

## Effect of Exchange Rate Volatility on Performance of Commercial Banks in East Africa Community

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### Abstract

Bank performance indicates the bank's capacity to generate sustainable profits. The banking sector in Kenya has been experiencing fluctuating performance, which could be detrimental to its survival. The study sought to determine the effect of the risk associated with exchange rate volatility on the profitability of commercial banks in the East African Community. This investigation specifically sought to establish the level of exchange rate volatility hence estimating the risk, and also analyze the effect of exchange rate volatility on commercial banks' performance. The study was anchored by the profit maximization theory and the monetary theory. It employed an explanatory research design. The study covered the period from 2000 to 2020 and utilized secondary data sourced from Central Banks and World Bank. The study employed a panel estimation procedure since the data was collected in panel series. The study concludes that volatility exists as a risk to the profitability of commercial banks in the East African Community. Using the coefficient of variation, the study found that Uganda performed better than Tanzania. As a result, Tanzania and Kenya saw greater currency rate volatility than Uganda. Further, the results showed that the volatility influenced commercial banks' performance proxied by ROA for the period between 2000 to 2020. The relationship was however found to be weak and negative.

**Keywords:** *Exchange Rate Volatility, Performance of Commercial Banks, East Africa Community*

### 1.0 Introduction

#### *The Exchange Rate*

The value of one country's currency in relation to another country's currency is what is known as the exchange rate. Further, an exchange rate can be seen as the unit price of foreign currency against domestic currency Keshtgar, Pahlavani and Mirjalili (2020). Exchange risk is also referred to as a degree of risk that stems from unexpected changes in the exchange rates. By expression, an exchange rate can take the multilateral or bilateral form. An exchange rate of the bilateral form expresses the exchange rate of one currency relative to another, for example, the rate at which the Kenya shilling can be expressed in terms of a United States Dollar (USD). Conversely, a multilateral exchange rate is one expressed in terms of a composite weighted basket of a country's trading partners' currencies (Gachoki et al., 2021). Majority of exchange rates fall under floating systems and are allowed to upswing or drop based on market supply

and demand but some exchange rates are not floating and are pegged to the value of other currencies and may have restrictions.

The exchange rate is one of the most significant factors that affect a country's comparative economic standing, along with inflation and interest rates. The argument over how exchange rates affect economic growth is still highly nuanced, though. Regarding exchange rate policies, two key issues are frequently brought up: the connections between exchange rates and the balance of payments; and, the macro stability and growth. Particularly, the exchange rate has a significant impact on a nation's trading performance. A currency with a higher value makes imports cheaper and exports more expensive in overseas markets. As a result, the production cost of items made locally is immediately and considerably impacted by exchange rate fluctuations in a country's prices (Kairu, 2016).

Keshtgar, Pahlavani, and Mirjalili (2020) argue that changes in exchange rates generally result in both large gains and losses. A company's accounting exposure increases with its level of involvement in international commerce, and unless this risk is hedged, it may experience either losses or gains financially from transactions.

Commercial banks unquestionably have a significant impact on the financial system and the financial industry as a whole. Their participation in channeling surplus finances are moved into productive activities is a chain that cannot be ignored in economic development. According to Franklin and Elena (2008) commercial banks are the grease that keeps this chain smooth. Financial institutions mobilize financial resources from surplus holders to deficient economic units (Kairu, 2016). To carry out this role the management of risk by commercial banks is key in decision-making, especially in the foreign exchange rate and currency exposure. Exchange rate fluctuations present a risk to firms due to uncertainty in potential profits. This challenge is ever present in developing countries since they have no instruments to hedge against exchange exposure and even in situations where they are available they are too costly (Kairu, 2016).

