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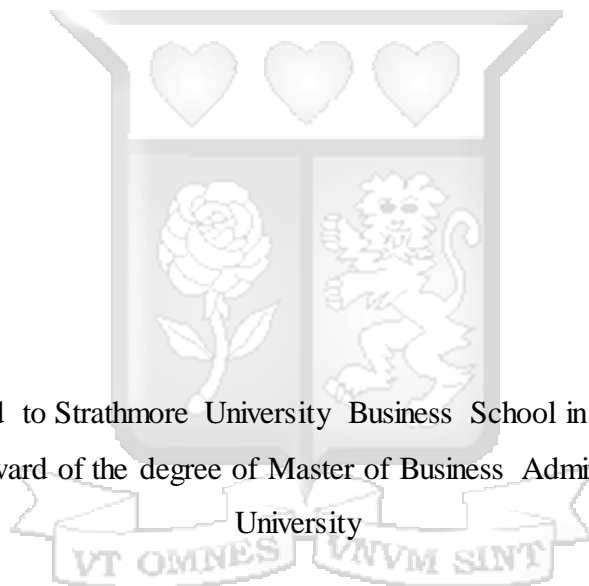
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**THE EFFECT OF FIXED VERSUS FLOATING EXCHANGE RATE ON FINANCIAL
PERFORMANCE OF COMMERCIAL BANKS IN SOUTH SUDAN**

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MBA/7775/2017



A dissertation submitted to Strathmore University Business School in partial fulfilment of the requirements for the award of the degree of Master of Business Administration of Strathmore

University

Strathmore University Business School

Nairobi, Kenya

November 2021

DECLARATION

I declare that this research dissertation has not been previously submitted and approved for an award of any degree by this or any other university. To the best of my knowledge and belief, this research dissertation contains no materials previously published or written by another person except where due reference is made in the research dissertation itself:

Samson Kipkorir Tenoy

MBA/7775/2017



Signature: **Date:** ...22nd November 2021.....

Approval

This research dissertation has been submitted with my approval as the University Supervisor.

Dr. David Mathuva

Senior Lecturer
Strathmore University



Signature: **Date:** .22nd November 2021.....



ABSTRACT

The financial sector plays an important role in Sub-Saharan countries, more so for South Sudan which is the youngest nation in Africa. More significantly, the adoption of a floating or fixed exchange rate regime affects the performance of commercial banks, hence the need to focus on it. This study aimed at establishing the effect of fixed versus floating exchange rate on the performance of commercial banks in South Sudan. Specifically, this study sought to: determine how fixed exchange rate affects the financial performance of commercial banks in commercial banks in South Sudan and to establish how floating exchange rate affects the financial performance of commercial banks in South Sudan; The study adopted a comparative descriptive research design and the population of the study was 30 banks operating in South Sudan between the months of December 2019 to December 2020. A sample of three foreign banks and two local bank was selected. Secondary data was collected and analysed through multiple linear regression. The study results indicated that the performance of foreign banks was affected by the exchange rate during the fixed exchange rate era ($p < 0.05$) while performance of local banks was not affected by the exchange rate during the fixed exchange rate era ($p > 0.05$). Results also showed that floating exchange rate affected the performance of all banks positively ($p < 0.05$). Further, the study findings indicated that there is a significant effect ($p = 0.008$) of the effect of exchange rate volatility on the financial performance of banks in South Sudan. The study concluded that, first, fixed exchange rate regimes are more fragile in a world of intense financial integration; floating exchange rates are also conducive to enhance banks performance. In fact, in developing countries, banking crises occur more often in an environment of flexibility of the exchange rate. Finally, the study concludes that the consensus view that emerging countries should allow for more exchange rate flexibility as a means to enhance financial performance and to curb the effects of exchange rate volatilities. The study makes the following research recommendations: developing countries financial sectors should move away from the fixed exchange rate regime and to allow for more flexible exchange rates, countries which choose to maintain a fixed exchange rate, have to move in the direction of increasing the cost of a devaluation and enhanced supervision of the banking systems.

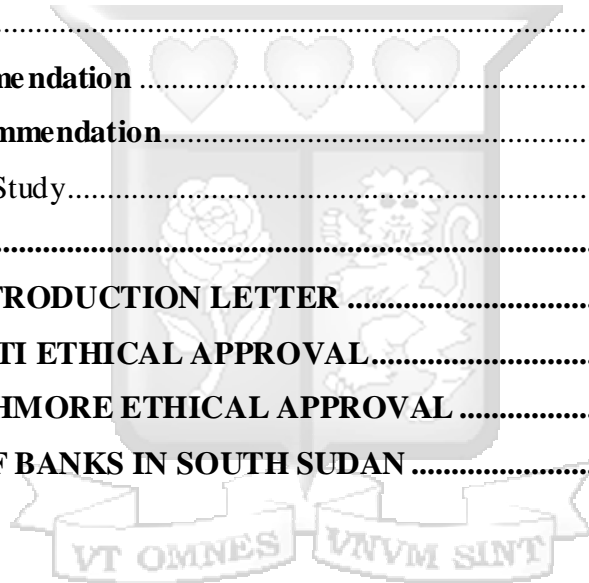
Keywords: *exchange rate regime; South Sudan; banking sector; financial performance; exchange rate volatilities*

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DEDICATION

I would like to thank God Almighty for the blessings He has given me. This dissertation is dedicated to my wife, my son, my parents for their continued support, may God bless you all abundantly.



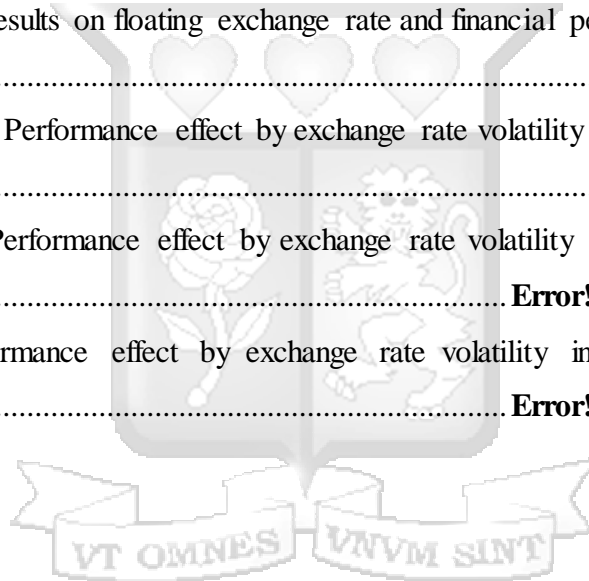
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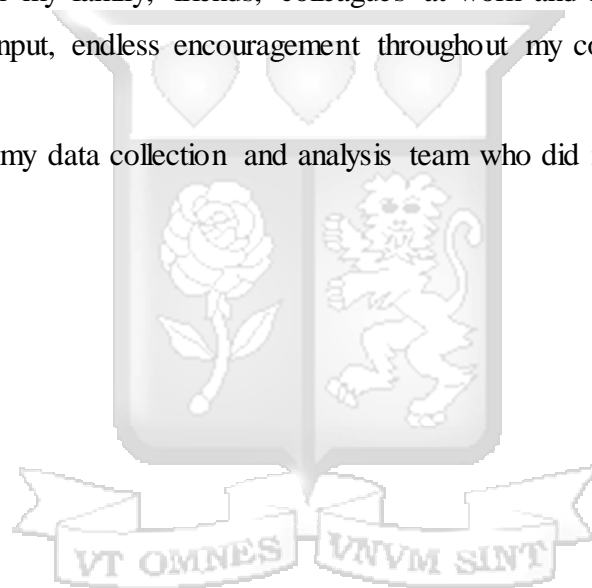
I thank God the Almighty in my life for the strength and wisdom to have been able to prepare for the execution and completion of the research paper.

My sincere gratitude goes to my supervisor, Dr. David Mathuva, for his guidance, advice and effective timely response at each stage in the preparation and execution of this research paper, for examination. Thank you for your support and inspiration.

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May God bless you All.



CHAPTER ONE

INTRODUCTION

1.1 Introduction

This chapter seeks to provide an overview of the issues being investigated in the study. The chapter reviews the background to the problem, statement of the problem, research objectives, significance of the study and the scope of the study.

1.2 Background of the problem

1.1.1 Exchange rate regimes in Sub Saharan Africa

Exchange rate regimes in countries in Sub-Saharan Africa vary greatly and have evolved over time (Rogoff, Husain, Mody, Brooks, & Oomes, 2004; Senadza & Diaba, 2017). International Monetary Fund (IMF) work on exchange rate regimes suggests that there is no single prescription, and that the appropriate regime for a country depends on macro-economic challenges facing the country and its particular circumstances (Ghosh, Ostry, & Tsangarides, 2010). The evolution of exchange rates in sub-Saharan Africa has reflected the impact of both external developments and distinct policy choices. The fall in export demand, commodity prices, and private capital inflows contributed to currency depreciation, which some authorities opted to counter through increased intervention, while others chose to let market forces play. Given above-trend inflation, the currencies of countries that intervened generally appreciated in real terms (Kaendera, Dixit, & Ltaifa, 2009).

According to Senadza and Diaba (2017), the exchange rate regimes in Africa reflect choices made at the time of independence as well as more recent trends in exchange rate regimes of developing countries; the original exchange rate pegs in many cases evolved over time into flexible exchange rates. IMF report categorized majority of countries in Africa are currently as having flexible exchange rate regimes (International Monetary Fund, 2019). The predominance of such regimes is even more noticeable if measured in terms of economic size, as such countries account for almost three quarters of the continent's GDP.

Several countries in Africa operate pegged exchange rate regimes of the more traditional type (Fosu, 2015; Masson & Pattillo, 2005). African countries seem to have shown a stronger tendency

than other developing countries in the last decade and a half or so to move in the direction of flexible exchange rates. Most countries differed not only on their initial choice of the exchange rate regime but in their ability to sustain the regime they initially choose. It is noted that the sustainability of the choice is dependent on macroeconomic policies, trade-off between curbing inflation and improving trade balance and extend of initial devaluation (Gaspar, Obstfeld, Sahay, & Laxton, 2016).

According to Motlaleng (2009), exchange rate systems are generally categorized as fixed or floating. In a floating exchange rate regime, the value of the currency in terms of another is determined in the foreign exchange market by demand and supply. On the other hand, a fixed exchange rate regime is the one in which the value of one currency vis à-vis another currency is held constant by the authorities intervention in the foreign exchange market (Ye, Hutson, & Muckley, 2014). While some countries have fixed exchange rate regime, others have a floating one. An important question that needs consideration, however, is the effect (on the performance of commercial banks) that will result from adopting either a fixed or floating exchange regime, more so for countries such as South Sudan.

