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EFFECT OF MACRO-ECONOMIC FACTORS ON FINANCIAL PERFORMANCE IN KENYA OF REGISTERED REAL ESTATE INVESTMENTS TRUSTS

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Abstract

Purpose: The purpose of the study was to determine the macroeconomic effect on Registered Real Estate Investments Trusts (REITs) financial performance in Kenya.

Materials and Methods: Causal research design was used to describe the REITs financial performance. This study used the population comprising of thirteen REITs firms in Kenya. The entire population (census) was used for the study. This study utilized secondary sources of data to get the information required to satisfy the research objectives. Time series data on REITs financial performance was computed for a four-year period as at 1st January 2016 to 31stDecember 2019, thus making use of 4 data points. The process of data analysis entailed preparation of the collected data through cleaning, editing and coding so that statistics could be keyed in the SPSS (statistical package for social sciences) package. The data was presented through tables and figures

Results: The regression model results without the moderating variable showed that R = 0.792, R^2 = 0.627 indicating that 62.7% of the variance in the REITs financial performance can be accounted for by the independent variables (macroeconomic variables). On the other hand, the regression model results with the moderating variable showed that R = 0.838, R^2 = 0.703 indicating that 70.3% of the variance in the REITs financial performance can be accounted for by the independent variables (macroeconomic variables) and the moderating variable considered in this study.

Unique contribution to theory, practice and policy: The study recommended that the government and REITs stakeholders should focus on policies and strategies that encourage favorable balance of payment in Kenya. REITs develop and design their products to suit consumers tastes and preferences to ensure their increased as consumption increases. Lastly, the government should expand the money supply to lower the inflation rates through tight fiscal and economic policies.

Key words: *Macroeconomic Factors, Financial Performance, Reits*

1.0 INTRODUCTION

Registered Real Estate Investments Trusts (REITs) are a development in the investment arena that acts as an alternative investment tool for the investors. They are a collective vehicle that pools funds from investors and invests them in a trust when income is earned from real estate investments (Cytonn, 2020). While they offer similar investment opportunities as mutual funds, REITs are considered to have a lower risk with high flexibility and liquidation opportunities (Block, 2011). This is continually increasing their popularity as investors are consistently seeking for ways and instruments to maximize the returns from their investments.

According to Levy, Gianou and Jones(2015), the concept of the REIT was as a result of the fact that state laws in the mid-19th century prohibited corporations from being used as vehicles for investing and dealing in real estate exclusively. As a result, business trusts were formed in Boston, Massachusetts to match the demand for real estate investment opportunities that resulted from the wealth created during the industrial revolution. More specifically, the US REIT regime was first enacted in 1960 and effected in 1961. The REITs regimes have since been seen to evolve continuously, and in the past year REITs have shown an impressive upswing particularly given the 2007/08 financial crisis that led to the crumbling of the property market (PwC, 2017).

Macro-economic factors are the indicators of the trends in an economy. They include interest rate, inflation rate, aggregate price levels, consumption, foreign direct investment, money supply, informal sector employment, national savings rate, GDP growth rate, GDP per capita savings and investment (Zhu, 2012). The factors influence the operations in an economy and act as a guide in making decisions on expenditure or investment for the populace, both individuals and businesses. The variables also affect the factors of production by influencing the prices of each of the factors (Shephard, 2016). This leads to dynamic changes in asset valuation and their respective prices.

REITs financial performance is measured by evaluating its value traded per year and Return on Assets (ROA). It is also evaluated by computing the core capital to total risk weighted assets (RWA) ratio, total capital to total RWA ratio and core capital to total deposit liabilities ratio. The interest coverage ratio measures a REITs ability to meet its interest on debt obligations as and when they fall due. Return on equity (ROE), return on capital (ROC), and return on assets (ROA) are all investment measures that are used to determine financial success (Understanding Financial Ratios, 2015).

The different macroeconomic variables have diverse effects on the performance of the real estate industry and REITs by extension. Interest rates affect mortgage payouts for real estate owners and the ability of investors to obtain financing to purchase real estate investments. High interest rates are associated with high cost of property prices and mortgage repayments, which is unfavorable for the real estate industry. On the other hand, high interest rates are an indication of a booming economy, which implies a boom in the real estate sector (Chan, Erickson, & Wang, 2002). These conditions, however, tend to vary for different markets as indicated by Kola (2016), who found out that the effect of interest rates on REITs financial performance is different in developed and developing countries.

REITs Financial Performance in Kenya

The Nairobi Securities Exchange launched its first REIT on October 22, 2015, becoming the fourth African bourse to have a REITs listing. This coincided with the opening of the

StanlibFahari I-REIT public offer (NSE, 2015).The IPO, registered an uptake of KES 3.6 billion (29%) with a net of KES 3.44 billion after expenses. This was within the target range of between KES 2.6 billion to KES 12.5 billion that was anticipated (Bankelele, 2015).Being a new investment vehicle, Kenyans are yet to aggressively adopt it as is with stocks. This is despite the attractive legislations such as exemptions of REITs from stamp duty.

The performance of the Stanlib I-REIT has also been dwindling having declined by almost 50% in 2018, 3 years following its listing. Some of the challenges following the poor adoption are lack of investor knowledge, adverse investor sentiments, inconsistent income from real estate property and a small pool of trustees for REITs (Mwiti, 2018).The I-REIT stock declined steadily 8 months after its listing and has been on a gradual decline henceforth. However, there were indicators for stability from July, 2019 through to April, 2020 (AFX, 2020).

Some of the piece of evidence of investor confidence in the Kenyan real estate commercial property is Old Mutual Property's recent investment in the Two Rivers Mall. The country real estate sector has also witnessed investments from the Delta Africa Property Fund, Retail Africa and Abland – all from South Africa. AVIC International Holding Corporation of China is also expected to invest over US$ 200M in constructing their Africa Headquarters in Nairobi. The multi-user development has been reported to contain the highest office block in East Africa and will undoubtedly reshape Nairobi's skyline (AFX, 2020).

All the aforementioned investments are attributed to the vibrant and ever growing real estate sector in Kenya especially in Nairobi County. The growth of Nairobi country then has led to the opening up of other towns that neighbor it. These are towns like Kiambu, Thika, Ruiru, Machakos, Kitengela and Limuru. In addition devolution and decentralization of funding had also led to the growth of many other rural towns due to availability of resources as well as empowerment of the people (AFX, 2020). It is against the backdrop that examining the performance of the REIT in relation to the macro-economic factors is suitable in enabling investors and policymakers to understand the investment tool and to enhance its performance.