### ***Exchange Rate Volatility***

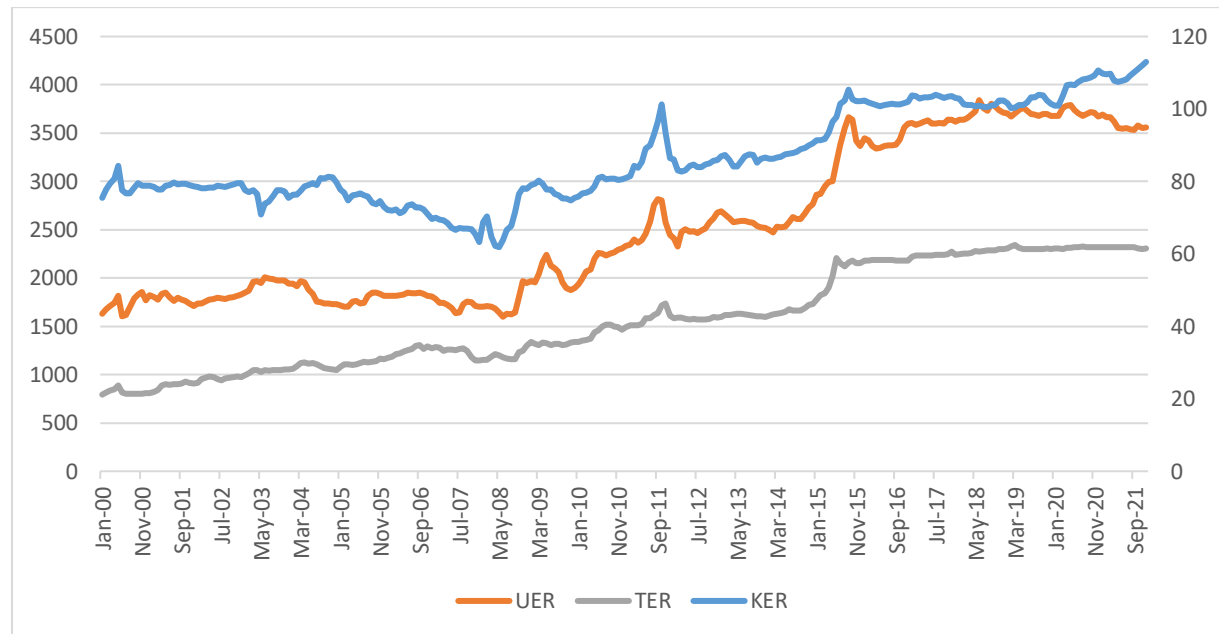
Fixed exchange rates are not volatile while floating exchange rates can have volatility or not depending on how it changes over time. However, because they are subject to alter at any time, floating exchange rates tend to be more volatile. rates of exchange Investment decisions are hampered by volatility since it raises exchange rate risk. Exchange rate risk is the possibility of suffering a loss as a result of fluctuating exchange rates. The variance in the exchange rate's value over time can be referred to as its volatility (Bagh et al., 2017). The volatility and uncertainty make the prediction of future prices difficult.

According to Keshtgar et al. (2020) commercial banks' performance is impacted both directly and indirectly by exchange rate volatility. Because banks engage in operations relating to foreign exchange, exchange rate volatility directly affects their financial performance. Before engaging in foreign exchange-related activities, it is important to evaluate exchange rate fluctuations, associated risks, and their effects on the Bank's foreign currency obligations and the profitability of its banking operations. The performance and outcomes of borrowers and depositors, as well as the risk and efficiency of the banking sector, are all adversely affected by exchange rate fluctuation.

Exchange rate fluctuations also have a negative influence on the return on assets for banks. Due to the volatility of foreign exchange, banks are vulnerable to a variety of hazards, which have an impact on their profitability. These risks include the risk of transactions, conversions, credit, interest rates, and inflation. The question then becomes what effect does exchange rate volatility has on banking performance?

### *EAC Exchange Rates 2000-2021*

Kenya’s exchange rate trend between 2000 to 2021 is shown in Figure 1.



**Figure 1: EAC Exchange Rates Trend 2000-2021**

**Source: Authors compilation (2022)**

From figure 1 it is evident that the three east African currencies –the Kenya shilling, the Uganda shilling, and Tanzanian Shilling have been depreciating more often than they have appreciated. With the exception of Tanzania which has had a consistent depreciation, Kenya and Uganda currencies were stable against the United States dollar between 2000 and 2004, followed by an appreciation that lasted in 2009 and a final epoch where the currencies have been depreciating to date. Like many developing countries the three EAC partner states have seen their currencies fall sharply in value over time, majorly due to declining commodity prices and a reversal of capital flows. Proti (2013) noted that currency depreciation against the dollar is not unique to any specific member of the EAC but a general trend.