1.1.2 Effect of exchange rate regimes on commercial bank performance

Stability of exchange rate is crucial for economic development; it provides the macroeconomic links among the countries via goods and asserts market (Guzman, Ocampo, & Stiglitz, 2018). Some scholars are of the view that fixed exchange rate is preferred over flexible exchange rate in a period of highly unstable and varying inflation and price liberalization (Ghosh, 2014; Helmy, Fayed, & Hussien, 2018). This is because fixed rates reduce inflationary pressures by keeping the growth of nominal variable control. Currency risk hedging procedures entail eliminating or reducing this risk, and need understanding of all the ways in which the exchange rate risk may have an effect on the operations of economic agents and techniques to alter the resultant risk implications.

According to Baggs, Beaulieu, and Fung (2009), large real exchange rate movements may affect the sales and the survival of firms in a manner comparable to the effects of significant episodes of tariff changes. Exchange rate volatility creates a risky business setting where there are

uncertainties concerning future profits and payments (Katusiime, Agbola, & Shamsuddin, 2016). This is worsened in contexts like Kenya with rudimentary monetary instruments for hedging against exchange risk. Owing to the sudden changes in exchange rates and exchange exposure, forex risk ensues because the extent of the surprising change in exchange rates has an effect on the worth of a firm's assets or liabilities (Butler, 2008). Deepening domestic financial markets is crucial to enhancing their capacity to handle external financial volatility over the long term (Kaendera et al., 2009).

Exchange rate regimes adopted by countries have an effect on commercial bank performance globally. Generally, an exchange rate regime adopted by country has a potential effect on the economy of the nation, 'directly through its effects on the adjustment to shocks, and indirectly, via its impact on other important determinants of growth, such as investment, international trade and financial sector development (Bailliu, Lafrance, & Perrault, 2003). In developing countries, adoption of fixed exchange rate regime is likely to worsen banking crises as compared to adopting a floating exchange rate regime (Domaç & Peria, 2003). This suggests that a floating exchange rate regime may be more suitable for developing countries.

Financial performance measures how well a firm is generating value for the owners. It can be measured through various financial measures such as profit after tax, return on net asset (ROA), return on equity (ROE), earning per share and any market value ration that is generally accepted (Abraham, Harris, & Auerbach, 2017). Generally, the financial performance of banks and other financial institutions has been measured using a combination of financial ratios analysis, benchmarking, measuring performance against budget (Hermes & Hudon, 2018). Throughout recent international money crisis, some banks that depend upon foreign currency-denominated debt have suffered significant forex losses that threaten their overall viability (Donohoe, Mariz, Littlefield, Reille, & Kneiding, 2009). With accumulated transactions using foreign currency, the fluctuations in exchange rates tend to cause vital foreign exchange risk. It is therefore important to manage forex risks as it will ultimately affect performance of financial institutions.

1.1.3 South Sudan and foreign exchange rate regime

South Sudan (officially known as ‘The Republic of South Sudan’) is the youngest African country having gained her independence in 2011. Even before the country’s independence, commercial banks existed in South Sudan though controlled from the North at Khartoum (Bank of Sudan); the management progressively ceded towards South Sudan (Mabil, 2019). Commercial banks and financial systems in general have however grown since the country’s independence, and play an important role in the country’s economic growth (Chol, Kalunda, & Kamau, 2019). From independence, 11 commercial banks were in operation (Mabil, 2019).

Developing Countries have been increasingly drawn into the integrating world economy in terms of both their trade in goods and services and in financial assets and as a result, these countries have been able to reap many of the benefits of Globalization (Mussa, et al., 2000). South Sudan is a landlocked country and heavily relies on movement of goods and products through Sudan or East Africa Countries. Oil accounts to 98% of its exports hence the major source of foreign currency (Basnett & Garang, 2015; Siddig, 2014). Other major inflows of foreign currency include remittances from diaspora as well as humanitarian organizations operating in South Sudan.

Underdeveloped financial markets might be one of several good reasons to manage floats in developing countries more tightly than in more developed and diversified economies (Ghani, 2016). The extreme lumpiness of foreign exchange earnings (especially aid inflows) could also constitute another reason. But at some point, beneficial smoothing could degenerate into an excessive emphasis on exchange rate stability and thus conflict with macroeconomic goals like low and stable inflation. A related question is the role of exchange rate movements in counteracting the effects of external shocks on inflation and output. Too much exchange rate smoothing through intervention will weaken that mechanism. However, there is a real danger of significant overshooting in thin foreign exchange markets where the excess demand for or supply of foreign exchange can develop into hot potatoes and vicious spirals. The macroeconomic performance of countries on a flexible exchange rate varies greatly from country to country

1.1.4 Banking Sector in South Sudan

South Sudan gained independence in 2011 following a successful internationally supervised referendum. Amara (2012) mentions that the then Bank of Southern Sudan which operated as an autonomous branch of Central Bank of Sudan began to operate as Central Bank for South Sudan with directive to oversee policy, price stability and ensure stability of the exchange rate. This led to the enactment of various acts by the Central Bank of South Sudan to enact new Acts such as Banking Act 2012 to regulate financial institutions operating in South Sudan. By the beginning of 2012, South Sudan had 28 commercial Banks, 10 microfinance, 11 insurance companies, 2 pension companies and 86 forex bureaus (Makur, 2014). As documented by Amara (2012), the services that banks offer in South Sudan are limited to foreign exchange and remittances bank transfers.

1.2 Statement of the problem

Financial Services are fundamental to economic growth and development (Valickova, Havranek, & Horvath, 2015). Banking, savings and investments, insurance and debt and equity financing help private citizens save money, guard against uncertainty, and build credit while enabling business to start up expand increase efficiency and compete in local and international markets (Sutton & Jenkins, 2007). Exchange rate policies have been playing an important role in reducing macro-economic imbalance and promoting structural change (Gasper, 2009; Guzman, Ocampo, & Stiglitz, 2018). In addition, Basnet and Garang (2015) observed that South Sudan has a narrow trade basket that is heavily dependent on a single export commodity – mineral fuel – which makes the country’s economy vulnerable to shocks from changes in production, global demand and world prices.

The banking sector in South Sudan is underdeveloped and faces many challenges because of the civil conflict, high inflation and strong currency depreciation (Pitia, 2018). Central Bank of South Sudan introduced a “special account” scheme where commercial banks have been required to immediately sell 75% of the FX purchased from the special account holders (mostly humanitarian organization) to BSS at official exchange rate (Mawejje, 2020). Further, Central Bank of South Sudan publishes on a daily basis reference rates which commercial banks apply bid -ask spreads. Many local banks are heavily undercapitalized and non-performing loans are rapidly rising. The prevalence of a parallel market exchange rate to the official one has inhibited trade and reduced

investments. An overvalued exchange rate damages trade competitiveness, as it makes South Sudanese exports relatively expensive. According to Akuei, Katuse, and Njenga (2016), most of the commercial banks are experiencing numerous challenges in their quest to effectively implement their strategy.

Based on publications from IMF and World Bank reports (2019), the exchange rate in South Sudan continued to depreciate in the last couple of years. The unofficial exchange rate more than doubled in 2018 but the depreciation moderated somewhat in 2019. This reflected worsening economic conditions and led to preference of the US Dollar. There exists sparse literature on how fixed and floating exchange regimes have affected the performance of commercial banks in South Sudan. Specifically, foreign banks operating in South Sudan have to do reporting and repatriate profits hence this study would be instrumental in finding out how some of these commercial banks have managed risks associated with both fixed and floating exchange rates. Going by the introduced International Financial Reporting Standards 9 (IFRS 9) that came into effect in January 2018 introduced new principles of how an entity should classify and measure financial assets, financial liabilities, and hedging accounting (Ercegovac, 2018). Baye and Ali (2020) elucidated that foreign exchange exposure unless managed well may led to substantial loss of income from foreign trade in the form of reducing receivables or increasing payables. Changes in exchange rate policy in South Sudan may have had an impact profitability of financial Institutions. It in the background of this that the study sought to fill the information gap by analysing the effect of fixed and floating exchange rates on the performance of banks operating in South Sudan.

1.3 Research objectives

1.3.1 Main objective

The main objective of this study is to establish the effect of fixed versus floating exchange rate on the performance of commercial banks in South Sudan.

1.3.2 Specific objectives

- i. To determine how fixed exchange rate affected the financial performance of commercial banks in South Sudan.

- ii. To establish how floating exchange rate affects the financial performance of commercial banks in South Sudan.
- iii. To analyse how the financial performance of commercial banks in South Sudan has been affected by exchange rate volatility in both fixed and floating exchange rate regime.

1.3.3 Research questions

- i. What is the effect of a fixed exchange rate on the financial performance of commercial banks in commercial banks in South Sudan?
- ii. How does a floating exchange rate affect the financial performance of commercial banks in South Sudan?
- iii. How has the financial performance of commercial banks in South Sudan been affected by exchange rate volatility in both fixed and floating exchange rate regime?

1.4 Significance of the study

The study enriches the finance department, treasury and risk managers in the banks with the required knowledge on fixed and floating exchange rate and their effect on financial performance in the banking sector in South Sudan. The literature, findings and recommendations complement the existing knowledge in the field.

This study is vital to current and prospective stakeholders in the financial sector as it offers an insight into how exchange rate peg affect financial performance of banks. The study adds value to investors as it provides information on forex risks which will aid them in sound decision making. It also enhances financial experts understanding in regulations and exchange rate frameworks for different countries.

From a policy perspective, it enables policy makers and regulator to formulate relevant exchange rate regimes. The government of South Sudan, as well as others in the African region and their research institutions also adds knowledge on intellectual capital. It adds to existing literature on the subject and stimulate further exploration in the area.

The study offers recent data to academicians and researchers, which can be used as a basis for further research. The study also suggests areas for further research that can be exploited by these stakeholders.

1.5 Scope of the study

The population of the study was banks operating in South Sudan between 1st of January 2012 to 31st December 2019. A sample of three foreign banks and two local banks was selected.



CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter highlights the various theories that have been brought forward for and against the fixed and floating exchange rate regime. We delve into a number of scholarly articles that have had previous research with review of empirical studies, general literature review, and theoretical framework and finally the conclusions from literature review are presented.

2.2 Theoretical review

In order to fully respond to the objectives of this study, i.e. establish the effects of both floating and fixed exchange rate regimes on the performance of commercial banks in South Sudan, as well as examine the effects of exchange rate volatility, two theories were adopted to anchor the arguments in this study. These were International Fisher Effect Theory, and Theory of Optimum Currency Areas (OCA). The specific origins and attributes of the theory, as well as their link to the study objectives are given in the next sub-sections.