Real Estate Investment in Kenya

Commercial properties are perpetually bought, sold, developed and redeveloped. In this way, real estate investments are very active in Kenya (MBAA, 2012). Most people living in urban areas are trying to acquire housing as a group or as an individual. This has caused obstacles and challenge for home ownership as land and financing sources have become constrained. A survey of real estate in Uasin Gishu County found that the problem of illegal land acquisition is growing in that County as well. About 70 percent of these documents are fake and only about 5 percent of them having genuine legal right. Along with high cost of construction, the prices were determined by the resources on the demand and supply. While for another reason it may be decided by other forces. The real estate market goes through cycles of growing and falling. The real estate sector is sub-divided into two: a formal and informal (Koech, 2014). These include the market of space, asset and development. All of these are regulated through the play of demand and supply. The property market involves the interaction of demand and supply of residential space. This predicts patterns of rent and vacancy (Martin & Wee, 2013).

Kenya has been experiencing a significant population growth over the past ten years. Due to increasing demand for urban homes, urbanization will expand further. This has caused imbalance in commercial, residential property supply and demand (Kim, 2017). Housing deficits is a big problem facing Kenya for years. The tremendous interest for lodging in Nairobi far overwhelms

supply. More than half of Nairobi's inhabitants are living in ghettos. The interest for center pay customers is additionally high. In these two regions, there exists gigantic interest hole. In view of these assessments, Nairobi urgently needs 150,000 new lodging units inside the following five years. To ease metropolitan congestion, the Government of Kenya is empowering inventive and proactive techniques. With current urban deficit of 550 units daily, and Nairobi alone requires an average of 410 units daily. Narrowing the budget deficit is not a mean target and therefore any housing units sold within the greater Nairobi will contribute positively towards reducing the shortfall (ISOCARP congress, 2020).

The 2010 constitution aims to devolve most of the services to county governments. To address housing issues that involve county employees, housing should be expanded in the local areas. In Kenya, the housing sector continues to see outstanding growth. Noted by Monsod, (2011) an active real estate market is one where families can convert their assumed demand for quality housing into valuable demand at market prices. As buildings are constructed, construction requires a considerable sum of money. Financial resources need to be managed in a comprehensive manner even before the commencement of the project. Funding for development should be developed in a planned manner. Financing construction is one of the most critical steps for construction. Major challenge in the real estate market is finding funding. Kenya has two financial institutions which focus on funding real estate. These are saving and Loans (S&Ls) and Housing Finance Corporation of Kenya. What is notable about this merger is that Kenya Commercial Bank (KCB) is not the only independent commercial real estate finance company left in the country. As a result of the limited financial options available to the real estate industry in Kenya, the industry has been restricted to high interest rates. For business to grow, money needs to be saved up in order to produce more goods to be sold (Gallagher & Flaman, 2012).

The selection of building materials and technology employed in Kenya's construction sector has also been a concern. The bulk of Nairobi's structures are made of traditional materials (concrete blocks or building stones for walling and tiles or corrugated coated iron sheets for roofing). These are the technical restrictions of this design. There is need to upgrade the use of modern building technology and promote its practical application outside of Nairobi. The situation in Nairobi is different as it is necessary to legalize technologies before they can be commercialized on the market. Real capital consists of resources and materials that are useful in the production of other resources or goods, (Carrier, Rosen, Benitez, & Chang, 2019).

Commercial property financing is extremely pertinent in an emerging economy because of low liquidity, limited number of available expertise, and inability to meet liquidity needs. Therefore, the evaluation of the project must take into account the main legal, market and financial risks. To ensure the economic prosperity, it is crucial that real estate developers are able to obtain the required financing. Real estate demand is derived from basic need. All humans must have shelter. Housing's price is not as responsive to changes in demand as other goods. This is because there are a small number of owners of land and expensive legal procedures due to property taxes. The authorities have put in place various programs to improve the city. In Nairobi, for example, there are several slum upgrading projects taking place in Kibera. Other housing projects are being proposed in Murang'a, Kiambu, Ruiru and Thika. By 2019, the government of Nairobi Metropolitan Development invested close to Ksh 3.4 trillion (ISOCARP congress, 2020).

Statement of the Problem

REITs are an attractive investment vehicle for investors in diversifying their portfolio given their benefits of high liquidity and high flexibility (Block, 2011). Globally, REITs have a high yield especially in the developed markets with returns as high as 26.87% (MSCI Japan, 2020). Kenya continues to position itself as a preferred hub by multinationals with operations within East and Central Africa mainly due to its location, connectivity, innovation, access to amenities and recent large scale infrastructural upgrades. While notable progress was made, a combination of downward pull factors especially macro-economic factors pose significant headwinds to the sector resulting in weak growth (Stanlib Fahari I-REIT, 2020).

NSE has shown the performance of REITs in Kenya was on a downward trend with NASI, NSE 20 and NSE 25 declining by 0.7%, 0.9% and 0.3%, respectively, taking their YTD performance to gains/(losses) of 5.9%, (6.0%) and 1.4%, for NASI, NSE 20 and NSE 25, respectively in 2019 (Cytonn, 2021). On the contrary, the average REITs returns in the US market were estimated to be 12.99% in 2019 while the Australian REITs had an average return of 17% The REITs in Japan based on MSCI IMI REITs index had a high of 26.87% while the returns in Singapore were 23% in 2019. The well-developed REITs across the globe indicate potential higher yields for the REITs investors (Cytonn, 2021).

Despite the important role macro-economic factors have on performance of REITs, there have been minimal studies undertaken in this area in the Kenyan context. At the international level, Chang, Chou and Fung's (2012) study established that, REITs are insensitive to the changes in interest rates in developed markets while there is a negative correlation in developing markets. Lee (2019) reevaluated whether the REITs financial performance and the inflation relates indeed due to inflation illusion in US.Henry, Olekalns and Suardi (2015) did a study on equal influences and REITs financial performance and uneven changing aspects of interest rate on short-term in Australia; Zhang and Daly (2013) examined how macroeconomic and bank specific factors affect the performance of banks in China.

At the regional level, Vianney (2013) conducted a study in Rwanda that was intended to ascertain the relationship between liquidity and the financial performance of REITs in Rwanda. Osamwonji and Chijuka (2014) investigated the effect of macroeconomic variables on financial performance of REITs in Nigeria. Kola (2017) found that in developing countries (South Africa and Bulgaria) unlike developed countries (USA), there is no causal relationship from interest rates to REITs financial performance. This was a study on the effects of interest rates on REITs financial performance.

Locally, Borr (2018) did a study on the effects of macroeconomic variables on real estate development in Kenya. However, the independent variables studied were balance of payment, government expenditure, external government debt, foreign direct investments, taxation, interest rate, inflation rates, unemployment, capital market development and exchange rates. Based on a study by Wambuu (2016) examined the macroeconomic factors that affect the financial performance of REITs in Kenya. However, data was collected on a quarterly basis for 5 years from July 2011 to June 2016. Wambuu (2016) undertook a study on macroeconomic (NSE All Share Indices, real GDP, inflation rate, exchange rate, and interest rate and diaspora remittances) factors affecting financial performance of the Real Estate Industry in Kenya. Mburu (2017) examined the determinants of performance of REITs in Nairobi County. Based on these studies, there are minimal views on the impact of macroeconomic factors

(balance of payment, consumption, savings and aggregated price levels) on REITs financial performance in Kenya. Therefore, there was a need to explore this area from a Kenyan perspective and this formed the basis of this study.

