ANALYSIS OF THE DETERMINANTS OF FINANCIAL PERFORMANCE OF FOREIGN EXCHANGE BUREAUS IN NAIROBI COUNTY MODERATED BY FIRM SIZE

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ABSTRACT

Foreign exchange (Forex) markets are crucial in international trade and financial transactions globally. They allow for the exchange of currencies from different countries that enables cross-border trade in goods, services, and financial assets. The daily volume of trades in the global Forex market is estimated to be over $7.5 trillion, underscoring its immense scale and importance to the worldwide economy. The study sought to analyse the determinants of financial performance of foreign exchange bureaus in Nairobi County moderated by the firm size. Its specific objectives include evaluating the effect of pricing strategies on the financial performance of foreign exchange bureaus in Kenya, assessing the effect of government regulations on financial performance of foreign exchange bureaus in Kenya, and examining the moderating effect of firm size on the determinants of financial performance. The Purchasing Power Parity and International Fisher Effect theories supported the study. The study applied a post-positivism research philosophy and used a descriptive research design. The study applied a convenience sampling technique to select all 61 Forex bureaus in Nairobi. Primary data was collected through a questionnaire. The data collected was edited, coded, and then fed into SPSS, aiding the data analysis. The data was analysed using descriptive and inferential statistics. The analysed quantitative data was presented using tables, charts, and graphs. The study results showed that pricing and government regulations are significant determinants of financial performance of Forex bureaus. The study found a positive and significant moderating effect of firm size on the relationship between the determinants of financial performance and financial performance. The study recommends the management to invest in technology integration to enable fast and accurate pricing strategies. The implication of the study was that the Central Bank of Kenya should consider re-evaluating the compliance burden placed on Forex bureaus. While regulations are essential for transparency and consumer protection, overly burdensome requirements may hinder profitability, especially for larger firms. The study recommends more research should be conducted on more than two independent variables as well as other moderating variables to aid management with a more comprehensive view that can better inform management strategies and policy formulation.

Keywords: *Determinants of Financial Performance, Financial Performance, Firm Size, Forex Bureaus*

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LIST OF ABBREVIATIONS

AML	Anti-Money Laundering
CBK	Central Bank of Kenya
EVA	Economic Value Added
FX	Foreign Exchange
GMM	Generalised Moment Method
IFE	International Fisher Effect
KAM	Kenya Association of Manufacturers
KES	Kenya Shilling
M & As	Mergers and Acquisitions
NSE	Nairobi Securities Exchange
OLS	Ordinary Least Squares
PPP	Purchasing Power Parity
ROA	Return on Assets
ROE	Return on Equity
ROI	Return on Investment
SSA	Sub-Saharan Africa
TAM	Technology Acceptance Model
USD	United States Dollar

DEFINITION OF TERMS

The exchange rate	is the relative price of one currency expressed in terms of another (or group of currencies) (Sin, 2023).
Financial Performance	**is** the extent to which an organization has been able to attract and enable the generation of acceptable returns for investors (Al-Saeed, 2018)
Firm size	**is** a determination of the physical scale of an organization, the amount of revenue earned, and the number of employees (Dang et al., 2018).
Forex bureaus	**are** financial institutions that offer an essential outlet for individual travellers and import/export businesses requiring currency conversion services in various jurisdictions (Batista & Vicente, 2023).
Government regulations	rules and regulations govern Forex bureaus' operations (CBK, 2011).
Pricing	the prices Forex traders are ready and willing to accept for the exchange between one currency and another (Saettete, 2021).
Resource availability	estimates the adequacy and timeliness of access to various resources needed by an organization (Wickens, 2020)

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Foreign exchange markets enable international trade and financial transactions globally since they allow the exchange of currencies from different countries to facilitate cross-border trade in goods, services, and financial assets. The daily volume of trades in the global Forex market is estimated to be over $7.5 trillion, underscoring its immense scale and importance to the worldwide economy (Magnuson, 2018). This categorically makes the foreign exchange market the world's largest and most impactful financial market.

