking & Finance*, 35(9), 2418-2428.
- Berger, A. N., Klapper, L., F., & Turk-Ariss, R. (2009). Bank Competition and Financial Stability. *Journal of Financial Services Research*, 35(2), 99-118.
- Chatziantoniou I., Duffy D., & Filis G. (2013). *Stock Market Response to Monetary and Fiscal Policy Shocks: Multi-Country Evidence*, *Economic Modeling* 30 (2013) 754–769.
- Corbitt (2012). *Interest Rate Swaps and other Derivatives*. New York. Columbia Business School.
- Getachew, K. (2017). *Determinants of Commercial Banks Deposit Mobilization in Ethiopia* (Doctoral Dissertation, St. Mary's University).
- Gertler, M., & Karadi, P. (2011). A Model of Unconventional Monetary Policy. *Journal of Monetary Economics*, 58(1), 17-34.
- Gilchris, M. (2013). Influence of Bank Specific and Macroeconomic Factors on the Profitability of 25 Commercial Banks in Pakistan during the Time Period 2007-2011. *American Journal of Business and Finance* 25(2), 12-23
- Irungu, P., N. (2012). *The Effect of Interest Rate Spread on Financial Performance of Commercial Banks in Kenya*, 1(1).
- Kumar, V., Acharya, S., & Ly, H. (2020). Does Monetary Policy Influence the Profitability? of Banks in New Zealand: *International Journal of Financial Sciences* 8(35), 754-790
- Laopodis, N., T. (2013). Monetary Policy and Stock Market Dynamics across Monetary Regimes, *Journal of International Money and Finance*. 3(1), 304-455.
- Mulwa, J., M. (2015). Factors Influencing Adoption of ICT in Service Delivery by County Governments in Kenya: A Case of Kitui County. *International Journal for Management Science and Technology*, 2(3), 47-54.
- Mumanyi, E., A., L. (2014). Challenges and Opportunities Facing Saccos in the Current Devolved System of Government of Kenya: A Case Study of Mombasa County. *International Journal of Social Sciences and Entrepreneurship*, 1(9), 288-314.
- Sebhatu, K., T. (2012). Management of Savings and Credit Cooperatives from the Perspective of Outreach and Sustainability: Evidence from Southern Tigray of Ethiopia. *Research Journal of Finance and Accounting*, 2(7-8), 10-23.
- Stein, J. C. (2012). Monetary Policy as Financial Stability Regulation. *The Quarterly Journal of Economics*, 127(1), 57-95.
- Thornton, D., L. (2014). Monetary Policy: Why Money Matters (And Interest Rates Don't). *Journal of Macroeconomics*, 40(3), 202-213.
- Zaman, R., Arslan, M., Sohail, M., & Malik, R. K. (2014). The impact of Monetary policy on financial performance: Evidence from banking sector of Pakistan. *Journal of basic and Applied scientific research*, 4(8), 119-124.