2.2.1 Purchasing Power Parity Theory

Purchasing Power Theory (PPP) according to Yang et al (2021), argues that when inflation rate in a country rises, the real purchasing power of that country's currency decreases meaning that the currency of one country devalues relative to the currency of another country. Mignon, Courdert and Couharde (2015) analysed the impact of trade terms on real exchange rates and established that only advanced oil-exporter's currencies are sensitive to changes in trade terms in the short run especially when volatility is high on commodity markets. Results on misalignment impacts on economic growth show that it has misalignments negatively influences economic growth (Sallenave, 2010).

Holmes (2000) highlights that PPP is relevant to African countries because most of the exchange rates policies and reforms are based on this theory. Katusiime et al (2015) elucidate that foreign exchange market is effective when the exchange rates reflect all available market information

indicating that traders will not be able to predict exchange rates at any given time. Test and validation of PPP theory is directly linked to efficiency in foreign exchange markets (Taylor and Taylor, 2004) and further states observed that when PPP holds. Investors cannot systematically take advantage of exchange rate difference to make large profits.

PPP has been tested in diverse context. PPP and efficient foreign exchange rate are thus important to the private sector to ensure proper risk management and forecasting decisions. This theory has been used applied in explaining the effect of fixed and floating exchange rates on performance of commercial bank in South Sudan. Empirical studies by use of PPP in post conflict environment is however scanty

2.2.2 International Fisher Effect Theory

The International Fisher Effect Theory (IFE) was advanced by Irving Fisher in the 1930s (Puci & Mansaku, 2016). The theory argues that foreign currencies with relative high interest rates are likely to depreciate as a result of the high nominal interest rates which mirror the projected inflation. Further, regarding IFE, Shapiro (2007) observed that the difference in inflation rates is a result of the difference in returns between two countries. According to El Khawaga, Esam, and Hammam (2013, p. 140) IFE 'states that foreign currencies with relatively high interest rates will depreciate because the high nominal interest rates reflect expected inflation assuming real rate of return is equalized across countries.' The foregoing authors further observed that this theory suggests that interest rate differential may be adopted as a forecast for future anticipated spot exchange rates.

Appreciation or depreciation of currency prices as the International Fisher Effect Theory argues, will to a large extent be linked to nominal interest rates (Puci & Mansaku, 2016). International Fisher Theory assumes that countries having lower interest rates are likely to experience lower levels of inflation, and this is likely to lead to increase in real value of associated currency as compared to other countries; nations with having higher interest rates will contrastingly experience currency depreciation (El Khawaga et al., 2013). Some scholars have argued that the validity of the Fisher effect may depend on the exchange rate regime existing within a country (Bayat, Kayhan, & Taşar, 2018).

Some empirical studies have tested IFE theory, with diverse results. He (2018) sought to verify the contributions of IFE theory in the Chinese and South Korean contexts, both in the short and long run. The study, which utilised monthly and annual data and used the fully modified ordinary least squares established that whether in the short or long run, the IFE theory holds between China and South Korea. Even then, the South Korean Fisher effect was more significant than that of the Chinese one. A related study by Puci and Mansaku (2016) sought to compare the Fisher effect of China and the United States of America between the years 2002 to 2014. Their study findings showed favour of the IFE theory at 1% significance, when Dickey Fuller and Phillip Peron unit root tests were performed. Bayat et al. (2018) examined the Fisher effect in fragile economies, specifically Indonesia, India, Brazil, Turkey and South Africa and used data obtained from International Financial Statistics for the period January 2000 to June 2016. The study which examined the relationship between consumer price index and policy interest rate variables concluded that the Fisher effect was only valid for Brazil and Indonesia.

The International Fisher Effect theory has therefore been tested in diverse contexts. This theory was similarly be applied in this study as it helps explain objectives one and two that seeks to explain the effect of fixed and floating exchange rates on the performance of commercial banks in South Sudan.

2.2.3 Theory of Optimum Currency Areas (OCA)

This theory is attributed to Mundell (1961) (and later to other scholars such as Mckinnon and Kenen) and argues that economic areas are made up of regions affected symmetrically by disturbances and where labour and other related factors of production flow. Thus, this theory, which is thought to have resulted from the debate and arguments about the merits and demerits of fixed and floating exchange rate regimes (Ishiyama, 1975), suggests that the characteristics of a given economy determine the exchange rate regime in such a nation.

According to Dellas and Tavlas (2009), Mundell (the proponent of the theory) provided conditions which if satisfied, 'diminished the case for flexible exchange rates' (p.1130). For optimum currency area, Mundell suggested four criteria, which are: i) large, available integrated labour

allowing workers free movement in an area; ii) wage flexibility and capital mobility; iii) centralized budget that should help redistribute resources to affected area owing to labour and capital mobility; and iv) existence of business cycles for participating nations to avoid shocks (Dellas & Tavlas, 2009; Ishiyama, 1975; Mundell, 1961).

A number of studies have applied the theory of Optimum Currency Areas (OCA). (Lima, 2017) examined the recent Euro crises in view of the theory of Optimum Currency Areas, and concluded:

After all that has happened post-2008, including both crises, overall, the Euro Area does not seem to be driven further from an OCA, with some indicators actually suggesting a tendency for it to become closer to an OCA. Moreover, this seems to be case also when one consider the other EU members (p.57).

This suggests that OCA was relevant in explaining the financial crises in the Euro area, especially in the season after 2008.

More recently, Yidana (2020) examined the potential for West African Optimum Currency Areas, comparing it to the European Union context. Working with data from 1980 to 2018, their study revealed that the countries studied did not have real convergence and should ideally not proceed with adoption of one currency until symmetry in foreign price shocks is achieved. A similar study by Preis (2019) focussed on the feasibility of an optimal East African Monetary Union and concluded that asymmetric shocks, structural differences, and limited convergence stood in the way of an optimum monetary union in the region.

OCA was helpful in responding to the third objective of the study, which sought to analyse how the financial performance of commercial banks in South Sudan has been affected by exchange rate volatility in both fixed and floating exchange rate regime. This is checked against the control variables that have been introduced as a measure on the disturbance effect on the economy.

2.3 Review of empirical literature

This section focusses on empirical literature from global and local contexts, which have been carried out on the research area, specifically, on the objectives of the study. The discussion will be done in line with the study objectives, thereafter a summary and the conceptual framework given.

2.3.1 Effect of fixed exchange rate on the performance of commercial banks

Brief overview of exchange rate systems confirms that currencies under flexible exchange rate system generally tend to depreciate more than currencies having fixed exchange rate system due to the occurrence of critical events (Kaendera et al., 2009). Similarly, adopting a fixed exchange regime allows countries to enjoy both the microeconomic and the macroeconomic disciplinary effects exerted on the domestic economy by the opening by the opening up process, as well as facilitate trade with other countries, especially that use the dollar (Frankel, 2003, 2006; Touitou, Laib, & Boudeghdegh, 2019).

It is important to consider why some countries have adopted exchange rate peg. There has been greater awareness that high and variable inflation distorts the private sectors decisions making with regards to investments, savings and production and ultimately leads to slower economic growth (Aizenman & Glick, 2008). Moreover, Aizenman and Glick (2008) argued that depending on the degree of firmness, exchange rate pegging does not exempt the country from concerns about the credibility of the peg since the public knows that the government incentive to renege and devalue the currency to depreciate the real exchange rate in response to a large enough economic disturbance. In a review on South Sudan's exchange rate regime, Adam and Crawford (2012) argued for a fixed exchange rate regime owing to the nature of the growing economy, and the underdeveloped financial market. The foregoing authors noted that a fixed exchange rate for South Sudan is the better option for stabilizing domestic inflation.

There are also various arguments against using fixed exchange rate. Some researchers have opined that credible exchange rate policies require anti-inflationary macro-economic policies (Gaspar, Smets, & Vestin, 2010). He further argues that if the underlying policies are inconsistent with the exchange rate no fixed exchange rate can in itself increase the credibility of a fixed exchange rate is weakened by the need for a strong devaluation at the outset. In addition, the above arguments, Gaspar, Smets, and Vestin, (2010) agrees that since inflation – unemployment trade-off is less pronounced in the case of fixed exchange rates, governments are more tempted to use surprise inflation to combat macroeconomic problems.

Aizenman and Glick (2008) analyzed the role of an exchange rate peg as a commitment mechanism to achieve inflation stability when multiple equilibriums are possible. They explained that the pegged exchange rates regimes have tended to end so explosively. They further argued that using exchange rate peg in achieving inflation stability can create a ‘trap’ whereby the regime initially confers anti-inflation credibility but ultimately results in an exit occasioned by large adverse real shocks resulting in big welfare losses to the economy. Rahman and Basher (2001) reported that in the era of trade liberalization, foreign exchange liberalization and devaluation of local currency have appeared as a common feature of developmental policy. These policies are meant to make the real exchange rate more aligned to the market determined “equilibrium” exchange rate and to enhance the competitiveness in the international markets.

El-Shagi (2011) used panel data from 1975 to 2004 obtained from 116 countries to examine the impact of fixed exchange rate on fiscal discipline. Findings showed that ‘a positive effect of fixed exchange rates, especially of pre-announced fixed exchange rates, on fiscal discipline is highly unlikely’ (p.701). Fiscal discipline, the focus of the foregoing study is all-encompassing and larger in scope than bank performance which is the focus of this study. In Nepal, Paudel and Burke (2015) examined the effect of the country’s exchange rate policy on their export performance for the period 1980-2010. Findings from the study revealed that Nepal, which had long adopted a fixed exchange rate policy, had the export affected by the appreciation of the exchange rate. The authors concluded that the country could resort to a more flexible exchange rate in order to avoid export competitive traps.

2.3.2 Effect of a floating exchange rate on the performance of commercial banks

On the case of floating exchange rate, there is need to determine the equilibrium exchange rate to be fixed as factors influencing the exchange rate change rapidly in these economies that are in transition; the equilibrium exchange rate also varies (Gaspar, Smets, & Vestin, 2010). Arguments against flexible exchange rate are that it can cause destabilizing impact on inflationary and devaluation expectations and can move market exchange rate in an unintended direction some of the factors causing this being rudimentary market mechanism and institutional backwardness. On the other hand, a floating exchange rate has been thought advantageous owing to its response to the foreign exchange market (Taiwo & Adesola, 2013).

Bunda and Desquilbet (2008) in their study used panel data on bank liquidity at the individual level and data on their macroeconomic environment, for a sample of commercial banks in emerging countries between 1995 and 2004. The study established that ‘in hard pegs and in pure floats, commercial banks are more liquid than in intermediary regimes’ (p.246). Similar results were obtained by Vodová (2013) whose study among Hungarian commercial banks showed that banks in countries with independently floating regimes were more liquid than intermediate ones.

While examining the balance sheet of banking systems in five East Asian countries (Thailand, South Korea, Malaysia, Philippines and Indonesia) affected by the 1997 Asian Crisis, Shrestha (2013) reported that before these countries experienced the Crisis, they all had a fixed exchange rate system. However, except for Malaysia, the rest of the countries under study adopted a floating exchange rate after the Crisis and that their reserve accumulation by central bank yielded domestic liquidity within banks.