Foreign exchange markets allow the daily conversion of hundreds of billions of dollars across numerous currency pairs globally. The three main FX centres handling the most significant volumes are London, New York, and Tokyo, collectively called the LNT axis (Caytas, 2016). London has consistently ranked as the largest foreign exchange centre, facilitating about 35% of worldwide FX turnover worth over $2 trillion daily (Christensen et al., 2021). The dominance of the US Dollar and other major currencies like the Euro and Japanese Yen in these financial hubs underscores their economic significance on the global stage. However, the structure of the global FX market began changing with the rise of China's Renminbi (RMB), challenging the Dollar's monopoly (Park, 2016). The RMB was once a separate currency used only for domestic transactions, but its inclusion in the IMF's Special Drawing Rights basket enhanced its global presence (Park, 2016). Several countries have bilateral currency swap lines with China to facilitate trade settlement in RMB. If China successfully internationalizes its currency amid continued US-China economic frictions, global FX's geopolitical and geo-economic dynamics could transform substantially over the long term (Park, 2016).

Foreign exchange bureaus, also known as Forex bureaus, are organizations authorized to operate by the Central Bank of Kenya Act to conduct foreign exchange business. Foreign exchange business is defined as the selling and buying of foreign currencies (CBK, 2011).

Forex transactions are conducted through banks, brokers, and specialized financial firms known as foreign exchange or forex dealers. Modern forex exchange dealers came into play in the aftermath of the discontinuation of the Bretton Accord (The Bretton Woods system called for most currencies to be pegged to the US dollar, which was backed by gold reserves) in 1972 to take advantage of the free market (Bordo, 2021). These markets were developed for retail forex traders in the 1990s, and with the development of algorithms, there was a niche for spontaneous market pricing. Algorithmic trading merged with 24-hour trading, and social trading was developed with the more significant digital revolution (Chamon et al., 2019). Social trading platforms promote a sense of community and knowledge sharing by allowing users to follow and replicate the techniques of more seasoned investors. This led to a spurt in the growth of speculative trading, with the asset no longer held by banks, Governments, and other institutions with high capital.

The technological revolution has been the core of maintaining a competitive edge (Mueni et al., 2023). After the Bretton Agreement, foreign exchange trading in the over-the-counter market was handled via telephone, whereby one caller quoted how much they would bid and quote, and the transaction was done through a series of back-office paperwork (Pittaluga et al., 2021). The introduction of the computer led to automation and the disruption of the traditional FX processing architectures. The manual process was shifted, and the back office adopted computers to reduce errors and developed to direct trades. The development of direct trades meant other players, such as small banks, would enter the scene, which a few parties highly dominated (Mueni et al., 2023).

Electronic trading platforms lead to an increase in volumes due to increased information on the market (Pittaluga et al., 2021). While large-volume transactions still flow through high-speed networks connecting Tier-1 banks and dealers, new FinTech entrants are gaining ground (Caytas, 2016). Digital platforms allow direct cross-border person-to-person funds transfers and peer-to-peer FX trading using mobile wallets and applications (Wang et al., 2023). Cryptocurrencies like Bitcoin have further catalysed the emergence of decentralized digital currency exchanges, circumventing conventional intermediaries. While bringing benefits of financial inclusion and lower costs, Magnuson (2018) implies that such innovations also pose challenges from a regulatory perspective, particularly regarding anti-money laundering compliance and financial stability risks. Therefore, the digital and technological revolutions showcased above present market exploration and regulation opportunities.

Exchange rate is the relative value of a currency represented in terms of another currency (Sin, 2023). The exchange rate can be measured in several ways; however, the use of the bilateral exchange rate is the most popular one, when a currency's value is pitted against another (Reserve Bank of Australia, 2024). Bilateral exchange rates are often published against the US dollar (USD), which is the most traded currency globally. For example, if the KES/USD exchange rate is 0.0063, you will receive US$0.0063 for every KES (Kenyan shilling) 1 that is converted to US dollars (Fukui et al., 2023). (The main expense of a currency deal is a Forex spread, which is included in the buy and sell prices of an FX pair (the difference between the buy and sale prices). The Reserve Bank of Australia refers to it as a bid-ask spread. 2024).