2.0 LITERATURE REVIEW

2.1 Theoretical Review

Efficient Market Hypothesis (EMH)

The Efficient Markets Hypothesis (EMH) is an investment theory primarily derived from concepts attributed to Eugene Fama's research as detailed in his 1970 book, "Efficient Capital Markets: A Review of Theory and Empirical Work." Fama (2018) put forth the basic idea that it is virtually impossible to consistently "beat the market", to make investment returns that outperform the overall market average as reflected by major stock indexes. According to Fama's theory, while an investor might get lucky and buy a stock that brings him huge short-term profits, over the long term he cannot realistically hope to achieve a return on investment that is substantially higher than the market average (Fama, 2018).

By the start of the twenty-first century, the intellectual dominance of the efficient market hypothesis had become far less universal. Many financial economists and statisticians (Shiller, 2015; Lo, Mamaysky & Wang, 2015; Lesmond, Schill, & Zhou, 2016) began to believe that stock prices are at least partially predictable. The new breed of economists emphasized psychological and behavioral elements of stock-price determination, and came to believe that future stock prices are somewhat predictable on the basis of past stock price patterns as well as certain "fundamental" valuation metrics. Moreover, the economists were even making the far more controversial claim that these predictable patterns enable investors to earn excess risk-adjusted rates of return.

The theory was relevant to the current study because, investors who subscribe to the EMH are more inclined to invest in passive index funds that are designed to mirror the market's overall performance. On the other hand, investors who subscribe to the EMH are less inclined to be willing to pay high fees for expert fund management when they don't expect even the best of fund managers to significantly outperform average market returns. Moreover, because research in support of the EMH has shown just how rare money managers who can consistently outperform the market; the few individuals who have developed such a skill are ever more sought after and respected (Fama, 2018). In the same way, balance of payments is a macro variable and a statistical statement that systematically summarizes for a specific period, the economic transaction of an economy with the rest of the world. Therefore, this theory predicted that changes in the balance of payments would impact investors' profit-maximizing behavior, impacting an entity's, industry's, and economy's financial performance.

2.2 Conceptual Framework

Conceptual framework is a tool which provides variational analysis linked to the research's goal. In this study the conceptual framework to be used is presented in Figure 1.

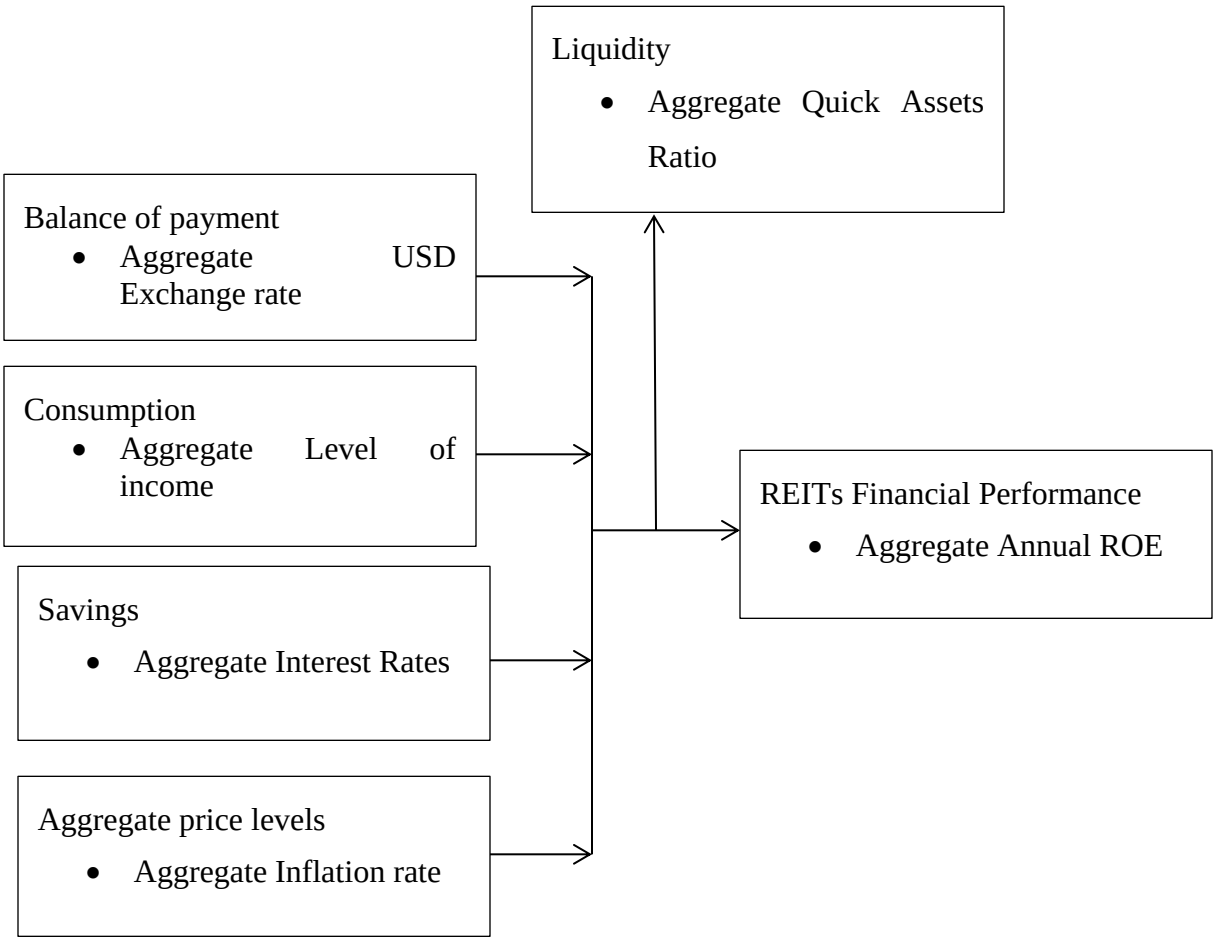


Figure 1: Conceptual Framework

3.0 METHODOLOGY

Causal research design was used to describe the REITs financial performance. This study used the population comprising of thirteen REITs firms in Kenya. The entire population (census) was used for the study. This study utilized secondary sources of data to get the information required to satisfy the research objectives. Time series data on REITs financial performance was computed for a four-year period as at 1st January 2016 to 31stDecember 2019, thus making use of 4 data points. The process of data analysis entailed preparation of the collected data through cleaning, editing and coding so that statistics could be keyed in the SPSS (statistical package for social sciences) package. The data was presented through tables and figures