A study on the effect of a floating exchange rate regime on Small and Medium Enterprises in the United Kingdom was carried out by Belghitar, Clark, and Meftah-Wali (2016). The study focussed on the years 1998-2014 (1998 being the first year of floating after the independence of Bank of England, and the study period including crises of the dot.com and mortgage bubbles). Findings from the study revealed a floating exchange rate regime had a negative effect on the competitive environment for SMEs.

2.3.3 Effect of exchange rate volatility on performance of commercial banks

The management of monetary risks helps to avoid the monetary distress and rising the company financial performance however once more to stay a tax constant. The company risk ought to be structured so as to attenuate the volatility or avoiding giant losses. The instability reduction in income or earnings and hindrance of losses facilitate to better set up the liquidity wants. This reduction of money flow and earnings influence the short-coming of accessible funds and consumption of equity for company funding (Iyakaremye, 2015). The great strategy of liquidity maintenance is to avoid the company losses; the management ought to take enough time to investigate the firm’s monetary stand at the most tolerated loss.

International trade becomes more difficult owing to exchange rate volatility. Some studies have been established to study on how volatility affects performance of commercial banks and other financial institutions. In Kenya, Kairu (2016) aimed to establish if there was a relationship between the volatility of exchange rates and the performance of commercial banks in Kenya. Using secondary data from 43 banks, the study concluded that there existed a weak positive relationship between exchange rate volatility and the performance of commercial banks in the country.

Another Kenyan study by Lagat and Nyandema (2016) targeted all commercial banks listed at the Nairobi Securities Exchange between 2006 and 2013, and used a time series correlation research design. Data from the study was analysed via multivariate linear regression analysis, and revealed that there was a strong positive relationship between the fluctuations in exchange rate and the performance of commercial banks. The study concluded that the fluctuations and volatility of the exchange rates is likely to have contributed to the growth and profitability of banks.

Using semi-annual data from the South Sudanese context, Manyok's (2016) study aimed at establishing the relationship between the rate of exchange variability on the financial performance of commercial banks from 2006 to 2015. Findings from the study revealed that there was a weak negative relationship between exchange rate variability and financial performance. Similarly Majok (2015) focussed on the exchange rate fluctuations on the performance of commercial banks in Nairobi Kenya. The study which used a descriptive research design and focussed on 43 commercial banks realised that there was a positive relationship between the fluctuations in the foreign exchange rate and the financial performance of banks as measured by the returns on assets ratio. More recently, Moyo and Tursoy (2020) examined the impact of inflation and exchange rate on commercial banks performance in South Africa. Their study which focussed on four large commercial banks revealed that there existed an inverse relationship between inflation and Return on Equity (ROE) and a weak association between exchange rate and ROE.

2.4 Summary and gaps in literature

This section will present in tabular form the summary of key studied reviewed, their study contexts, main findings, gaps arising from them as well as how the current study fills the gap.

Table 2.1: Summary of gaps in literature

Study	Country	Study aim	Key findings	How current study fills gap
El-Shagi (2011)	116 countries	Investigated the effect of exchange rate on fiscal discipline	Positive effect of exchange rate on fiscal discipline improbable.	Current study focuses on exchange rate regime (fixed and floating) and effect on bank performance.
Paudel Burke (2015)	Nepal	Examined the effect of exchange rate policy on export performance	A fixed exchange rate policy affected the performance of export in the country.	The study focussed on fixed exchange rate only, and export performance. Current study additionally looks at floating exchange rate and commercial bank performance.
Toutou, Laib, & Boudeghdegh, (2019).	Algeria	Determining empirically the impact of the exchange rate on economic growth	The empirical results confirm theoretical expectations that decline in the real effective exchange rate of the dinar increases the growth economy through public spending for consumption and is stimulated by oil taxation.	The current study shows how floating exchange rate can influence performance of banks through improved performance of the economy.
Frankel, (2003)	East Asia	The paper reviews recent trends in thinking on exchange rate regimes	Empirical evidence regarding the economic performance of different exchange rate regimes depends entirely on the classification scheme.	The effect of the exchange regimes for a developing economy as opposed to an emerging economy is reviewed
Gaspar, Smets, & Vestin, (2010).	European Countries	Investigates the implications of adaptive learning in the private sector's formation of inflation expectations for the conduct of monetary policy	The study finds that departures from rational expectations increase the potential for instability in the economy, thereby strengthening the importance of managing (anchoring) inflation expectations.	This study shows how the private sector expectations in relation to the floating exchange rate regime can be formed in line with adaptive learning (market conditions)
Adam, & Crawford, (2012).	South Sudan	This paper is concerned with exchange rate management in South Sudan	It argues that the exchange rate regime currently sits uncomfortably between two regimes. The severity of the impending economic crisis for South Sudan makes it likely that the fixed exchange rate regime will disintegrate, inflation will spike and, with some	This current study makes recommendations on how the fixed exchange rate regime can be made effective for a country in economic crisis like South Sudan

			likelihood, the economy will revert to a de facto dollarization	
Aizenman and Glick (2008)	European Countries	This paper studies the empirical and theoretical association between the duration of a pegged exchange rate and the cost experienced upon exiting the regime	Empirically the result show that exits from pegged exchange rate regimes during the past two decades have often been accompanied by crises, the cost of which increases with the duration of the peg before the crisis.	In relation to the study the current study shows that a duration such as that of South Sudan using the fixed exchange rate might not have been long enough to bring about a crisis
Rahman, & Basher, (2001).	Bangladesh	Examines real exchange rate behaviour and exchange rate misalignment	The study finds that real exchange rate and the macro-economic fundamentals affecting exchange rate form a co-integrating vector resulting in real depreciation of the currency	The current study therefore supports the need for a currency at equilibrium to avoid currency devaluation
Bunda and Desquilbet (2008)	Emerging countries	Bank liquidity across exchange rates	Commercial banks are more liquid in hard pegs and pure floats, than in intermediary regimes	The study focussed on emerging countries; current study narrows itself to South Sudan only
Vodová (2013)	Hungary	Determinants of liquidity among Hungarian commercial banks	Levels of interest rates do not influence bank liquidity; liquidity increases with higher capital adequacy.	Hungarian commercial banks are more developed and established than South Sudanese ones
Shrestha (2013)	Thailand, South Korea, Malaysia, Philippines and Indonesia	Examined the reserve accumulation of the countries under study after the 1997 East Asian Crisis	Most countries under study (except for Malaysia) adopted a floating exchange rate after the Crisis and that their reserve accumulation by central bank yielded domestic liquidity within banks	Study focussed on reserve accumulation in relation for exchange rate regime; current study focuses on the performance of commercial banks.
Belghitar, Clark, and Mefteh-Wali (2016)	United Kingdom	Studied effect of a floating exchange rate regime on the performance of SMEs in the UK	A floating rate regime negatively affected the performance and competitiveness of SMES in the country	While some factors can be compared, the performance of commercial banks (which was the focus of the current study) is different from that of SMEs
Taiwo & Adesola, 2013	Nigeria	This study investigated the impact of unstable exchange rate on bank performance in Nigeria using two proxies for bank	The two models specified show that the impact of exchange rate on bank performance is sensitive to the type of proxy used for bank performance.	The current study aims to make a recommendation of this study in relation to a stable exchange rate is needed to improve the performance of banks

		performance, namely loan loss to total advances ratio and capital deposit ratio.		
Kairu (2016)	Kenya	The relationship between the volatility of exchange rates and the performance of commercial banks in Kenya.	The study concluded that there existed a weak positive relationship between exchange rate volatility and the performance of commercial banks in the country.	The study focussed on volatility only, and Kenya's commercial banks are quite advanced as compared to South Sudanese ones.
Lagat and Nyandema (2016)	Kenya	Investigated the influence of foreign exchange rate fluctuations on the performance of commercial banks listed at the Nairobi Securities Exchange (between 2006-2013)	There was a strong positive association between the fluctuations in exchange rate and the performance of commercial banks.	The focus, besides being of Kenyan commercial banks (which are more established) focussed on those listed at the NSE. The current study focuses on selected banks.
Moyo and Tursoy (2020)	South Africa	Examining the impact of inflation and exchange rate on the financial performance of commercial banks in South Africa	There existed a weak relationship between exchange rate and ROE, and inverse relationship between inflation and ROE.	Focussed on four commercial banks in South Africa; current study focuses on five public and one private banks in South Sudan. Used ROE only for bank performance; current study additionally uses ROA
Majok (2015)	Kenya	Assessing the effect of exchange rate fluctuations on the performance of commercial banks in Kenya	Exchange rate movement affected the performance of the stock market; further, a weak relationship between foreign exchange rate fluctuations and the performance of commercial banks in Kenya existed.	This study focussed on Kenya, while the current study looks at South Sudanese context, whose commercial bank is still growing, unlike Kenya's
Manyok (2016)	South Sudan	Investigating the effects of exchange rate fluctuations on financial performance of financial institutions in South Sudan	There was a negative association between exchange rate fluctuations and financial performance	The study focussed on exchange rate fluctuations only and studied all financial institutions; the current study additionally looks at fixed and floating rates as well and focuses on selected banks.

Iyakaremye, 2015	Kenya	The purpose of the study was to analyze the financial performance, financial risk, and position of the agricultural companies listed on the Nairobi Securities Exchanges.	The study result has shown that there is a relationship between financial performance ratios and financial risk ratios.	In the current study just like in companies, International trade becomes more difficult owing to exchange rate volatility. This study therefore makes recommendations on need for stable exchange rate for a countries performance
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2.5 Conceptual framework

According to Kothari (2010), an independent variable is one that stands alone, one that the researcher manipulates to test its effect on another, while a dependent variable is one that is being tested and measured in a study. In this study, the independent variables are fixed exchange rate, floating exchange rate and exchange rate volatility.

Fixed exchange rate was measured through: depreciation, macro & micro economic policies, exchange rate peg, and inflation. On the other hand, floating exchange rate was measured through: lending to deposit rate; growth of reserves, domestic credit growth, and foreign reserves. Exchange rate volatility was measured through standard deviations, while performance of commercial banks studied was measured through profitability of banks. Similar measures have been used in other global studies (Belghitar et al., 2016; Chol, Kalunda, & Kamau, 2019; Kairu, 2016; Lagat & Nyandema, 2016; Moyo & Tursoy, 2020).