The exchange rate and the bid-ask spread are the most common pricing measures in foreign exchange transactions. They are affected by various variables, including interest rates, such as the variation in interest rates between the main currencies (Hashchyshyn et al., 2020). Furthermore, factors include the increased connectedness of significant countries' financial markets, advancements in the telecommunication sector, the advent of dedicated asset managing agencies, the liberation of significant countries' financial markets, and the increased usage of foreign trading as profit centres (Aziz, 2014). According to Egilsson (2020), Mundell Fleming's model affirmed that to control inflationary pressure and ensure the stabilization of the depreciation of the exchange rate, the interest rate needs to be increased, which will, in turn, lead to the avoidance of negative economic consequences.

Alongside banks and brokers operating in the institutional, wholesale Forex market, many countries host regulated retail Forex bureaus that cater to individuals and small businesses. Forex bureaus, foreign exchange offices, currency exchanges, or money transfer companies provide currency exchange services (Pittaluga et al., 2021). They operate under licensing requirements to conduct Forex transactions and ensure transparency at the retail level. Regulated Forex bureaus aim to provide a legal alternative for small-scale currency exchange needs and promote stability in the retail Forex market. Forex bureaus offer an essential outlet for individual travellers and import/export businesses requiring currency conversion services in various jurisdictions. They are typically regulated under national Forex control acts and anti-money laundering regulations, which mandate record-keeping, knowing your client and customer due diligence compliance, and

reporting large transactions (Batista & Vicente, 2023). Such oversight fosters orderly market conditions while curbing criminal activities in the retail Forex segment.

Regulations may prescribe caps on exchange rate spreads to protect consumers and ensure fair pricing (Kiguel et al., 2016). For example, in Kenya, the Central Bank provides daily reference rates for individual bureaus to align their buy-sell quotes within a margin framework that seeks to balance transparency and consumer protection while allowing market forces to drive currency pricing (Boldar, 2022). Authorized Forex bureaus also require significant start-up capital for office setup costs, licensing fees, and compliance systems. According to Raheem (2020), sustained profitability further demands achieving adequate scale, which can be challenging in countries with low Forex volumes and limited avenues for international remittances. Therefore, Regulated players must strategically optimize cost structures and distribution networks to remain competitive against informal Forex agents.

Despite regulated frameworks for currency exchange, informal Forex markets often emerge outside the purview of government oversight (Collomb et al., 2019). Parallel markets refer to unregulated channels through which currency exchange occurs without adherence to legal and reporting requirements (Kiguel et al., 2016). They are characterized by unlicensed and unregulated operations that circumvent the formal financial system. Parallel markets can offer favourable exchange rates than regulated bureaus by avoiding regulation compliance costs (Boldar, 2022). This allows them to attract customers who desire better prices for their currency conversions. However, anonymity made possible by parallel markets can be used for illegal financial practices, including tax evasion and money laundering (Caytas, 2016). While the studies confirm the existence and characteristics of parallel markets, they do not provide any data or analysis on how these parallel markets affect financial performance.

The rise of parallel Forex markets stems from various supply and demand factors. On the supply side, relaxed entry restrictions allow informal agents to operate with lower set-up and compliance costs than regulated bureaus (Nyamongo et al., 2021). This enables them to offer competitive exchange rates by absorbing fewer overheads (Cohney et al., 2019). On the demand side, customers who prefer faster transactions and maximum anonymity are attracted to parallel markets despite the inherent risks. For example, importers and exporters dealing in large volumes may find regulated channels less expedient than trading directly with informal brokers (Christensen et al.,

2021). Specific groups like migrant labourers also tend to rely on unregulated hawala networks for overseas remittances due to their broad geographical reach and cultural familiarity. While these studies indicate some of the macroeconomic factors leading to informal agents, they do not attest to the interconnecting relationship between pricing and informal agents. Research on how regulated bureaus strategically price their services can help identify successful pricing models and determine how regulated bureaus can strategically price their services in the face of potential price competition from informal channels.