The three currencies also exhibit a distinct pattern for the periods 2000-2004 when they are relatively stable, followed by a sudden appreciation from 2004-2009, and another sudden shift towards depreciation up to 2015, a slight appreciation towards the end of 2015 and finally a fairly stable period to date. Such tendencies are most likely associated with volatility. Epaphra and Kazungu (2021) claims that volatility happens in clusters, citing the propensity for significant foreign exchange fluctuations (negative or positive) to occur after significant changes and vice versa.

In nominal terms, the Kenyan shilling maintained a general stable appreciation trend from 2000 to 2008, on the other hand, the Kenya shilling (Ksh) has exhibited a steady depreciating trend. The Ksh has experienced excessive declines since 2008, showing nominal weakness in the wake of the global financial crisis. Like other world currencies, Ksh continued to fall in 2015 in real and nominal terms after the dollar rose against other currencies around the world (Yabu & Kimolo, 2020).

The depreciation of the Tanzanian shilling exchange rate and associated volatility is due to, among other things, the increasing global demand for the dollar, the rapid expansion of oil imports, and the delay in supporting overseas programs. Due to the US dollar's overall strength against other currencies as a result of increased US economic activity, the significant decrease in 2015 was unavoidable. As with other EAC member countries under study, the Ugandan exchange rate has been highly volatile since 2000, with two sudden devaluations in 2011 and the first half of 2015. Also, be careful. Movements in real effective exchange rates are often reflected in nominal exchange rate movements (Yabu & Kimolo, 2020).

One notable issue is that in the early 1990s, all EAC countries adopted structural adjustment programs (SAPs) and various other macroeconomic reforms led by the IMF and the World Bank. The focus of these reforms was mainly policies to do with foreign trade and market exchange. The establishment of a market-based exchange rate system has caused periodic fluctuations in the exchange rates of the EAC. These currency rate changes are occasionally so significant in some EAC member nations that they have led to volatility brought on by both internal and external shocks (Yabu & Kimolo, 2020).

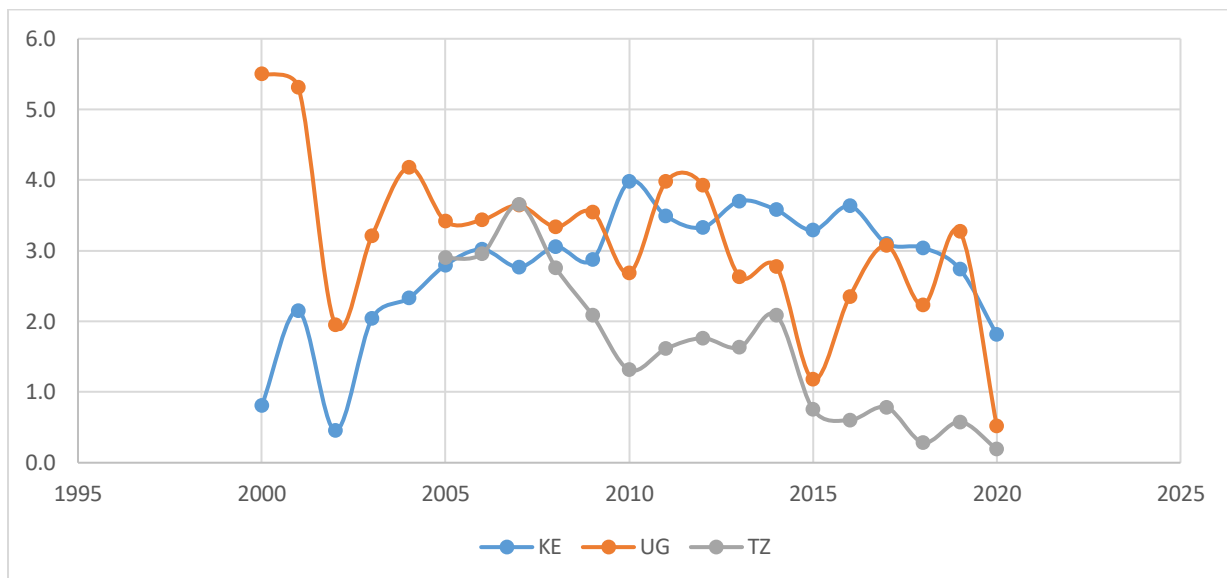
### ***Commercial banks' performance in EAC 2000-2020***