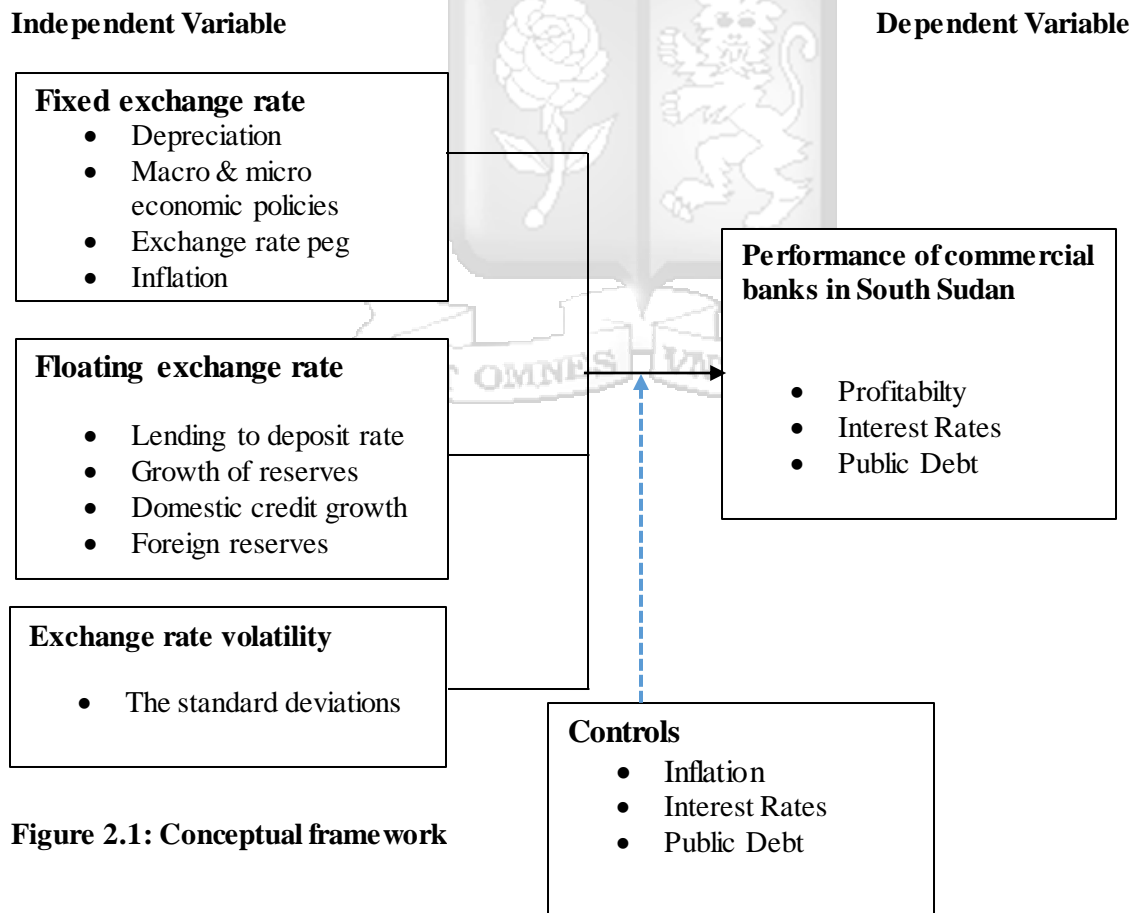


Figure 2.1: Conceptual framework

2.5.1 Operationalization of study variables

Table 2.2: Operationalization of study variables

Type of Variable	Variables	Indicators / Determinants	Measurement	Relevant theory	Studies using the variables
Dependent	Commercial Bank performance	<ul style="list-style-type: none"> Return on Assets (ROA) Return on Equity (ROE) 	Ratio	Theory of Optimum Currency Areas (OCA)	Chol et al. (2019); Lagat & Nyandema (2016); Vodová (2013)
Independent	Fixed Exchange Rate	<ul style="list-style-type: none"> Depreciation Macro & micro economic policies Exchange rate peg Inflation 	Ratio	The International Fisher Effect theory	El-Shagi (2011); Frankel (2006)
	Floating Exchange Rate	<ul style="list-style-type: none"> Lending to deposit rate Growth of reserves Domestic credit growth Foreign reserves 	Ratio	The International Fisher Effect theory	(Belghitar et al. (2016); Kairu (2016)
	Exchange Rate volatility	<ul style="list-style-type: none"> The standard deviations 	Ratio	The International Fisher Effect theory	(Bunda and Desquilbet (2008); Senadza and Diaba (2017)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This presents the research design that was used in the study, the population and sampling, sources of data, the procedure of data collection and analysis of data and method of data presentation. How the ethical consideration was undertaken is also discussed in this chapter.

3.2 Research philosophy

Research philosophy is a paradigm, a world view or a set of beliefs and assumptions that govern how research is conducted (Patton, 2015). Research philosophy affects the way researchers carry out their studies, directly and indirectly. According to Saunders, Lewis, and Thornhill (2016), research philosophy can be looked at from the perspectives of ontology (the nature of reality); epistemology which is how knowledge is acquired); and axiology or ethics (values in relation to research).

Research philosophy, on one end can be positivism, while on the other extreme end, interpretivism; other philosophies including pragmatism, realism, and others (Cooper & Schindler, 2014). Positivism is concerned with objective reality, and is aligned with quantitative research studies, while interpretivism is associated with subjectivism in research, and much aligned with qualitative studies (Saunders et al., 2016). In this study, a positivist research philosophy was adopted as the main objective of this study is to establish the effect of fixed verses floating exchange rate on the performance of commercial banks in South Sudan, which requires a quantitative approach.

3.3 Research design

A research design is the general plan of how research is to be carried out (Saunders et al., 2016). According to Cooper and Schindler (2014) a research design is the plan and structure of investigation conceived so as to obtain answers to research questions. A research design therefore plays an instrumental role in the study at hand. This study adopted a comparative descriptive research design to answer the research questions given. Descriptive survey studies portray a correct profile of men and women, occasions, or account of the characteristics, for example behaviour, critiques, abilities, beliefs, and understanding of a selected individual, scenario or organization

(Cooper & Schindler, 2014; Saunders et al., 2016). Descriptive layout reports determine how things are and try to describe these things with values, attitudes, behaviour and traits.

On the other hand, comparative design seeks to compare between two things to discover something new (Saunders et al., 2016). In this case the design sought to compare between performance of the commercial banks in the two regimes, that is, fixed exchange rate regime (2012 - 2015) and the floating exchange change regime (2016 – 2019).

3.4 Population and sampling

The population of a study refers to a group of individuals with similar characteristics, those whom the results of the study was generalized to (Bryman & Bell, 2007; Kothari, 2010). In this study, the population comprised of 30 banks operating in South Sudan. An 8 year data scope was sought since January 2012 to December 2019. This ensured that 4 year performance data in both regimes, that is, the fixed exchange rate regime of 2012 – 2015 and the floating exchange rate regime of 2016 -2019 was available and complete. The selection provided a basis of comparison of the performance of the banks in the two regimes. A 20% sample size as recommended by Patton (2016) was employed where 5 banks of the sampled 6 banks met this criteria of having been operational since 2011 and having reported data that was being sought for in the study according to the Central Bank of South Sudan . The banks were purposively sampled were three foreign banks KCB, Stanbic and Equity Bank and two local banks, that is, Ivory and Buffalo Bank. According to Etikan, Musa, and Alkassim (2016), purposive sampling allows the researcher to choose individuals or organizations with characteristics that the researcher is interested in

Table 3.1: Banks studied

Name of Bank	Public/Private	Years of Operation	Years of Study
KCB	Private	15 Years	10
Equity Bank	Private	13 Years	10
Stanbic Bank	Private	8 Years	8
Ivory Bank	Public	19 Years	10
Buffalo Bank	Public	12 Years	10

3.5 Data collection method

Secondary data were used as the main data collection sources. Data from the sampled banks' financial statements was used, as well as information obtained from publications from the World

Bank and Central Bank of South Sudan. Performance data was the main data of interest. Specifically, quarterly profitability of banks in both regimes was sought. The exchange rates from 2012 – 2015 which was the fixed exchange rate period was sought and also the annual floating exchange rates between 2016 – 2019 on an aggregated quarterly basis were sought. For all this data sets, quarterly data is preferred because of the rapid changes in exchange rates especially during the floating exchange change regime. This relates to Panel data which was used to analyse the relationship between the dependent and independent variable. Monthly data was aggregated to quarterly data to compute descriptives which were later aggregated to annual data to compute relationships between the exchange rate regimes on performance. Panel data, sometimes referred to as longitudinal data, is data that contains observations about different cross sections across time, that is, multiple data of cases over multiple time periods (Aiken, West, & Pitts, 2003). Consequently data for various sampled banks over a variety of period was sought.

The Central Bank of South Sudan was the main source of this financial information. This data was acquired by sending an introductory letter and the NACOSTI letter to the Central Bank of South Sudan, Central Records and Documentation Center Department. The department with invited the researcher in the supervision of a banking official to collect the required data. Most of the data sought was acquired. The rest of the data relating to banks and bank characteristics such as years of operation was obtained from manuals of the respective banks online and through visits to the individual banks on appointment days. All this data was recorded in a data sheet.

3.6 Data analysis

Multiple linear regression analysis was used to analyse the relationships between the independent and dependent variables in the study (Aiken, West, & Pitts, 2003). The analysis was done by regressing the dependent variable on independent variable, and ensuring the significance of P value of each of the variables in the regression equation. Notably, the P Value is significant if it is ≤ 0.05 . Regression assesses the trends in performance for the individual banks as the exchange rate changes as opposed to aggregating the performance data. Monthly data was aggregated to quarterly data to compute descriptives which were later aggregated to annual data to compute relationships between the exchange rate regimes on performance. The specific quarterly performance data was

therefore used as opposed to the aggregated data. The general regression equations to be adopted was:

$$y = \beta_0 + C + \beta_1 PE + \beta_3 HK + \varepsilon \dots \dots \dots \text{equation I (2012 - 2015)}$$

Versus

$$y = \beta_0 + C + \beta_2 FF + \beta_3 HK + \varepsilon \dots \dots \dots \text{equation II (2016 - 2019)}$$

Where:

y= Performance of Commercial Banks (dependent Variable)

PE = Fixed Exchange Rate (Independent Variable)

FF = Floating Exchange Rate (Independent Variable)

HK= Exchange Rate volatility (Independent Variable)

β_0 = the coefficients of the variables in the model

C = Control Variables (Aggregated Bank internal Factors, Performance of the Economy (GDP))

3.7 Validity and reliability

Validity refers to the accuracy of a measure, or the extent to which the degree to which results obtained from the analysis of the data actually represent the phenomenon under study (Bryman & Bell, 2007; Nachmias & Nachmias, 2009). On the other hand, reliability is a measure of the degree to which a research instrument yields consistent results or data after repeated trials. Thus, the reliability of an instrument is achieved when it can measure a variable accurately and consistently, and obtain the same results under the same conditions over time (Sekaran & Bougie, 2013). Validity and reliability in this study was achieved through a pilot study with data from two other banks (which are not part of the study).