According to research by Muiruri (2023), the Central Bank of Kenya (CBK) reported that there were 74 licensed Forex bureaus in Kenya, with 118 outlets. The highest it had been in 10 years since 2011, the number of Forex bureaus in Nairobi, Kenya stood at 61 with 108 outlets. However, the report noted that this expansion occurred in the backdrop of a weakening of the local currency against the USD for three consecutive years, losing an estimated 20% on average. Additionally, stringent regulatory requirements have seen at least 50 Forex bureaus leave business between 2012 and 2021.

1.1.1 The Determinants of Financial Performance in FOREX Bureaus

Pricing (otherwise known as Forex rates), which is one of the antecedents of the financial performance of foreign exchange bureaus, is defined as the average rates at which the local currency is bought and sold against major foreign currencies in the Forex market daily (Edvardsson, 2023). These rates typically act as a reliable indicator of the value of the local currency on a given day. Forex quotes are usually offered at bid and ask prices where the former relates to the price at which the Forex broker is willing to purchase the base currency (usually the USD) in exchange for the counter currency (CAD); while the latter relates to the price at which the seller will sell the base currency in exchange for the CAD (Chagboud et al., 2023). In forex, the difference between what the broker will pay (bid) and what the broker will sell it for (ask) is referred to as the bid-ask spread.

Although foreign exchange rates serve as a standard for valuing currencies, there are serious problems with pricing in the Forex market, especially in unofficial or parallel markets. Lack of pricing transparency is one of the primary issues, particularly when brokers or unofficial agents manipulate rates for their benefit. As a result, bid-ask spreads are frequently erratic and do not accurately represent supply and demand dynamics (Chagboud et al., 2023). Furthermore,

speculative trading, geopolitical events, and unregulated trade can all contribute to price volatility, which can skew a currency's true value and make it challenging for importers, exporters, and even central banks to make informed plans (Edvardsson, 2023).

The AXI index, which is a weighted average of credit spreads for financial instruments not secured in the US, was the subject of a study to look into across-the-curve credit spread indices. The construction of the index involved a long-maturity bond market and a short-maturity money-market component (Berndt et al., 2023). The study collected issuer data and bond issues from the Mergent FISD database. The results indicated that in addition to dynamically setting spreads based on market conditions, bureaus reference interbank rates disseminated by monetary authorities or large commercial banks to glean indicative prices.

A study on whether Fintech facilitates cross-border mergers and acquisitions (M&AS) by focusing on Chinese A-share listed firms was conducted between 2011 and 2019. According to the results, as intermediaries, Forex bureaus earn margins by quoting slightly different buy and sell prices for a currency pair (Wang et al., 2023). The bid-ask spread, representing this difference, incorporates variables like exchange rate volatility, liquidity, and transaction costs affecting risk-adjusted pricing. Wider spreads offer bureaus a higher buffer against adverse exchange rate movements but deter customers sensitive to costs.

A second determinant of the financial performance of Forex bureaus is government regulations. The regulations of Forex dealings in Kenya are contained in Part 6(A) of the CBK Act and Legal Notice number 23 of 28th February 1996 (CBK, 2002). These regulations include stipulations on who the authorized Forex dealers are, the authorized banks, the legalized activities for Forex bureaus, individuals who are permitted to transact Forex business, currency sales and purchases, detection of counterfeit currencies, display of exchange rates, the nature of Forex transactions, and market manipulation.

An investigation into the effectiveness of central bank involvement in the Brazil, Russia, India, China, and South Africa (BRICS) foreign exchange market. This was an empirical investigation. According to the results, central interventions and the exchange rate levels did not correlate. However, interventions were positively correlated with the reduction of exchange rate volatility and, by extension, the financial performance of non-bank players such as Forex bureaus in all the countries apart from South Africa (Chaudhari & Trivedi, 2022). Additionally, sovereign yield

spreads substantially impacted exchange rate returns in South Africa and China and returns volatility in Russia and Brazil.