Profitability is the primary indicator of a commercial bank's financial performance. The profitability of banks in the EAC is impacted by both internal and external variables, just like all other banks worldwide. Internal variables can be thought of as a unique factor that impacts a bank's profitability because they are indications derived from a bank's financial statements (balance sheet, profit, and loss account) (Wahdan & Leithy, 2017). External variables are those that reflect the economic and regulatory environment and are not controlled by bank management but yet have an indirect impact on the performance and profitability of banks (Tobias & Themba, 2011).

Various profitability ratios exist, and they can be used by businesses to shed light on the health and performance of their finances, according to the Corporate Finance Institute. There are two categories in which to place these ratios. First, the firm's ability to turn a variety of sales into profit is shown by the margin ratio. The operational profit margin, net profit margin, cash flow margin, and gross profit margin are some of these ratios. The profitability ratio, which takes into account returns on: assets, equity, cash on assets, debt, retained earnings, risk-adjusted income, yield, and investment capital, assesses a company's capacity to produce returns for its shareholders.

The margin ratios, which show how well the company is doing at converting sales into profits, are the profitability measurements that are most frequently utilized. When it comes to simplicity, calculating gross profit as a percentage of net sales makes it the simplest to evaluate gross profit margin ratio. The ROA reveals the efficiency with which a company's assets are managed. If the size and structure of the assets are adjusted to the unique nature of the business's activities, a high return on total assets can be reached (Rutkowska-Ziarko, 2015).

According to Supriyadi (2021), an asset's contribution to generating a net profit is indicated by the ROA ratio. The ROA ratio should show how effectively and efficiently the company manages its assets. Figure 2 shows the ROA trends for Kenya, Uganda, and Tanzania from 2000 to 2020.



**Figure 2: Return on Assets in EAC 2000-2020**

Source: Author’s Compilation (2022)

Figure 2 shows the commercial banks' performance in EAC as measured using the ROA between 2000 and 2020. The trends show close clustering and a general declining trend of commercial banks in the three EAC member states. There are however notable epochs where the ROA increased between 20002 and 2007 and a general decline to date. Another notable thing is that between 2004 and 2009 when the exchange rates appreciated briefly, the ROA for Kenya and Uganda was also stable. From 2010 to date a period when exchange rates have depreciated the ROA has also been on a decline. A casual look at Figures 1 and 2, therefore, shows a pattern that is a subject of the investigation.

**Problem Statement**

Banking institutions encounter risks associated with exchange rate fluctuations where huge exchange rate losses could lead to decreased banks’ profitability, liquidity, and payoffs to investors including the complete collapse of banks. Generally, foreign exchange rate volatility has a negative effect on commercial banks’ performance and the economy at large (Kairu, 2016).

Other than the years 2004 to 2006 the exchange rates of EAC member states generally depreciated and commercial banks’ profits equally declined as measured by ROA. In the years that the exchange rates depreciated, commercial banks generally recorded declined profits as shown in figure 2. Epaphra and Kazungu (2021) claims that volatility happens in clusters, citing the propensity for significant foreign exchange fluctuations (of either sign) to occur after significant adjustments and vice versa. Figure 1 exhibits such a trend which literature shows is most likely associated with volatility.

Numerous studies on the performance of commercial banks have been conducted, with ambiguous findings. Kairu (2016) found a weak effect while Keshtgar et al. (2020) found a negative effect. In addition, Kemisola et al. (2016) found that there are insignificant effects associated with exchange rate volatility. Majority of these enquiries also did not use volatility as a variable of consideration. These studies include Frederick (2015), Hafidh (2020), and Lotto (2019). Majority of these studies also used time series data. This study deviates from these

country-specific studies by considering a group of countries which shares similar characteristics such as the main exchange rate in terms of the dollar. Most importantly, the study considers exchange volatility risk as an important determinant of commercial banks profitability and adopts panel data.