3.8 Ethical consideration

Ethical consideration is important throughout the research process (Saunders et al., 2016). In this study, official request was sought for information that is not publicly available from banks to be studied, as well as from Central Bank of South Sudan. Further, ethical clearance was sought from the Institutional Review Board (IRB) of Strathmore University.

This chapter sought to analyse the data collected. The study examined the exchange rate characteristics from 2012 to 2019 as since South Sudan attained independence 2011. During this period, two exchange rate eras, that is 2012 – 2015 and the other from 2016 but was limited to 2019 to allow equal 4 year period for each period. This regimes in place could have affected performance of banks. This chapter was therefore also guided by the research objectives which included: to determine how fixed exchange rate affected the financial performance of commercial banks in South Sudan, establish how floating exchange rate affects the financial performance of commercial banks in South Sudan and analyse how the financial performance of commercial banks in South Sudan has been affected by exchange rate volatility in both fixed and floating exchange rate regimes.

4.2 Sample representation

The banks sampled were three foreign banks KCB, Stanbic and Equity Bank and two local banks, that is, Ivory and Buffalo Bank. The data sought was 8 year data for all the 5 sampled banks was sought and hence 50 data set records were expected. All the data set records were acquired leading to a response rate of 100%. This was considered sufficient to conduct the study.

4.3 Exchange rate characteristics / Controls

Parallel and Indicative Characteristics of exchange rates in both regimes was computed to assess whether there were any other factors affecting performance of banks. This was necessary to determine controls for the study. This was in an effort to determine controls for the study. The study sought to compute the exchange rate characteristics during the fixed and floating exchange eras. This was to show trends in the exchange rates. These were compared from 2011 – 2017 and from against the parallel exchange rate which could be assumed to give an indication of what the exchange rate should have been.

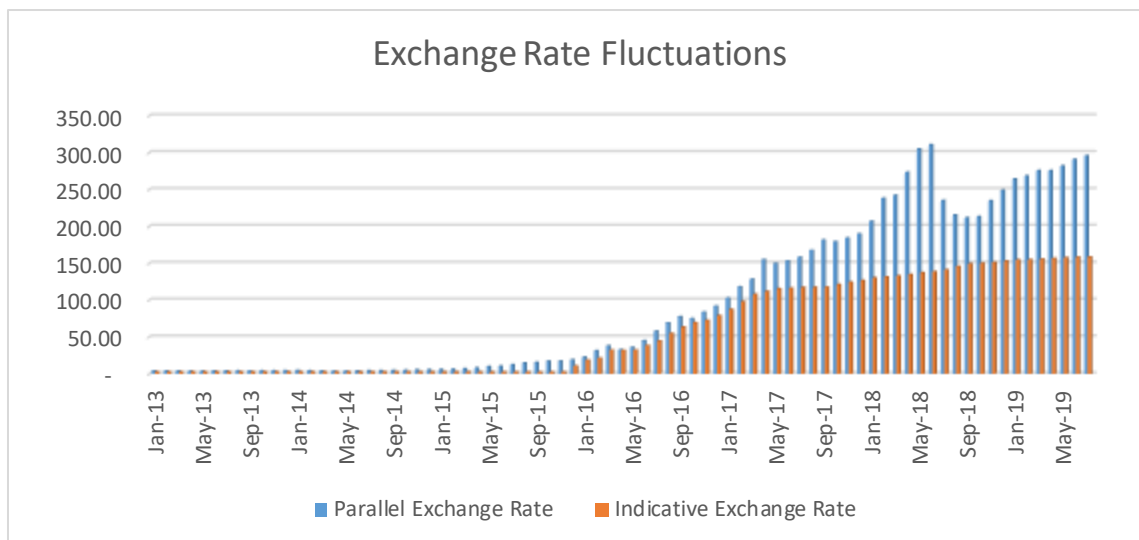


Figure 4.1: Exchange rate fluctuations during 2013 to 2019 period

The study results show that there was a period of fixed exchange rate up to December 2015 after which exchange rate was changed to a floating exchange rate determined by market forces. This period is marked with the sudden increased change in exchange rate after January 2016. Figure 4.1 also shows that the parallel exchange rates varied from the indicative exchange rates both in the fixed and in the floating exchange rate eras. This was an indication of other underlying market financial factors that could have been causing inconsistencies in the market.

Table 4.1 Comparison between indicative and parallel exchange rates

Paired Samples Test									
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Parallel Rate – Indicative Rate	36.036	47.249	5.316	25.452	46.619	6.779	78	0.000
	Individual Results	Mean	N	Std. Deviation	Std. Error Mean				
	Parallel Rate	97.2001	79	106.08335	11.93531				
	Indicative Rate	61.1644	79	62.49842	7.03162				

The study results indicate that there was a significant variation ($p = 0.000$) between the parallel exchange rate and the indicative rate in the republic of South Sudan from 2013 to 2019. The same test was checked against the fixed exchange rate period.

Table 4.2: Comparison between indicative and parallel exchange rates to 2015

Paired Samples Test									
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Parallel Rate to 2015 – Indicative Rate to 2015	3.885	4.129	0.688	2.488	5.282	5.646	35	0.000
	Individual Results	Mean	N	Std. Deviation	Std. Error Mean				
	Parallel	7.0531	36	4.55887	.75981				
	Indicative Rates	3.1681	36	1.30833	.21806				

The study results indicated that there was a significant variation ($p = 0.000$) between the parallel exchange rate and the indicative rate in the republic of South Sudan up to 2015.

The significant variations in the parallel and the indicative rates during the two eras indicated systematic problems in both regimes on the exchange rates. It meant that there were no sufficient controls to appropriately apportion exchange rate in both regimes. To ascertain other factors that could have contributed to these changes, a regression analysis of other economic forces affecting the money markets and specifically the exchange rates was conducted. The study results are presented in Table 4.3

Table 4.3: Key factors accounting for Variations in Parallel Vs Fixed Exchange Rates

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	12.366	9.514		1.3	0.199
	Inflation	0.033	0.001	0.983	33.185	0.000

Interest Rate	-0.556	0.889	-0.021	-0.625	0.534
Public Debt as a Percentage of GDP	-0.158	0.083	-0.059	-1.905	0.062
a. Dependent Variable: Indicative Rate					
Model Summary	R = .981 ^a	R Square = .962			
ANOVA^a / Goodness of Fit	p = .000 ^b				

The study findings indicated that inflation was a major factor accounting for the differences as it had a significant relationship ($p = 0.000$) with the indicative exchange rate. Interest rates ($p = 0.534$) and Public Debt (0.062) had no significant effects ($p > 0.05$).

This computation was necessary as it determined that inflation was the only significant factor requiring control in the final overall regression equation

4.4 Analysis based on the research objectives

The study sought to analyse the results based on the research objectives. The study findings were then presented

4.4.1 The effect of fixed exchange rate on the financial performance of commercial banks in South Sudan

The study sought to determine how fixed exchange rate affected the financial performance of commercial banks in South Sudan. Table 4.4 displays the results for this objective.

Table 4.4: Correlations between fixed exchange rate and financial performance

Correlations		Year	Exchange Rate	Foreign	Local
Year	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	7			
Exchange Rate	Pearson Correlation	.351	1		
	Sig. (2-tailed)	0.254			
	N	7	7		
Foreign Banks Performance	Pearson Correlation	.911**	.844*	1	
	Standardized Pearson Correlation	.671**	.723*		
	Sig. (2-tailed)	0.004	0.017		
	N	7	7	7	
Local	Pearson Correlation	.931**	.925*	.969**	1
	Standardized Person Correlation	.524**	.624	.734**	

	Sig. (2-tailed)	0.002	0.253	0.000	
	N	7	7	7	7
**. Correlation is significant at the 0.01 level (2-tailed).					
* . Correlation is significant at the 0.05 level (2-tailed).					

Due to existence of multicollinearity, the data was standardized by subtracting the means of variables (Centering the variables). Centring the variables is also known as standardizing the variables by subtracting the mean. This process involves calculating the mean for each continuous independent variable and then subtracting the mean from all observed values of that variable. Then, use these centered variables in your model. This has no effects on the P-values but removes structural multi-collinearity

The study results indicated that the performance of foreign banks was affected by the exchange rate during the fixed exchange rate era. This means that there was a relationship between the fixed exchange rate and the performance of foreign banks ($\beta = 0.723$, $p = 0.017$) and this relationship was strong. Further the results indicated that the performance of local banks was not affected by the exchange rate during the fixed exchange rate era. This suggests that there was no relationship between the fixed exchange rate and the performance of local banks ($\beta = 0.624$, $p = 0.253$) and this relationship was strong.

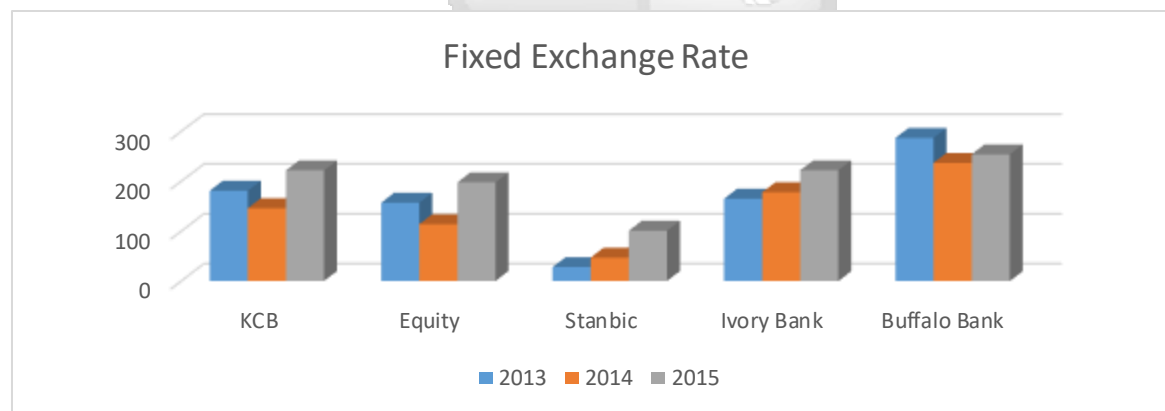


Figure 4.2: Performance of foreign and local banks in the fixed exchange rate era.

Results show inconsistent performance for foreign banks apart for Stanbic bank whose performance was low. The results also show that local banks had a higher performance in the fixed exchange period era (for example buffalo bank) and improved performance where operational scales were low (for example, ivory bank).