A study was conducted to investigate South Sudan's re-engagement strategy with key international financial institutions through a desktop review. The key highlights of the re-engagement strategy included support from the government for FX market reforms, collaboration with development partners in the provision of much-needed financial and technical support for functional financial systems and markets, and focus on the restoration of credibility and trust through enhanced oversight over the use of public resources through audit institutions (Garang, 2022). Consequently, strong political will has resulted in the resuscitation of FOREX bureaus, which had reduced to a low of 44 in 2019 following COVID-19 to 64 in 2021, with the expectation that the sector will reach the initial highs of 96 FOREX bureaus in 2014 on the back of the integration of best practices.

The dynamic of uncertainty and lumpy liquidity that characterize Sub-Saharan Africa (SSA) markets regarding future foreign exchange flows results in the hoarding of foreign exchange (FX) among the participants, leading to liquidity shortages for the official FX market (Kaltenbrunner et al., 2022). This is particularly damaging for FX bureaus, which lack access to central bank liquidity, resulting in poor profitability during periods of high volatility.

The distributional effect of financial access on poverty in a few SSA countries was the subject of a study. Between 2014 and 2015, it carried out a household-level FinScope data survey in eight SSA nations (Ndlovu & Toerien, 2020). A re-centred influence function (RIF) regression model was applied to determine the relation between the variables. Additionally, an instrumental variable quantile approach was utilized to remove the likelihood of endogeneity. The results indicated that Forex bureaus derive pricing power from demand-supply dynamics, but regulatory frameworks also prescribe indicative reference rates. Illiquid markets with little competition are characterized by high bid-ask spreads, which are the gap between purchasing and selling prices (Duffie, 2023). Wider spreads seen during times of uncertainty indicate market inefficiencies arising from a lack of perfect information processing. This enables parallel markets offering narrower spreads with no compliance overheads to eat into regulated bureaus' customer base.

One of the antecedents of the Forex Bureau's financial performance is exchange rate volatility, which refers to the risks linked to unanticipated exchange rate movements (Feng et al., 2021).

Jama (2020) found that fluctuations in the foreign exchange rate led to reductions in the Nairobi Forex bureau's financial performance since they raised macroeconomic risks and operational costs, thereby reducing profit margins.

Ochieng (2018) affirmed that market volatility was not significantly correlated with the profitability of Forex bureaus; nonetheless, there was a stronger statistical correlation between interest rates and Forex bureau profitability. The limitations of this study were its focus on currency spread determinants rather than financial performance. Gakuru (2022) established that online trading platforms and automated office operations were critical antecedents of Kenyan Forex bureaux's financial performance. Limitations of this study were the different theoretical framework and data collection methodology.

The literature in this section has revealed several gaps, including gaps where there was a lack of focus on Forex bureaus, making the findings of such studies unsuitable to the present study. There have also been gaps, such as the focus on specific aspects of performance, such as currency spread, rather than a more holistic focus on performance, rendering such studies too narrow in their focus. Different research designs and data collection techniques were also identified, arguably leading to different results and conclusions and making it difficult to make effective comparisons.

There have also been several controversies relating to the empirical research on determinants of the financial performance of Forex bureaus. For instance, several studies (Ndlovu & Toerien, 2020; Gakuru, 2022) have been premised on completely different theoretical frameworks. Additionally, several studies have been done on a different geographical regions, such as Wang et al. (2023), Berndt et al. (2023), and Kaltenbrunner et al. (2022), their findings were not necessarily aligned with the operations and management of Forex bureaus in Nairobi County, Kenya. Finally, several studies (Johnson & Johnson, 2020) have been conducted in an expanded geographical context where several countries, such as Kenya, Nigeria, Ghana, South Africa, and Uganda, have been included, making the findings of such studies imprecise for comparison given the different operational environments.

1.1.2 Financial Performance in Foreign Exchange Bureaus

Financial performance is a critical outcome for many firms, especially those in the business of money, such as foreign exchange bureaus. There are several definitions of financial performance, including a determination of the attainment of set financial objectives (Fatihudin et al., 2018), the extent to which an organization has been able to attract and enable the generation of acceptable returns for investors (Al-Saeed, 2018), and a determination of a company's capacity to create economic value (Orozco et al., 2018). Tudose et al. (2022) determined that the value produced for shareholders and the business is measured by four key financial performance metrics: profit margin, profit growth rate, return on equity, investment, and asset (ROE, ROI, and ROA).