4.0 RESULTS

4.1 Descriptive Statistics

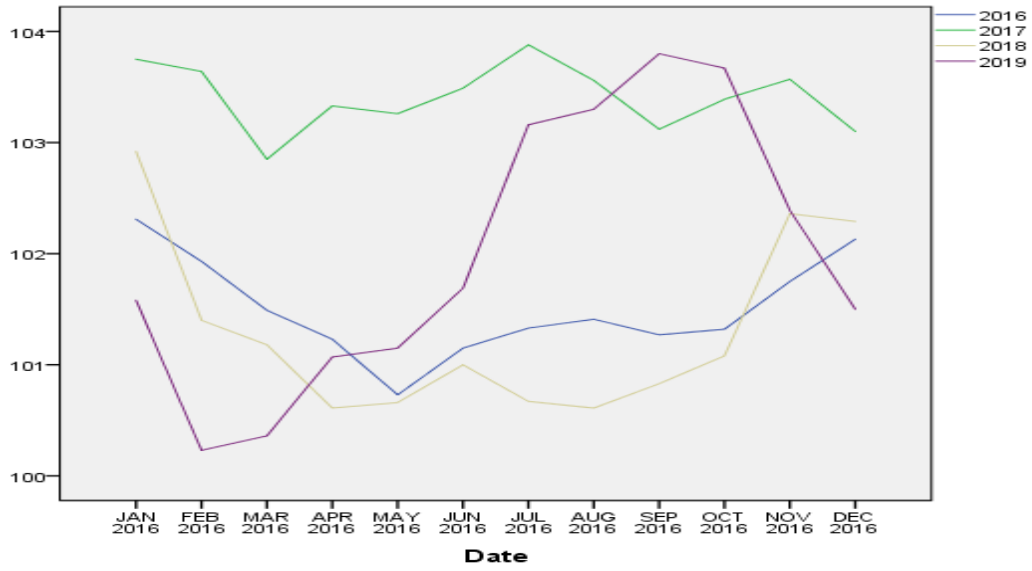
4.1.1 Balance of Payment

The study sought to establish the trend in BOP on REITs financial performance in Kenya over the study period of 2016-2019 computed by United States Dollar (USD) rate charged and REITs performance was computed by ROA. Table 1 shows the descriptive statistics results for the BOP variable with 48 observations each forming a time series data and industry.as shown in the table, the BOP ranged from 101.5042 to 101.9917 with an average of 102.0521 and a standard deviation of 0.695923. The BOP trend over the four year period (2016-2019) is illustrated in Figure 2. The trend results for the BOP in Kenya had dramatic growths in 2019 as it peaked in the month of September and sharply decreased in December. Years 2017 – 2018 exhibited inconsistent growth and decline patterns.

Table 1: Balance of Payment

	Mean	**Std. Deviation**
2016	101.5042	.44832
2017	103.4117	.29649
2018	101.3008	.79031
2019	101.9917	1.24857
Average	**102.0521**	**0.695923**

Figure 1: Balance of Payment Time Series



4.1.2 Consumption

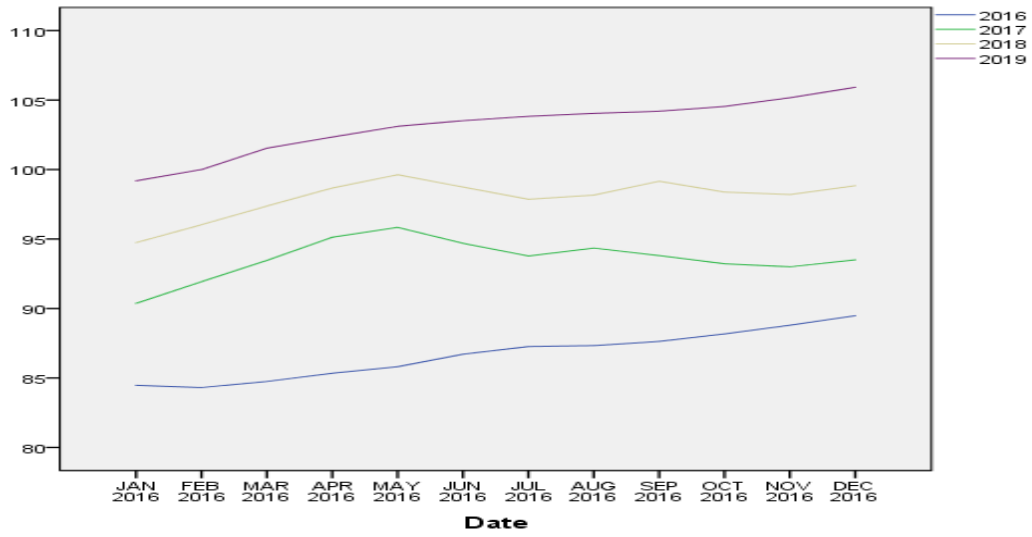
The study sought to establish the trend in consumption on REITs financial performance in Kenya over the study period of 2016-2019. Table 2 shows the descriptive statistics results for the consumption variable with 48 observations each forming a time series data and industry.as shown in the table. The consumption ranged from 86.672 to 103.117 with an average of 95.340

and a standard deviation of 1.644. The consumption trend over the four year period (2016-2019) is illustrated in Figure 3. The consumption trend results in Kenya had consistent growths patterns over the four years increasing from January to December for all the years.

Table 2: Consumption

	Mean	Std. Deviation
2016	86.672	1.732
2017	93.590	1.444
2018	97.982	1.376
2019	103.117	2.023
Average	**95.340**	**1.644**

Figure 2: Consumption



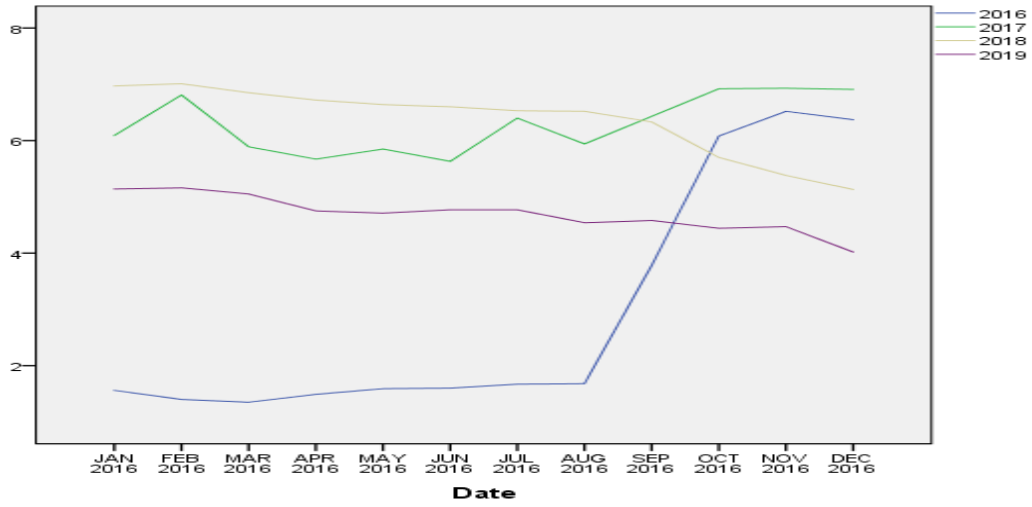
4.1.3 Savings

The study sought to establish the trend in saving on REITs financial performance in Kenya over the study period of 2016-2019. Table 3 shows the descriptive statistics results for the savings variable with 48 observations each forming a time series data and industry.as shown in the table. The savings ranged from 2.9242 to 4.7000 with an average of 5.070 and a standard deviation of 0.901. The consumption trend over the four year period (2016-2019) is illustrated in Figure 4. According to the trend results savings in Kenya had an inconsistent growth and decline pattern over the four year period while 2016 showed a steadily increase in growth climaxing in November.