### ***Research Objectives***

- i. To estimate exchange rate volatility in EAC.
- ii. To ascertain how the performance of commercial banks in the EAC is affected by exchange rate volatility.

## **2.0 Literature Review**

### ***Theoretical Review***

Marshall (1890) developed the Profit Maximization Theory, which is based on the idea that corporations' primary goal is to maximize profits. According to the theory, every business employee acts in ways that increase profits for himself or herself. The concept is most commonly used in economics, where businesses strive to maximize profits by balancing marginal income against marginal costs. According to Day et al. (2013), a company is successful when it makes significant profits and even more so when it uses its resources to create goods and services that can be offered to customers to make a profit. Marshall goes on to say that a company's ability to maximize profit determines whether it can survive. These days, many firms, particularly those in the financial industry, can employ this notion. One of the fundamental presumptions is that while offering services, banks want to maximize their revenues. Banks must conduct business in a way that optimizes profitability because shareholders want them to make a profit. As a result, their investment and income are maximized, and their costs are reduced (Wong, 2012). A bank's ability to influence pricing on the input and output markets, respectively, depends on its market power. With proper management, a company can maximize revenues through the appropriate selection of inputs and outputs. Thus, profitability as one of the performance indicators is informed by this idea.

Dornbusch created the sticky pricing monetary theory in 1976. The currency rate overshoots in the short run in response to an expansionary monetary shock but eventually settles on its long-run equilibrium path. The model explains the tendency of the exchange rate to be too volatile. This theory is based on a flexible exchange rate regime in a small country, where the goods market is characterized by prices that are inflexible in the short term. Additionally, it depends on realistic expectations. When monetary policy is altered, for as by raising interest rates, the financial and commodities markets respond to the new equilibrium. However, the financial market reaches equilibrium first because of the product market's price stability. As a result, the exchange rate overshoots in the short run and generates excessive volatility when, eventually, the merchandise and service prices gradually adjust to a new equilibrium.

### ***Empirical Review***

While investigating how exchange rate volatility affects commercial banks' profitability in Iran (Keshtgar et al., 2020) studied 14 Iranian banks between 2007-2017. Models from the GARCH family were used to estimate the volatility of the exchange rate. An evaluation of the random effects supported the conclusion that exchange rate volatility has a detrimental and statistically significant impact on banks' capital return ratio. The GARCH family models, which this study employed as an improved way of assessing volatility, were prominently referenced in the current work.

Baba and Ashogbon (2019) investigated how inflation affects Nigerian commercial banks' performance. Panel data from 2006 to 2015 were used and analyzed through ANOVA. The findings were that the variable of interest was an insignificant determinant of return on equity. This study did not capture the risk factor associated with the exchange rate and that's the improvement of this current study.

Kairu (2016) conducted a qualitative investigation on the association between Kenya's commercial banks' performance and exchange rate volatility. According to the study, there is a tenuous positive correlation between the performance of commercial banks and exchange rate volatility. In light of the adoption of the valuables, this study is crucial to the current study. The adoption of a qualitative research design may have contributed to the weak relationship. Contrary, an empirical analysis will be used in this investigation.

A similar study by Kemisola et al. (2016) evaluated the impact of exchange rate fluctuations on Nigerian banks' performance from 2005 to 2014 using annualized data. The ARCH model was employed to estimate the volatility of the exchange rate, and the Hausman test revealed that random effects were the best option. The results showed that ROA was unaffected by the erratic nature of currency exchange rates. ROA is important since it serves as a substitute for profitability in the current study. The ARCH LM test, however, might have had an impact on the outcomes; this is fixed by using a GARCH model.