The profit margin is a reflection of a company's ability to produce profits based on its sales (Nguyen et al., 2020). Research has shown that careful profit margin management is essential for avoiding or anticipating reducing profits to forestall the possibility of bankruptcy and enhance competitiveness (Imhanzenobe, 2020). The measurement of financial performance based on the growth rate of profit represented the evolution from static measurement to more dynamic measurement, with some authors (Endri et al., 2020) identifying efficient operation as the key driver of profitability of listed companies.

Profitability rates express the degree to which profits can be attributed to the utilization of a company's resources and include ROA and ROE (these are the most popular), which represent profitability that stems from the efficient utilization of the organization's assets and shareholders' funds; At the same time, ROI is a more holistic assessment of the organization's efficiency (Siahaan et al., 2021). Economic value added (EVA) measures the balance between the invested capital's profitability and opportunity cost (Shad et al., 2019).

The financial performance of Forex bureaus is particularly critical given the threats posed by money laundering and increasingly dwindling profit margins in the face of black-market Forex operations (Ochieng, 2018). Additionally, the frequent exchange rate fluctuations threaten Forex bureaus' integration of effective exchange rate risk management strategies to ensure a more stable platform for good financial performance (Otieno, 2014). Unfortunately, these strategies require significant investments, such as staff training in modern exchange rate risk management

techniques. Thus, pricing control is critical for improving financial performance since it addresses exchange rate volatility through spontaneous pricing models.

A study on foreign exchange markets in Asia-Pacific. The study focused on the Asian Pacific-FX markets, such as Singapore, Australia, Indonesia, Malaysia, Vietnam, Japan, and New Zealand (The Asian Consultative Council of the Bank for International Settlements, 2022). The results indicated that whilst more advanced economies such as Australia and Singapore had well-established FX markets where all the players had the requisite support from the central bank in terms of FX monitoring and surveillance and access to FX hedging markets, the emerging economies such as Vietnam and Malaysia were still in the process of developing their FX markets. Additionally, the financial performance of Forex bureaus was found to be highly dependent on the established FX infrastructure, including the market structure and capital flows.

To study the performance of Egypt's stock and foreign exchange markets, a causal (explanatory) research approach was employed. It conducted a Granger causality test to investigate the relationship between the foreign exchange market and stock market performance between 2009 and 2016 (El-Masry & Badr, 2021). The results showed a bi-directional causality between market capitalization and the foreign exchange market, meaning that financial market players needed to take cognizance of this causality to enhance their financial performance.

Interest rates and currency rates have a negative and substantial relationship (Atoi & Nwambeke, 2021). Thus, Nigerian FX bureaus improved their performance when the volatility of the foreign exchange rate stabilized, which had a calming effect on the money market.

Macroeconomic factors, such as interest rates and inflation, were critical determinants of the FX bureau's performance in Nairobi (Cheruiyot et al., 2016). A Limitations of the study was its choice of research methodology. FX bureaus could attain enhanced profitability by adopting risk mitigation strategies such as hedging, payment netting, diversification, and interest rate mitigation (Adow & Ochiri, 2018). The study focused on interest rate risk mitigation.

The literature in this section has exposed several research gaps. Firstly, there was a gap due to the lack of focus on Forex bureaus, making the findings of such studies unsuitable for the present study. Secondly, there were studies with different methodological gaps, such as different research designs and data collection techniques, which would arguably lead to different results and

conclusions and make it difficult to make effective comparisons. Thirdly, several studies had different theoretical frameworks, meaning they were underpinned by different knowledge bases, leading to different perspectives from the present study.

1.1.3 The Moderating Effect of the Firm Size on Determinants of Financial Performance and Financial Performance

It is posited that profitability is a critical determinant of firm value (Mulyadi, 2022). Further, leverage and firm value were found to have a strong association (Panjaitan & Supriyati, 2023). Lastly, firm size was important in moderating the association between profitability, leverage, and firm value. The study had conceptual gaps given the choice of theoretical framework, the focus on firm value, and methodological gaps given the choice of research design.