Table 3: Savings

	Mean	Std. Deviation
2016	2.9242	2.15045
2017	6.2892	.50714
2018	6.3650	.62263
2019	4.7000	.32516
Average	**5.070**	**0.901**

Figure 3: Savings



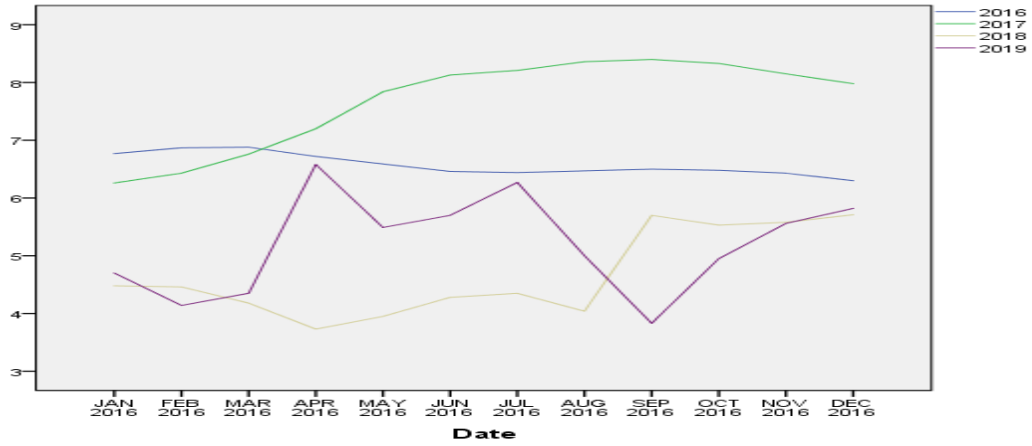
4.1.4 Aggregate Price Levels

The study investigated the trend in aggregate price levels on REITs financial performance in Kenya over the study period of 2016-2019. Table 4 shows the descriptive statistics results for the aggregate price levels variable with 48 observations each forming a time series data and industry.as shown in the table. The aggregate price levels ranged from 6.576 to 5.199 with an average of 6.028 and a standard deviation of 0.644. The aggregate price levels trend over the four year period (2016-2019) is illustrated in Figure 5. According to the trend results on aggregate price levels in Kenya for years 2018 and 2019 had inconsistent growth and decline patterns while year 2017 showed a steady increase that climaxed in September. On the other hand, year 2016 showed a steadily decreased from January to December.

Table 4: Aggregate Price Levels

	Mean	**Std. Deviation**
2016	6.576	0.189
2017	7.671	0.791
2018	4.666	0.744
2019	5.199	0.851
Average	**6.028**	**0.644**

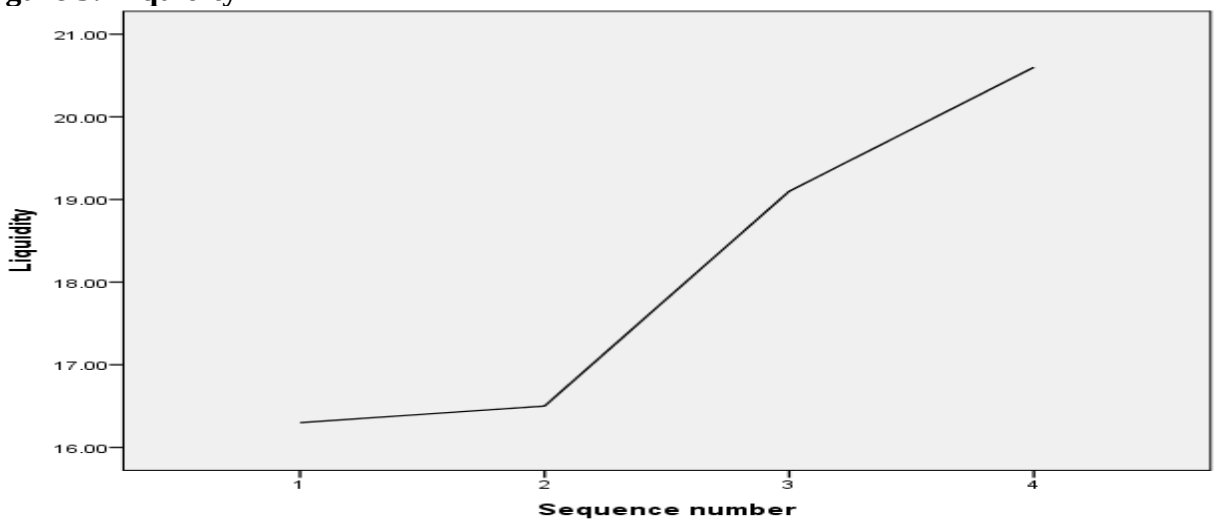
Figure 4: Aggregate Price Levels



4.1.5 Liquidity

The study examined the trend in liquidity on REITs financial performance in Kenya over the study period of 2016-2019 as illustrated in Figure 6. According to the trend results on liquidity in Kenya steadily increased from 2016 to 2019.