An inquiry on the exchange rates impact on the profitability involving Nairobi Securities Exchange-listed commercial banks was undertaken by Lagat and Nyandema (2016). The period from 2006 to 2013 was the intended demography for the time series correlation research design. Profitability served as the dependent variable, and multivariate linear regressions were used to ascertain how the independent factors related to profitability (interest rates, inflation rates, and foreign exchange rate changes). Financial performance measures like return on assets and customer retention were found to have a strong positive correlation with exchange rates. This study takes a step further by looking at how the risk of exchange rate fluctuations impacts financial performance.

Majok (2015) studied how volatility affected the profitability of 43 Kenyan commercial banks from 2002 to 2014. Using an ANOVA and a descriptive research design, the study looked at the 43 commercial banks' ROA as a performance indicator. The study established that volatility is positively related to returns on assets. The ANOVA method becomes ineffective when there are two or more dependent variables, which could lead to bias in the study's findings.

In analyzing the extent of exchange rate fluctuations influence on Nigerian banks as a measure of risk, Isaac (2015) employed an auto-regression conditional model that draws on secondary sources of data. The conditional variance was described by the model as a deterministic function of the squared residual of earlier periods. The investigation found that increases in exchange rates are caused by an increase in profit after taxes.

A similar study concerning the commercial banks in Gahna, Addael, Nyarko-Baasil, and Tetteh (2014) focused on the sensitivity of the exchange rate of selected commercial banks between 2005 and 2010. This study utilized econometric models in addition to qualitative and quantitative methods. The study's findings provided evidence that the observed commercial banks involved themselves in trading in foreign exchange and gained in terms of profit from foreign exchange trading.

### 3.0 Methodology

The study employed an explanatory research design. The study covered the period from 2000 to 2020 and utilized secondary data sourced from Central Banks and World Bank. The study employed a panel estimation procedure since the data was collected in panel series. To analyze the effect of volatility on the performance of commercial banks in EAC, descriptive and inferential analyses were conducted. The descriptive statistics used to describe the study variables are the mean standard deviation minimum and maximum values. To further explore the relationship, inferential statistics which included correlation and regression analysis were used. Diagnostic tests which include the test for unit root test for the series and the Hausman test for random and fixed effects and heteroscedasticity were conducted.

### 4.0 Results and Discussion

#### *Stationarity Test*

Stationarity test was carried out and the unit root at the level is found in GDP, return on assets, capital, credit, and inflation, as shown in Table 1. It was discovered that the levels of the exchange rate volatility rate do not contain a unit root. Regressions could produce erroneous results if non-stationary variables were used, so the variables at first difference were used. At the 5 percent significance level, each variable's first difference was stationary.

**Table 1: Results of Levin – Lin – Chu Test**

Variables at level				Variables at first difference		
Variable	Z	P value	Remarks	Z	P value	Remarks
GDP	0.3986	0.6549	Unit root	-4.5925	0.0000	$I(1)$
ROA	-1.2911	0.0983	Unit root	-4.4443	0.0000	$I(1)$
CAP	-0.1314	0.4477	Unit root	-4.2203	0.0000	$I(1)$
CRE	-1.4645	0.0715	Unit root	-3.0601	0.0011	$I(1)$
CPI	-1.4481	0.0738	Unit root	-7.7276	0.0000	$I(1)$
VOL	-3.5106	0.0002	Stationary	-8.9714	0.0000	$I(0)$

**Source: Authors Compilation (2022)**

#### *Exchange Rate Volatility in EAC*

Table 2 estimates the volatility of the three countries' currency rates. Overall, the findings suggest that the coefficients of ARCH/GARCH adequately incorporate the volatility of the currency rate in Uganda, Tanzania, and Kenya. Concerning Kenya, Uganda, and Tanzania the volatility of the exchange rate was calculated using the GARCH (1, 1) specification after minimizing the Akaike information criteria (AIC) and Schwarz information criterion (SIC). Furthermore, Tanzania's currency rate volatility, which was statistically significant at 5 percent, was caused by the last variance (the GARCH component). Uganda's currency rate fluctuations, which was 5 percent and 1 percent significance level, respectively, was significantly influenced by the departure from the mean (ARCH component) and the final variance.