Table 4.5. regress Overall_Performance Vs Fixed Exchange_Rate Regime

Source	SS	df	MS	MS	Number of obs = 3
					F(1, 1) = 6.27
Model	1140.9846	1	1140.9846		Prob > F = 0.2419
Residual	182.0232	1	182.0232		R-squared = 0.8624
					Adj R-squared = 0.7248
Total	1323.0078	2	661.5039		Root MSE = 13.492
Overall_Per~e	Coef	Std. Err	t	P> t	[95% Conf. Interval]
Exchange_Rate	63.64615	25.42118	2.5	0.001	-259.3605 386.6528
_cons	-23.29615	80.87637	-0.29	0.821	-1050.928 1004.336

Study findings was noted that there was no significant relationship ($p = 0.242$) between the fixed exchange rate regime and the performance of the commercial banks. This was interpreted to mean that the fixed exchange rate regime caused confusion to banks operations (both local and foreign) as was indicated in correlations of individual banks as operations were not open to market forces.

4.3.2 The effect of floating exchange rate on the financial performance of commercial banks in South Sudan

The study sought to determine how floating exchange rate affected the financial performance of commercial banks in South Sudan, and results are shown on Table 4.5.

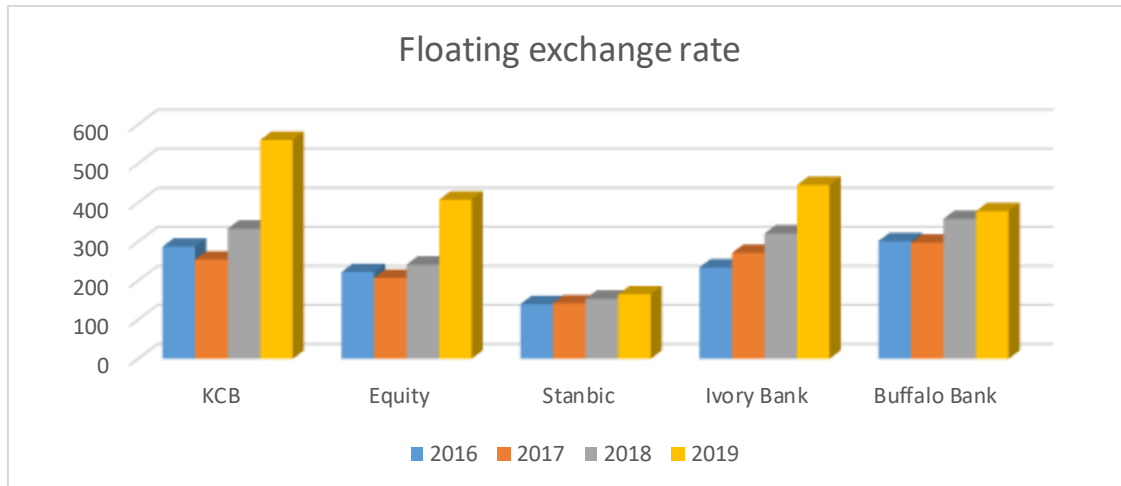
Table 4.5 Correlations on floating exchange rate and financial performance

Correlations		Year	Exchange Rate	KCB	Equity	Stanbic	Ivory Bank	Buffalo Bank
Year	Pearson Correlation	1						
	Sig. (2-tailed)							
	N	7						
Exchange Rate	Pearson Correlation	.951**	1					
	Standardized Person Correlation	.721**						
	Sig. (2-tailed)	0.001						
	N	7	7					
KCB	Pearson Correlation	.868*	.816*	1				

	Standardized Person Correlation	.521*	.521*					
	Sig. (2-tailed)	0.011	0.025					
	N	7	7	7				
Equity	Pearson Correlation	.845*	.782*	.992**	1			
	Standardized Person Correlation	.567*	.624*	.712**				
	Sig. (2-tailed)	0.017	0.038	0				
	N	7	7	7	7			
Stanbic Bank	Pearson Correlation	.947**	.846*	.765*	.761*	1		
	Standardized Person Correlation	.721**	.612*	.607*	.631*			
	Sig. (2-tailed)	0.001	0.016	0.045	0.047			
	N	7	7	7	7	7		
Ivory Bank	Pearson Correlation	.939**	.901**	.970**	.956**	.819*	1	
	Standardized Person Correlation	.721**	.708**	.698**	.681**	.699**		
	Sig. (2-tailed)	0.002	0.006	0	0.001	0.024		
	N	7	7	7	7	7	7	
Buffalo Bank	Pearson Correlation	.842*	.897**	.887**	.858*	0.734	.879**	1
	Standardized Person Correlation	.701*	.703**	.662**	.624*	.512	.624**	
	Sig. (2-tailed)	0.018	0.006	0.008	0.013	0.06	0.009	
	N	7	7	7	7	7	7	7
**. Correlation is significant at the 0.01 level (2-tailed).								
* . Correlation is significant at the 0.05 level (2-tailed).								

Again, due to existence of multicollinearity, the data was standardized by subtracting the means of variables (Centering the variables). Centering the variables is also known as standardizing the variables by subtracting the mean. This process involves calculating the mean for each continuous independent variable and then subtracting the mean from all observed values of that variable. Then, use these centred variables in your model. This has no effects on the P-values but removes structural multi-collinearity

Results showed that floating exchange rate affected the performance of all banks positively. There was a significant correlation between floating exchange rate and performance of KCB ($\beta = 0.521$, $p = 0.025$), performance of Equity ($\beta = 0.624$, $p = 0.038$), performance of Stanbic Bank ($\beta = 0.612$, $p = 0.016$), performance of ivory bank ($\beta = 0.721$, $p = 0.006$) and performance of Buffalo Bank ($\beta = 0.703$, $p = 0.006$). These results were interpreted to mean that overall, the returns for banks were higher during the floating exchange period. This was presented in figure 3.



Overall the results indicated that the financial performance of banks was general increase during the floating exchange rate period.

Table 4.5. regress Overall_Performance Vs Fixed Exchange_Rate Regime

Source	SS	df	MS	MS	Number of obs = 3
					F(1, 1) = 6.27
Model	1140.9846	1	1140.9846		Prob > F = 0.2419
Residual	182.0232	1	182.0232		R-squared = 0.8624
					Adj R-squared = 0.7248
Total	1323.0078	2	661.5039		Root MSE = 13.492
Overall_Per~e	Coef	Std. Err	t	P> t	[95% Conf. Interval]
Exchange_Rate	63.64615	25.42118	2.5	0.001	-259.3605 386.6528
_cons	-23.29615	80.87637	-0.29	0.821	-1050.928 1004.336

Study findings was noted that there was a significant relationship ($p = 0.001$) between the fixed exchange rate regime and the performance of the commercial banks. This was interpreted to mean that the floating exchange rate regime allowed banks to operate in market environments that allowed for enhanced performance.

4.3.3 The effect of exchange rate volatility on the financial performance of commercial banks in South Sudan

The study sought to determine how the financial performance of commercial banks in South Sudan has been affected by exchange rate volatility in both fixed and floating exchange rate regime. To compute this, an overall regression model using Panel Data (Stata) was computed. First the Hausman effect was computed to determine if the random of the fixed effect was to be considered.

Table 4.6: Hausman fixed random

---- Coefficients ----				
(b)	(B)	(b-B)	sqrt(diag(V_b-V_B))	
fixed	random	Difference	S.E.	
Exchange_R~e	1.083579	1.037912	.0456673	.4836206

b = consistent under Ho and Ha; obtained from xtreg

B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

$\chi^2(1) = (b-B)'[(V_b-V_B)^{-1}](b-B)$
= 0.01
Prob>chi2 = 0.9248

The study findings indicated that (p = 0.9248) was higher than p value < 0.05 hence the random effect was chosen.

Table 4.7: regress Overall Performance Exchange_Rate, re (Inflation Controlled)

Random-effects GLS regression		Number of obs		=	7
Group variable: EraCode		Number of groups		=	2
R-sq:	within = 0.5007	Obs per group:	min	=	3
	between = 1.0000		avg	=	3.5
	overall = 0.7855		max	=	4
			Wald chi2(1)	=	18.32
			Prob > chi2	=	0.0000
corr(u_i, X) = 0 (assumed)					

Overall_Per~e	Coef.	Std. Err.	z	P> z	95% Conf. Interval	
Exchange_Rate	1.037912	.2425223	4.28	0.000	0.5625771	1.513247
_cons	173.9886	22.44575	7.75	0.000	129.9958	217.9815
sigma_u	0					
sigma_e	45.753819					
rho	0	(fraction of variance due to u_i)				

The study findings indicated that there is a significant effect ($p = 0.000$) of the effect of exchange rate volatility on the financial performance of banks in South Sudan. This was interpreted to mean that exchange is a major determinant of the performance of foreign commercial banks. This in the study also meant that employing either the fixed or the floating exchange rate regime in a country can influence the performance of the commercial banks in the country.

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a discussion, conclusions and recommendations of the study objectives. The discussion is carried out by presenting key findings in view of past literature (both agreeing and contrasting ones). The conclusion is then given, following by recommendations.

5.2 Discussion

5.2.1 The effect of fixed exchange rate on the financial performance of commercial banks in South Sudan

In determining how fixed exchange rate affected the financial performance of commercial banks in South Sudan, the study results indicated that the performance of foreign banks was affected by the exchange rate during the fixed exchange rate era. Further, the results indicated that the performance of local banks was not affected by the exchange rate during the fixed exchange rate era. Results show inconsistent performance for foreign banks. These inconsistencies in results is supported by Montiel and Reinhart (2001) who observed that there are high credit risks affecting performance in a fixed exchange rate regime. They noted that in a fixed exchange rate regime, banks may consider the exchange rate regime as a guarantee for foreign borrowing and seek more external funding. As the exchange rate rises, so does the amount of foreign exchange debt for banks. Rising exchange rate make debtor less able to repay the debt, and less willing to repay the foreign exchange loan they receive.

Further, Krugman (1979) noted an additional link between a fixed exchange rate and the probability of poor financial performance of banks. Thus, when the authorities fix the exchange rate and commit themselves to maintaining this, they may create a moral hazard problem in countries where the domestic interest rate exceeds the foreign one. Banks may then have an incentive to borrow at the low foreign interest rate and to transform the proceeds of this foreign borrowing into domestic currency loans. In efficient markets this incentive should not occur because banks will correctly perceive the risks involved. However, there are several reasons to believe that banks may misperceive the risks. First, the solemn commitment to a fixed exchange rate may lure the banks to underestimate the risks involved. Secondly, and more importantly, the expectation of bailouts by the authorities may give poorly supervised domestic banks an incentive to over-borrow in foreign currency.

Thus, there are reasons to believe that a poor financial performance of the banking sector that erupts in the foreign exchange market is transmitted to the banking sector, so that it degenerates into a twin crisis involving both the exchange market and the banking sector. This is all the more so when the liberalisation of capital movements increases the size of the liquidity flows and the domestic interest rates in the wake of a speculative movement in the foreign exchange market. It has been argued that the combination of high capital mobility, fixed exchange rates and relatively feeble bank supervision is a major cause of the banking crises of the 1990s.