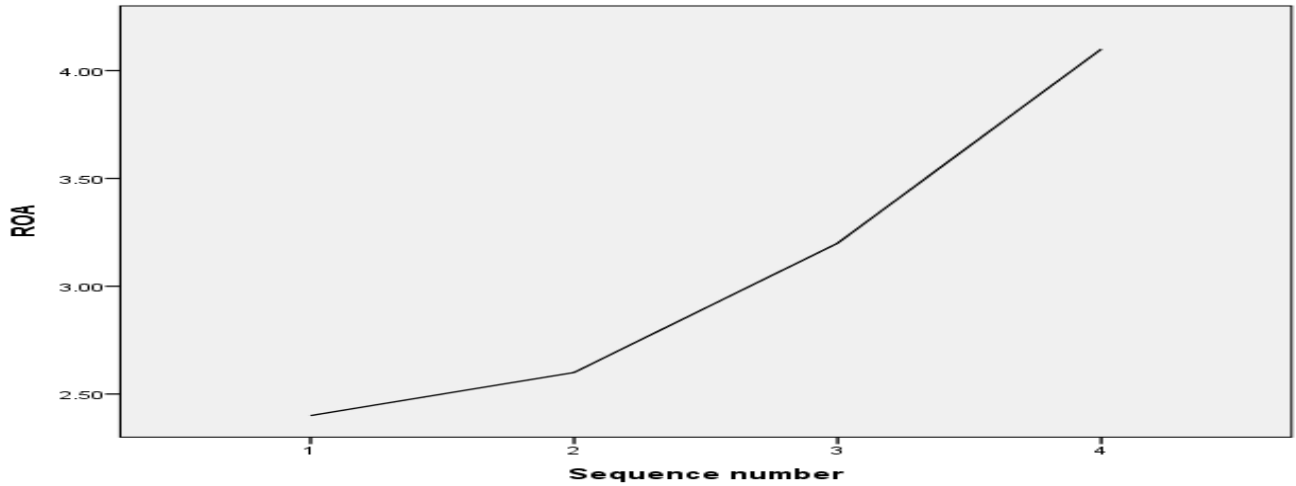
Figure 5: Liquidity



4.1.6 Return on Assets (ROA)

The study explored the trend in ROA on REITs financial performance in Kenya over the study period of 2016-2019 as illustrated in Figure 7. According to the trend results on ROA in Kenya for years 2018 and 2019 steadily increased from 2016 to 2019. As per the trend results on ROA in Kenya steadily increased from 2016 to 2019.

Figure 6: Return on Assets (ROA)



4.1.7Correlation Analysis

The Pearson correlation shown in Table 5 indicated that the associations between each of the independent variables and the dependent variable relate, the results observed that all the variables were significant at 95% confidence level. Correlation analysis as noted by Mugenda and Mugenda (2003) helps investigate the relationship between independent and dependent variables. Furthermore, correlation analytics shows the strength and positivity or negativity of relationship between variables ranging from -1 to 1. The correlation analysis determined the relationship between balance of payment, consumption, savings and aggregated price levels and REITs financial performance in Kenya.

Table 5: Correlation Analysis

		Aggregate Price Levels	Savings	BOP	Consumption	Liquidity	Return On Equity
Aggregate Price Levels	Pearson Correlation	1	.505	.365	.869**	.754**	.350
	Sig. (2-tailed)		.094	.243	.000	.005	.264
	N	12	12	12	12	12	12
Savings	Pearson Correlation	.505	1	.598*	.293	.283	.341
	Sig. (2-tailed)	.094		.040	.355	.373	.278
	N	12	12	12	12	12	12
BOP	Pearson Correlation	.365	.598*	1	.016	.340	.562
	Sig. (2-tailed)	.243	.040		.961	.279	.057
	N	12	12	12	12	12	12
Consumption	Pearson Correlation	.869**	.293	.016	1	.794**	.353
	Sig. (2-tailed)	.000	.355	.961		.002	.261
	N	12	12	12	12	12	12
Liquidity	Pearson Correlation	.754**	.283	.340	.794**	1	.662*
	Sig. (2-tailed)	.005	.373	.279	.002		.019
	N	12	12	12	12	12	12
Return On Equity	Pearson Correlation	.350	.341	.562	.353	.662*	1
	Sig. (2-tailed)	.264	.278	.057	.261	.019	
	N	12	12	12	12	12	12

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Based on the findings aggregate price levels insignificantly correlated with REITs financial performanceweakly positively as was shown by a Pearson correlation of 0.350 and a p-value of

0.26. In addition, aggregate price levels correlated positively with savings with a Pearson correlation of 0.505 and p-value of 0.094showing statistically insignificant relationship. On the same scale aggregate price levels correlated positively with BOP with a Pearson correlation of 0.365and p-value of 0.243 showing statistically insignificant relationship. Moreover, aggregate price levels correlated positively with consumption with a Pearson correlation of 0.869 and p-value of 0.000 showing a statistically significant relationship. Lastly, aggregate price levels correlated positively with liquidity with a Pearson correlation of 0.754 and p-value of 0.005 showing a statistically significant relationship.

The findings concerning Savings had a weak positive and insignificant correlation with REITs financial performance as shown by a Pearson correlation of 0.341 and a p-value of 0.278. In addition, savings also had a weak positive and insignificant correlation with consumption and liquidity as shown by the Pearson correlation of 0.293and 0.283 and p-value of 0.355 and 0.373 respectively. Additionally, savings had a strong positive and significant correlation with BOPas shown by the Pearson correlation of 0.598and p-value of 0.040.

The findings for BOP were as follows; BOP had a strong positive and insignificant correlation with REITs financial performance as shown by a Pearson correlation of 0.562 and a p-value of 0.057. BOP also had a weak positive and insignificant correlation with aggregate price levels, consumption and liquidity as shown by the Pearson correlation of 0.365, 0.016 and 0.340 and p-value of 0.243, 0.961 and 0.279 respectively. In addition, BOP had a strong positive and significant correlation with savingsas shown by the Pearson correlation of 0.598 and p-value of 0.040.

The findings for consumption were as follows; consumption had a weak positive and insignificant correlation with REITs financial performance as shown by a Pearson correlation of 0.353 and a p-value of 0.261. Consumption also had a weak positive and insignificant correlation with savings and BOP as shown by the Pearson correlation of 0.293 and 0.016 and p-value of 0.355 and 0.961 respectively. Lastly, consumption had a strong positive and significant correlation with aggregate price levelsas shown by the Pearson correlation of 0.869and p-value of 0.000.

The findings for liquidity were as follows; liquidity had a strong positive and significant correlation with REITs financial performance as shown by a Pearson correlation of 0.662 and a p-value of 0.019. Liquidity also had a strong positive and significant correlation with aggregate price levels and consumption as shown by the Pearson correlation of 0.754 and 0.794 and p-value of 0.005 and 0.002 respectively. Lastly, liquidity had a weak positive and insignificant correlation with savings as shown by the Pearson correlation of 0.283 and p-value of 0.373.

Finally, the findings for return on equity were as follows; ROE had a strong positive and significant correlation with liquidity as shown by a Pearson correlation of 0.662 and a p-value of 0.019. ROE also had a weak positive and insignificant correlation with aggregate price levels, savings and consumption as shown by the Pearson correlation of 0.350, 0.341 and 0.353 and p-value of 0.264, 0.278 and 0.261 respectively. Lastly, ROE had a strong positive and insignificant correlation with BOPas shown by the Pearson correlation of 0.562and p-value of 0.057.

4.2 Diagnostic Tests

The study conducted the following tests: normality, autocorrelation, multicollinearity, heteroscedasticity to find out if the assumptions of linear model were met.

4.2.1Normality Test

Tests were done to establish the normality of aggregate price levels, savings, BOP, consumption, liquidity and Return on Equity. Using One-Sample Kolmogorov-Smirnov Test, values were established. The analysis of the One-Sample Kolmogorov-Smirnov Test indicated that the Asymp. Sig. (2-tailed) for aggregate price levels was 0.200, savings was 0.200, BOP was 0.055, consumption was 0.023, liquidity was 0.200 and Return on Equity was 0.200. All variables had a p value above 0.05. This implies that aggregate price levels, savings, BOP, consumption, liquidity and Return on Equity data were normally distributed.