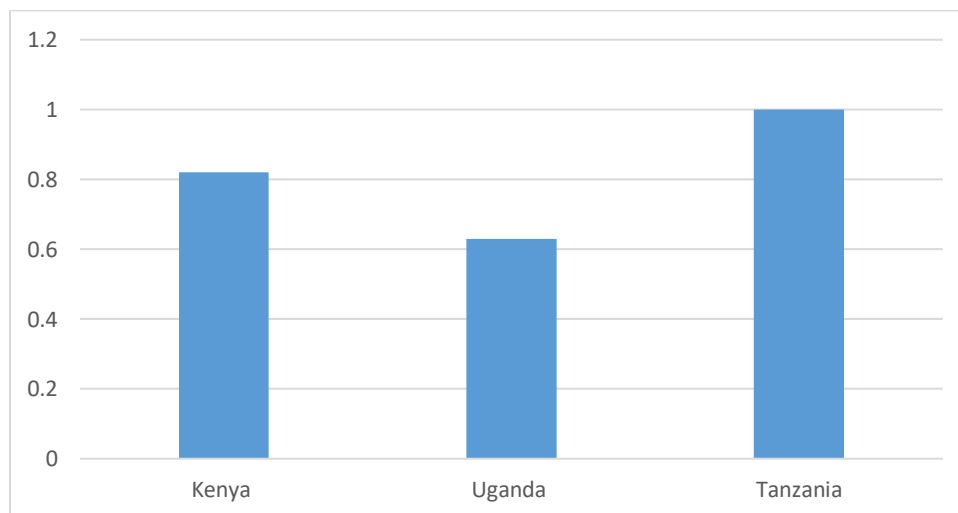


**Table 2: Exchange Rate Volatility Estimation Results**

Country	Variable	Coeff	SE	z-Stat	
Kenya		0.416979	0.078286	5.326372	0.0000
		0.790756	0.134428	5.882372	0.0000
		0.178128	0.083531	2.132481	0.0330
Uganda		344.3817	81.04116	4.249266	0.0000
		0.430030	0.110197	3.902393	0.0001
		0.517787	0.070932	7.299810	0.0000
Tanzania		93.62298	13.89814	6.736368	0.0000
		0.751920	0.158567	4.741966	0.0000
		0.280577	0.074126	3.785148	0.0002

**Source: Authors Compilation (2022)**

The results show that the ARCH and GARCH coefficients ( $\alpha+\beta$ ) all add up to one for all countries: Kenya (0.97), Uganda (0.95), and Tanzania (1), indicating that exchange rate volatility shocks lasted quite a while (Mosbei et al., 2021). discovered results that were comparable to this study. Figure 3 compares the volatility levels of the exchange rate of the three selected EAC members. These indicate which nation has the lowest or highest degree of exchange rate variation among nations.



**Figure 3: Coefficient of Variation**

**Source: Author's Compilation (2022)**

Kenya and Uganda have seemingly low volatility compared to Tanzania. Tibesigwa, Kaberuka, and Watundu (2014) argue that the existence of high rates of exchange volatility could be explained by the fact that these currencies are not pegged to any major international currency. Figure 4.1 shows that during the study period, Tanzania followed Uganda in having the highest

coefficient of variation in the series of exchange rate volatility. As a result, Tanzania and Kenya saw greater currency rate volatility than Uganda.

***Exchange Rate Volatility and Performance of Commercial Banks***

The estimation of Prob > chi2 = 0.9930 was observed using the Hausman test. Random effects were accepted because the null hypothesis that random effects are superior to fixed effects was not rejected.

**Table 3: Random Effects Model**

<b>Regression results for Random-effects</b>						
Number of obs	=	56				
R-sq:	=	0.8699				
Wald chi2(6)	=	327.51				
Prob > chi2	=	0.0000				
<b>ROA</b>	<b>Coef.</b>	<b>Std. Err.</b>	<b>z</b>	<b>P&gt;z</b>	<b>95%</b>	<b>Conf. Interval</b>
CAP	.123576	.0641644	1.93	0.054	-.002184	.249336
CRE	-.0533681	.0162664	-3.28	0.001	-.0852496	-.0214866
GDP	.0195805	.0712248	0.27	0.783	-.1200175	.1591785
CPI	.0452401	.0304487	1.49	0.137	-.0144384	.1049185
VOL	-.0045817	.0015747	-0.291	0.004	-.0076681	-.0014953
CONS	4.639122	1.103357	4.20	0.000	2.476582	6.801662