5.2.2 The effect of floating exchange rate on the financial performance of commercial banks in South Sudan

When establishing how floating exchange rate affects the financial performance of commercial banks in South Sudan, results showed that exchange rate affected the performance of all banks positively. In general, the results indicated that the financial performance of banks increased during the floating exchange rate period. This finding is supported by Obstfeld and Rogoff, (2000) who noted that flexible exchange rates allow countries to adjust more flexibly to asymmetric shocks originating in the goods and labour markets. When, for example a deterioration of the terms of trade occurs, a depreciation of the currency will soften the macroeconomic effects of this shock.

However Goodhart (1989) cautioned that the exchange rates react very little to shocks in macroeconomic fundamentals. Instead most of the changes in the exchange rates are produced by the news in the exchange rates themselves. This implies that the movements of exchange rates are an independent source of volatility, unrelated to the volatility of underlying macroeconomic fundamentals. In such an environment, the volatility of the exchange rates increases the fragility of the balance sheets of local businesses and banks. This is especially the case in countries where the supervision of banks is poorly organised. All this leads to the conclusion that a flexible exchange rate does not necessarily provide for an environment conducive to financial stability. The evidence of the developing countries indicates that flexible exchange rates for many of them are a more serious source of financial fragility than fixed exchange rates. The consensus view among policy makers that countries that are unable or unwilling to move into a monetary union

(or some other form of union such a ‘dollarization’) should allow for more exchange rate flexibility should be revised.

5.3.3 The effect of exchange rate volatility on the financial performance of commercial banks in South Sudan

In analysing how the financial performance of commercial banks in South Sudan has been affected by exchange rate volatility in both fixed and floating exchange rate regime, study findings indicate that there was a significant effect of the effect of exchange rate volatility on the financial performance of banks in South Sudan. These findings are supported by Babazadeh and Farokhnejad (2012) who found that exchange rate is an important determinant of bank's profit in Iran. Kiganda (2014) concluded that macroeconomic variables such as real GDP, inflation and exchange rate have affected banks' profitability in Kenya. Further, Sanders et al. (1990) noted that developing countries' financial institutions are more vulnerable to financial crises. Most financial and economic analysts agree that banks' earnings, costs and profitability are directly affected by exchange rate changes.

Babazadeh and Farrokhnezhad (2012), also supports this finding in his study indicating that a short-term increase in the exchange rate has a reaction at the expected level, while in the long run the banks profit appears when the exchange rate is more than the equilibrium rate. Significant short-term and long-term exchange rate behaviour exists for banks' profits. Although exchange rate and profit from foreign exchange operation are non-stationary, but there is a co-integration between two variables. The effect of exchange rate volatility on short-term foreign exchange earnings is more than its long-term effect. The error correction factor is 1.23 and we achieve long-run equilibrium, when the short-term and long-term equilibrium are overlapped.

5.3 Conclusion

The study concludes that first, fixed exchange rate regimes are more fragile in a world of intense financial integration. Since the exchange markets and the banking sector are strongly intertwined, crises in the foreign exchange markets can easily spill over into the domestic banking sector leading to a twin crisis.

Secondly, floating exchange rates are also conducive to enhance banks performance. In fact, in developing countries, banking crises occur more often in an environment of flexibility of the exchange rate. The reasons are that the flexibility of the exchange rate usually reflects a failure of national authorities to follow stable and predictable policies. In addition, it appears that the exchange rate is rarely a tool to improve the adjustment process following macroeconomic disturbances. It is more often than not a significant source of monetary and macroeconomic instability endangering the stability of the banking sector. Finally, the study concludes that the consensus view that emerging countries should allow for more exchange rate flexibility as a means to enhance financial performance and to curb the effects of exchange rate volatilities.

5.4 Recommendations

5.4.1 Policy recommendation

The developing countries financial sectors should move away from the fixed exchange rate regime and to allow for more flexible exchange rates. It is clear that if foreign exchange crises are the only financial crises, one has to worry about in terms on performance of commercial banks. Policy measures in countries using fixed exchange rates therefore have to be developed and policy measures to govern application of floating exchange rate strengthened.

5.4.2 Practice recommendation

There is also a need for recommendations on practice especially for countries which choose to maintain a fixed exchange rate, have to move in the direction of increasing the cost of a devaluation. Increasing the cost of devaluations, the credibility of fixed exchange rate regimes can be increased. Time is generally against fixed exchange rate regimes. With the passage of time some shock large enough to destroy the authorities' willingness to defend a fixed exchange rate

commitment is bound to occur. This implies that the transition period for the accession countries should not be too long.

On practice also, the study recommends enhanced supervision of the banking systems. A crucial factor in determining how the exchange rate regime affects the stability of the banking sector is the quality of bank supervision. In countries with well-developed supervision a crisis in the foreign exchange market rarely leads to a banking crisis.

On suggestions for further studies, it is unclear, however, that the floating exchange rate remains the sensible policy advice if one takes into account the possibility of banking crises. There is therefore a need for further studies on the effect of the floating exchange rate in times of the banking crisis to determine if the floating exchange rate regime would impact performance of the commercial banks during this turmoil.

5.5 Limitations of the Study

The study encountered a number of challenges during the course of its undertaking. First, it was difficult to access the financial performance data of all the local and foreign banks operating in South Sudan. The researcher therefore sought clearances from the Central Bank of South Sudan and got most of its information from this authority as opposed from the individual banks.

Secondly not all banks' data was available for over 10 years which was the data set that the study required. This was the case for the foreign banks which were new in the country. Some banks such as the Stanbic bank had operated 8 years. The study therefore employed extrapolation so that relationships between the data could be calculated.

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APPENDIX 1- SBS INTRODUCTION LETTER

Old Senate Rd, Marureiri Estate,
P.O. Box 55007, Nairobi, Kenya.
Cell: +254 703 41 1000, Tel: +254 20 550000
Email: info@sbs.ac.ke or vis. www.sbs.strathmore.edu



13th July 2021

To Whom It May Concern.

Dear Sir/ Madam.

RE: FACILITATION OF RESEARCH – SAMSON KIPKORIR TENOY

This is to introduce Samson Tenoy who is a Master of Business Administration student at Strathmore University Business School, admission number MBA/7775/17. As part of our MBA Program, Samson is expected to do applied research and undertake a project. This is in partial fulfilment of the requirements of the MBA course. To this effect, he would like to request for appropriate data from your organization.

Samson is undertaking a research paper on “The Effect of Fixed Versus Floating Exchange Rate on Financial Performance of Commercial Banks in South Sudan”. The information obtained from your organization shall be treated confidentially and shall be used for academic purposes only.

Our MBA seeks to establish links with industry, and one of these ways is by directing our research to areas that would be of direct use to industry. We would be glad to share our findings with you after the research, and we trust that you will find them of great interest and of practical value to your organization.

We appreciate your support and shall be willing to provide any further information if required.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Caroline Tiara', written over a light blue horizontal line.

Caroline Tiara.
Manager – Graduate Programs.
Strathmore University Business School.




Association of African
Business Schools



Strathmore Business School is a member of:



APPENDIX 2- NACOSTI ETHICAL APPROVAL

 REPUBLIC OF KENYA	 NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
Ref No: 699461	Date of Issue: 22/July/2021
RESEARCH LICENSE	
	
This is to Certify that Mr. Samson Tenoy of Strathmore University, has been licensed to conduct research in Nairobi on the topic: THE EFFECT OF FIXED VERSUS FLOATING EXCHANGE RATE ON FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN SOUTH SUDAN for the period ending : 22/July/2022.	
License No: NACOSTIP/21/11907	
699461 Applicant Identification Number	 Director General NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
Verification QR Code	
	
NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.	

APPENDIX 2- STRATHMORE ETHICAL APPROVAL



24th August 2021

Mr Tenoy Samson
sam.tenoy@gmail.com

Dear Mr Tenoy,

RE: The Effect of Fixed Versus Floating Exchange Rate on Financial Performance of Commercial Banks in South Sudan

This is to inform you that SU-IERC has reviewed and **approved** your above **SU-master's** research proposal. Your application reference number is **SU-IERC1099/21**. The approval period is **24th August 2021 to 23rd August 2022**.

This approval is subject to compliance with the following requirements:

- i. Only approved documents including (informed consents, study instruments, MTA) will be used
- ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by SU-IERC.
- iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to SU-IERC within 48 hours of notification
- iv. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to SU-IERC within 48 hours
- v. Clearance for export of biological specimens must be obtained from relevant institutions.
- vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.
- vii. Submission of an executive summary report within 90 days upon completion of the study to SU-IERC.

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology, and Innovation (NACOSTI) <https://research-portal.nacosti.go.ke/> and also obtain other clearances needed.

Yours sincerely,

for: Dr Virginia Gichuru,
Secretary; SU-IERC

Cc: Prof Fred Were,
Chairperson; SU-IERC



Ole Sangale Rd, Madaraka Estate. PO Box 59857-00200, Nairobi, Kenya. Tel +254 (0)703 034000
Email admissions@strathmore.edu www.strathmore.edu

APPENDIX 3- LIST OF BANKS IN SOUTH SUDAN

S/NO.	NAME OF COMMERCIAL BANK	STATUS	START OF OPERATIONS
1	African National Bank	National	2012
2	Afriland First Bank	Joint Venture	2012
3	Agricultural Bank	National	In Process
4	Buffalo Commercial Bank	National	2008
5	Charter One Bank	foreign	2011
6	Commercial Bank of Ethiopia	Foreign	2009
7	Cooperative Bank of South Sudan	Joint Venture	2013
8	Ecobank South Sudan Ltd	Foreign	2013
9	Eden Commercial Bank	National	2012
10	Equity Bank South Sudan Limited	Foreign	2009
11	International Commercial Bank	Joint Venture	2012
12	Ivory Bank	National	2006
13	KCB Bank South Sudan Limited	Foreign	2006
14	Kush Bank PLC	National	2013
15	Liberty Commercial Bank	National	2012
16	Mountains Trade and Development Bank	National	2011
17	National Credit Bank	Joint Venture	2013
18	Nile Commercial Bank	National	2006
19	Opportunity Bank	Joint Venture	2013
20	Southern Rock Bank	Joint Venture	2013
21	People's Bank	Joint Venture	2013
22	Phoenix Commercial Bank	Joint Venture	2013
23	Qatar National Bank	Foreign	2011
24	Regent African Bank	Joint Venture	2013
25	Royal Express Bank	National	2013
26	South Sudan Commercial Bank	Joint Venture	2011
27	Stanbic Bank Kenya Limited	Foreign	2012
28	Alpha Commercial Bank	Joint Venture	2015
29	Ebony National Bank	National	2015
30	St Theresa Rural Development Bank	National	2016

(Source: South Sudan Bankers association, 2020)