Table 6: One-Sample Kolmogorov-Smirnov Test for Normality

One-Sample Kolmogorov-Smirnov Test

		Aggregate Price Levels	Savings	BOP	Consumption	ROE
N		12	12	12	12	12
Normal Parameters[a,b]	Mean	6.0283	5.0717	102.0533	95.3400	17.8625
	Std. Deviation	.34433	.44946	.41340	1.42523	.50694
Most Extreme Differences	Absolute	.183	.199	.240	.261	.186
	Positive	.168	.199	.134	.169	.186
	Negative	-.183	-.174	-.240	-.261	-.130
Test Statistic		.183	.199	.240	.261	.186
Asymp. Sig. (2-tailed)		.200[c,d]	.200[c,d]	.055[c]	.023[c]	.200[c,d]

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.
d. This is a lower bound of the true significance.

4.2.2 Autocorrelation Test

The Durbin Watson Test for autocorrelation was used for the data. Study findings showed Durbin-Watson indicator was 2.585 this implied that according to Durbin and Watson (1971) when the Durbin-Watson indicator is amid 1.5 and 2.5, there is no evidence to depict that autocorrelation exists. This hence would lead to conclusion that there was no auto-correlation in the data that was considered for multiple regression analysis.

Table 7: Autocorrelation Test Using Durbin Watson

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.792[a]	.627	.414	.38802	2.585

a. Predictors: (Constant), Consumption, BOP, Savings, Aggregate Price Levels
b. Dependent Variable: Return On Equity

4.2.3 Multicollinearity Test

Test of multicollinearity in study involved the use of Variance of Inflation Factors (VIF) study and tolerance. Multicollinearity depicts the probability that a predictor variable considered in a regression model might have a significant linear relationship with another independent variable. The findings revealed that aggregate price levels had tolerance value of 0.118 with VIF value of 8.480, savings had tolerance value of 0.547 with VIF value of 1.827, BOP had a tolerance value of 0.412 with VIF value of 2.429, and consumption had tolerance value of 0.140 with VIF value of 7.159. Therefore, in the absence of the moderating variable, all independent variable had a tolerance value more than 0.2 or 0.1 simultaneously. Moreover all of the independent variables were less than VIF value of 10 hence it was considered that the independent variables had no multicollinearity problem. These findings corroborates with (Tsay, 2005) that coefficients were compared if the value of tolerance is less than 0.2 or 0.1simultaneaously, the value of VIF 10 and above then the multicollinearity is concluded problematic.

Table 8: Multicollinearity Test without the Moderating Variable

	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
Model	**B**	**Std. Error**	**Beta**	**t**	**Sig.**	**Tolerance**	**VIF**
1(Constant)	-148.277	54.938		-2.699.031			
Aggregate Price Levels	-1.810	.989	-1.230	-1.830.110		.118	8.480
Savings	-0.81	.352	-.072	-.231.824		.547	1.827
BOP	1.265	.441	1.032	2.868.024		.412	2.429
Consumption	.507	.220	1.426	2.310.054		.140	7.159

a. Dependent Variable: ROE

4.2.4 Heteroscedasticity Test

Provided in Table below are the results of regression of the absolute residual value (ARV) on the independent variables. When a regression model used the REITs financial performance as the response variable, the testing resulted in the p-value for all the variables was greater than 0.05hence there was no heteroscedasticity problem. Green and Heywood (2008) noted that when testing heteroscedasticity in a more general form, can adopt residual-based tests of heteroscedasticity tests which can test different categories of the independent variables.

Table 9: Heteroscedasticity Test

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	8.752	28.069		.312	.764
	Aggregate Price Levels	-.123	.506	-.256	-.243	.815
	Savings	.114	.180	.309	.632	.548
	BOP	-.084	.225	-.209	-.371	.721
	Consumption	.002	.112	.014	.015	.989

a. Dependent Variable: AbsUt

4.3Regression Model Summary

The table below shows the regression model.

Table 10: Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.792[a]	.627	.414	.38802

a. Predictors: (Constant), Consumption, BOP, Savings, Aggregate Price Levels

Table 10 shows the regression model without the moderating variable which is represented by Model 1.It shows that R = 0.792, R^2 = 0.627. According to the findings R^2 value indicate that 62.7% of the variance in the REITs financial performance can be accounted for by the independent variables (macroeconomic variables) considered in this study.

Table 11: ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.773	4	.443	2.944	.101[b]
	Residual	1.054	7	.151		
	Total	2.827	11			

a. Dependent Variable: Return On Equity

b. Predictors: (Constant), Consumption, BOP, Savings, Aggregate Price Levels

Table 11 reveals that there was a significant relationship between macroeconomic factors and REITs financial performance in Kenya as the F critical at 5% level of significance was 2.944 since F calculated is lower than the F critical (value = 4.120), this shows that the overall model was insignificant.

Table 12: Coefficients[a]

Model	Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.

1	(Constant)		-148.277	54.938		-2.699	.031
	Aggregate Price Levels		-1.810	.989	-1.230	-1.830	.110
	Savings		-.081	.352	-.072	-.231	.824
	BOP		1.265	.441	1.032	2.868	.024
	Consumption		.507	.220	1.426	2.310	.054

a. Dependent Variable: Return On Equity

Model one in Table 12 above illustrates the regression equation and it was established that taking all factors into account and held at zero (consumption, BOP, savings, aggregate price levels) would lead REITs financial performance to decrease by 148.277. The findings presented also showed that with all other variables held at zero, a unit change in aggregate price levels would lead to a 1.810 decrease in REITs financial performance, a unit change in savings would lead to a 0.081 decrease in REITs financial performance, a unit change in BOP would lead to 1.265 increase in REITs financial performance and a unit change in consumption would lead to a 0.507 increase in REITs financial performance. Hence **Model 1**: REITs Financial Performance= $-148.277 - 1.810X_1 - 0.081X_2 + 1.265X_3 + 0.507X_4$

Where X1= Aggregate Price Levels; X2= Savings; X3= BOP; and X4= Consumption

Table 13: Regression Model Summary with Moderating Variable

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.838[a]	.703	.455	.37436

a. Predictors: (Constant), Consumption, BOP, Savings, Aggregate Price Levels, Liquidity

Table 13 shows the regression model with the moderating variable. It shows that R = 0.838, R^2 = 0.703. According to the findings R^2 value indicate that 70.3% of the variance in the REITs financial performance can be accounted for by the independent variables (macroeconomic variables) and the moderating variable considered in this study.

Table 14: ANOVA[a] with the Moderating Variable

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.986	5	.397	2.834	.119[b]
	Residual	.841	6	.140		
	Total	2.827	11			

a. Dependent Variable: Return On Equity
b. Predictors: (Constant), Consumption, BOP, Savings, Aggregate Price Levels, Liquidity

Table 14 reveals that there was an insignificant relationship between macroeconomic factors, the moderating variable and REITs financial performance in Kenya as the F critical at 5% level of significance was 2.834 since F calculated is lower than the F critical (value = 4.387), this shows that the overall model was insignificant.