Source: Author computation based on Stata output (2022)

The variable of interest Exchange rate volatility (VOL) has a negative and significant effect on performance of commercial banks as shown by the probability 0.004 which is less than 0.05 at 5 percent significance level. The coefficient is also very small (-.0045817). this implies that based on the sign, an increase in exchange volatility would lead to a decline in returns on assets. The small magnitude was also found by Kairu (2016) who found a weak volatility - performance of commercial banks nexus in Kenya. Similarly, Keshtgar et al. (2020) found a negative and weak coefficient (-0.077) which was only significant at 10 percent significance level. Contrary, Kemisola et al. (2016) discovered that volatility presented a marginally negative effect on commercial banks' performance in Nigeria.

At 5 percent significance level, inflation coefficient was positive but insignificant. Similar findings were obtained by Baba and Ashogbon (2019) who found an insignificant link between CPI and the commercial bank's performance in Nigeria.

At the 5 per cent level of significance, it was determined that capital had a positive and significant coefficient of return on assets. The return on assets of commercial banks increased by 12% with a unit increase in capital. According to Halkos and Salamouris (2004), banks with higher capital on the majority significantly performed superior to their counterparts with lower capital. Further, Oyier (2016) found a robust positive association between ROA and core capital.

At the 5 percent level of significance, it was determined that the GDP measure of the economies of the EAC members had a positive and insignificant coefficient. Similar results were found by Al-Harbi (2019) who found that GDP per capita does not affect commercial banks'

profitability. Contrary to expectations GDP has no effect on banks' profitability in developing and less developed countries (Al-Harbi, 2019).

Concerning credit, to deposit ratio the coefficient was significant and negative at a 5 percent significance level. This Credit Deposit or CD ratio depicts how much a bank lends out of the deposits it has mobilized. The results show that a 1 percent increase in the CD ratio decreases the commercial banks' profitability by 5.3 per cent. According to Fields (2015), the loan-to-deposit ratio and the profitability of commercial banks have an inverse connection. One of the risks that banks face is the credit-to-deposit ratio, which requires them to strike a balance between borrowers' need for credit and liquidity and depositors' need for immediate cash. Banks may become exposed and vulnerable to systemic increases in the demand for liquidity from borrowers by balancing the needs of depositors and borrowers, causing depositors to run (Fields, 2015). This indicates that the bank's profitability declines as this risk increases.

## 5.0 Conclusion

The first objective under investigation involved measuring the degree to which exchange rates are volatile in the EAC. The three partner states' currencies all fluctuate, which is the key finding. The analysis concludes that these countries' commercial banks' profitability is in danger from volatility.

The study also examined how the performance of commercial banks in the EAC was impacted by exchange rate volatility. The key conclusion was that exchange rate volatility and the credit-to-deposit ratio are two twin dangers that influence how successfully commercial banks operate. The outcome suggests that the observed decline in ROA may have been influenced by credit risk and currency rate volatility, albeit to a lesser extent.

Additionally, enough capital has the biggest magnitude by a coefficient and benefits commercial banks' profitability. The conclusion is that capital is a key determinant of commercial banks' performance. Inflation and the economic sizes of the EAC member states under consideration were found to be insignificant.

## 6.0 Recommendations

Several implications can be drawn from this study's findings. First Central Banks in the countries under review should endeavor to maintain stability in the exchange rates. This can be achieved by hedging instruments and pegging their currencies on major currencies such as the dollar or Euro.

The report also suggests that central banks keep reliable systems in place to monitor the capital sufficiency of commercial banks. This will ensure that commercial banks have a strong capital base, allowing them to stay competitive and maintain the trust of their customers.

Third, it is recommended that commercial banks should not rely on deposits to fund their operations, considering the negative effect of credit on deposits and profitability. In comparison to exchange rate volatility commercial banks should monitor credit to deposits ratio more robustly than volatility due to magnitude.

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