Firm size correlated positively and significantly with micro factors and financial performance (Mutunga & Owino, 2017). The association between financial leverage and financial performance was strongly moderated by firm size (Wayongah & Mule, 2019). Thus, non-financial firms must control their size to avoid financial leverage challenges. There were gaps, given the lack of focus on Forex bureaus and the emphasis on financial leverage.

Firm size attenuated the relationship between firm profitability and working capital management, which was highly influenced by working capital management. (Pervaiz & Akram, 2019). The study did not have a theoretical framework and concentrated on working capital management.

The association between innovation and firm performance is positively and significantly moderated by business size (Kijkasiwat & Phuensane, 2020). Firm size significantly affected the connection between debt capital and the financial performance of listed agricultural enterprises as determined by the return on assets (Sulaiman and Khalid, 2024).

Financially distressed firms with high Z-scores in Egypt could not experience effective earnings management (El-Rabat et al., 2023). Firm size and earnings management had a crucial negative association, and firm size strongly moderates the association between earnings management and financial distress. It had gaps, given the focus on financial distress and earnings management. Dynamic capacities and sustainable performance were significantly correlated, while company size had a negligible moderating effect (Kitenga et al., 2020).

1.1.4 Foreign Exchange Bureaus in Kenya

The advent of Kenyan Forex bureaus was precipitated by the Kenya Gazette Notice No. 150 of January 1995, which sought to enhance the competitiveness of the country's foreign exchange market from a retail perspective. This was reinforced by the passage of a licensing policy for independent Forex dealers in 2005, controlled by the CBK (CBK, 2014). The CBK then issued mandatory guidelines for running non-bank Forex bureaus. Amongst the most critical guidelines included the requirement for deposit security with a CBK of USD 5,000 (Ndung'u, 2019).

Forex bureaus in Kenya operate under a distinct regulatory framework established by the Central Bank of Kenya, which is specifically tailored to their activities and the risks associated with currency exchange. They must also fulfill their obligations as registered companies under Kenyan company law.

A significant challenge for the sector was the proliferation of underground Forex outlets in the country's major urban areas, including Nairobi, Mombasa, and Kisumu (Gachanja et al., 2023). Even after the liberalization of foreign exchange, they have stubbornly remained in business. These dealers also pose a competitive disadvantage, and their role in money laundering cannot be underestimated. These outlets are unlicensed and operate outside of regulatory control, which has made it impossible to determine their trading (Nyamongo et al., 2021).

1.2 Problem Statement

Foreign Exchange Bureaus (FEBs) play a vital role in facilitating currency transactions. Kenya is ranked as the third-largest retail Forex trading market in Africa, with an 80% growth in retail trading in 2020 (Finance Magnates, 2021). Despite these statistics, many Forex bureaus struggle with outdated strategies, volatile exchange rates, and increased regulatory oversight that limit adaptability to the changing financial landscape (Jama, 2020; Gakuru, 2022; Otieno, 2014).

Studies have determined that macroeconomic factors such as imports and exports, inflation, employment, interest rates, trade deficits, macroeconomic policies, and geopolitical conditions significantly influence Forex prices (Berndt et al., 2023; Wang et al., 2023; Kaltenbrunner et al., 2022). Studies have identified that exchange rate fluctuations, speculative market behaviour, and inconsistent bid-ask spread negatively impact financial outcomes (Jama, 2020; Ochieng, 2018;

Cheruiyot et al., 2016; Edvardsson, 2023). Forex bureaus depend on controlling bid-ask spread to ensure optimal prices which would result in better performance; however, many bureaus fail to manage the spread effectively (Berndt et al., 2023). While pricing is a fundamental determinant of financial performance for Foreign Exchange Bureaus (FEBs), there is limited empirical understanding of how specific pricing dynamics—such as exchange rate spreads, volatility, and responsiveness to interbank rates—affect the performance of FEBs within Nairobi County.