Table 15: Coefficients[a] with the Moderating Variable

Model	Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1(Constant)	-97.068	67.337		-1.442	.200
Aggregate Price Levels	-1.510	.985	-1.026	-1.533	.176
Savings	.074	.362	.066	.206	.844
BOP	.837	.549	.682	1.523	.179
Consumption	.263	.290	.740	.908	.399
Liquidity	.645	.523	.597	1.233	.264

a. Dependent Variable: Return On Equity

Table 15, Model 2:After introducing (Xi*Liq combined)in model two below it was established that taking all factors into account and held at zero(consumption, BOP, savings, aggregate price levels, liquidity) would lead REITs financial performance to a decrease of 97.068. The findings presented also showed that with all other variables held at zero, a unit change in aggregate price levels would lead to a 1.510decrease in REITs financial performance, a unit change in savings would lead to a 0.074 increase in REITs financial performance, a unit change in BOP would lead to 0.837increase in REITs financial performance and a unit change in consumption would lead to a 0.263 increase in REITs financial performance. Also a unit change in (Xi*Liq Combined) would lead to a 0.645 increase in REITs financial performance.

Hence Model 2: REITs Financial Performance= $-97.068 - 1.510X_1 + 0.074X_2 + 0.837X_3 + 0.263X_4 + 0.645X_5$

Conclusion: The P values (0.176, 0.844, 0.179, 0.399 and 0.264) for the aggregated price levels, savings, BOP, consumption and liquidity respectively indicate that the impact of liquidity on the real estate industry is insignificant, this is attributed to their indirect influence on the macroeconomic variables and financial performance.

5.0 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

To determine the Effect of Balance of Payment on the Financial Performance of REITs in Kenya

The study determined the effect of BOP on the financial performance of REITs in Kenya by using United States Dollar (USD) rate charged. It was found that BOP variable with 48 observations each forming a time series data and industry that ranged from 101.5042 to 101.9917 with an average of 102.0521 and a standard deviation of 0.695923. The BOP trend over the four year period (2016-2019) illustrated dramatic growths in 2019 as it peaked in the month of September and sharply decreased in December. Years 2017 – 2018 exhibited inconsistent growth and decline patterns. Unmoderated regression findings revealed that a unit change in BOP would lead to 1.265 increase in REITs financial performance while moderated regression findings showed that a unit change in BOP would lead to 0.837 increase in REITs financial performance.

To examine the Influence of Consumption on the Financial Performance of REITs in Kenya

The study examined the influence of consumption on the financial performance of REITs in Kenya. The study finding shows that consumption variable had 48 observations each forming a

time series data and industry. The consumption ranged from 86.672 to 103.117 with an average of 95.340 and a standard deviation of 1.644. The consumption trend over the four year period (2016-2019). The consumption trend results in Kenya had consistent growths patterns over the four years increasing from January to December for all the years. Additionally, unmoderated regression findings revealed that a unit change in consumption would lead to a 0.507 increase in REITs financial performance while moderated regression findings indicated that a unit change in consumption would lead to a 0.263 increase in REITs financial performance.

To establish the effect of Savings on the Financial Performance of REITs in Kenya

The study established the effect of savings on the financial performance of REITs in Kenya. Savings was measured using interest rates. It was found that time series data and industry ranged from 2.9242 to 4.7000 with an average of 5.070 and a standard deviation of 0.901. The savings trend over the four year period (2016-2019) had an inconsistent growth and decline pattern over the four year period while 2016 showed a steadily increase in growth climaxing in November. Unmoderated regression findings revealed that a unit change in savings would lead to a 0.081 decrease in REITs financial performance while moderated regression findings showed that a unit change in savings would lead to a 0.074 increase in REITs financial performance.

To assess the effect of Aggregate Price Levels on the Financial Performance of REITs in Kenya

The study sought to find out the effect of aggregated price levels on the financial performance of REITs in Kenya. Aggregated price levels was measured by inflation rate. The descriptive statistics results for the aggregate price levels variable with 48 observations each forming a time series data and industry ranged from 6.576 to 5.199 with an average of 6.028 and a standard deviation of 0.644. The aggregate price levels trend over the four year period (2016-2019) showed inconsistent growth and decline patterns while year 2017 showed a steady increase that climaxed in September. On the other hand, year 2016 showed a steadily decrease from January to December. Moreover, regression findings without the moderating effect of liquidity showed that with all other variables held at zero, a unit change in aggregate price levels would lead to a 1.810 decrease in REITs financial performance. Upon the introduction of the moderating variable, the findings showed that with all other variables held at zero, a unit change in aggregate price levels would lead to a 1.510 decrease in REITs financial performance.

Moderating influence of Liquidity between Macroeconomic Variables and REITs Financial Performance

The study sought to find out the moderating effect of liquidity on macroeconomic factors and REITs financial performance in Kenya. Liquidity was measured by Quick Assets Ratio. The findings shows that liquidity in Kenya steadily increased from 2016 to 2019. The regression model results with the moderating variable showed that $R = 0.838$, $R^2 = 0.703$. According to the findings R^2 value indicate that 70.3% of the variance in the REITs financial performance can be accounted for by the independent variables (macroeconomic variables) and the moderating variable considered in this study. Furthermore, a unit change in (Xi*Liq Combined) would lead to a 0.645 increase in REITs financial performance.

Conclusion

The study concluded that; the effect of BOP on REITs performance was higher without the influence of liquidity. The effect of consumption on REITs performance was higher without the

influence of liquidity. However, overall, the effect of consumption on REITs performance was positive. The effect of savings on REITs performance was higher without the influence of liquidity. Nevertheless, overall, the effect of savings on REITs performance was positive. When aggregate price levels are unmoderated by liquidity they have a more adverse effect on REITs financial performance compared to when they are moderated. However, generally, an increase in aggregate price levels negatively affects REITs financial performance. There is a moderating effect of liquidity on macroeconomic variables and REITs financial performance thus liquidity is an important factor on both independent variables and dependent variable.

Recommendations

The government and REITs stakeholders should focus on policies and strategies that encourage favorable BOP in Kenya to ensure the continued positive performance of the REITs. The study recommends that the REITs develop and design their products to suit consumers tastes and preferences to ensure their increased as consumption increases. Since the study shows that there is a positive relationship between consumption and REITs performance, the strategy for aligning REIT products will ensure the continued strong performance of the REITs. The study also recommends that the government should encourage favorable interest rates to encourage savings and the continued uptake of REITs products for the sustained positive performance of the REITs. On the other hand, the REITs should increase sensitization and awareness of their products to ensure that consumers look at them as favorable savings options hence increase their uptake. Inflation has a negative effect on REITs financial performance due to decreased aggregated price levels which means that high inflation reduces the level of exchange rate. The government should expand the money supply to lower the inflation rates through tight fiscal and economic policies.

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