Despite existing regulations by the Central Bank of Kenya (CBK, 2002; 2023), there is limited empirical consensus on how these regulations impact financial performance. Some studies argue that government regulations undermine operational flexibility and profitability through increased compliance requirements such as licensing fees, reporting obligations, and capital thresholds (Raheem, 2020; Muiruri, 2023; Mahmoud, 2020). Other studies emphasize the role of regulation in fostering transparency, consumer protection, and corporate governance (Batista & Vicente, 2023; Pittaluga et al., 2021; CBK, 2023).

Studies have demonstrated that the relationship between a number of determinants, including working capital management, innovation, profitability, and leverage, and overall firm performance is significantly moderated by firm size (Mulyadi, 2022; Pervaiz & Akram, 2019; Kijkasiwat & Phuensane, 2020; Sulaiman & Khalid, 2024). The firm size has been found to either strengthen or weaken these associations depending on the context (El-Rabat et al., 2023; Kitenga et al., 2020; Wayongah & Mule, 2019).

Therefore, this study seeks to examine the determinants of the financial performance of foreign exchange bureaus in Kenya moderated by the firm size in Nairobi County.

1.3 Research Objectives

1.3.1 General Objective:

The study sought to examine the determinants of the financial performance of foreign exchange bureaus in Kenya moderated by the firm size.

1.3.2 Specific Objectives

1. To evaluate the effect of pricing on the financial performance of foreign exchange bureaus in Nairobi County.
2. To assess the effect of existing Government regulations on the financial performance of foreign exchange bureaus in Nairobi County.
3. To determine the moderating role of firm size on the determinants of financial performance of foreign exchange bureaus in Nairobi County.

1.4 Research Questions

1. What is the effect of pricing on the financial performance of foreign exchange bureaus in Nairobi County?
2. What are the effects of existing Government regulations on the financial performance of foreign exchange bureaus in Nairobi County?
3. What is the moderating effect of firm size on the determinants of financial performance and financial performance of foreign exchange bureaus in Nairobi County?

1.5 Scope of the Study

In this study, the researcher examined the determinants of the financial performance of foreign exchange bureaus in Nairobi County moderated by the firm size.

It addressed the critical issues faced by Forex Bureaus in Nairobi County by analysing the impact of pricing, government regulations, and firm size on the financial performance of licensed Foreign Exchange Bureaus operating within Nairobi County. Primary data was collected from 61 licensed forex bureaus that were operational in Nairobi County during the period between 30th November 2024 and March 2025.

The theoretical scope of this study is anchored in the Purchasing Power Parity (PPP) Theory and the International Fisher Effect (IFE) Theory. These theories provide a relevant framework for understanding how currency dynamics, interest rates, and inflation expectations influence the operational realities and performance outcomes of foreign exchange bureaus.

The unit of analysis for the study was the individual foreign exchange bureau, treating each bureau as a distinct entity for data collection and analysis.

The geographical scope was to Foreign Exchange Bureaus operating within Nairobi Kenya. The researcher collected primary data from 61 licensed Forex bureaus operational in Nairobi County.

1.6 Significance of the Study

1.6.1 Foreign Exchange Bureaus (FEB)

Forex Bureaus stand to benefit through increased enlightenment on the relationship between financial performance and its key determinants. This is due to the fact that it can offer insightful information on the elements influencing their business operations and economic impact on the community.

This study's findings and recommendations may help them make sound decisions that will aid profitability and competitiveness.

1.6.2 Government Agencies

The research is significant to government agencies such as the Kenya Revenue Authority by highlighting companies' challenges in implementing the Pricing Rules. This can aid in designing effective regulations, improving regulatory oversight, and promoting financial inclusion by providing accessible and affordable foreign exchange services to individuals and businesses, particularly in underserved areas.

1.6.3 Potential Investors

The prospective investors willing to set up companies in Kenya stand to benefit from this study through the insights generated about the pricing of foreign currencies. Investors are encouraged to put their money into places or regions that offer substantial returns. Addressing pricing inefficiencies in Kenya can lead to fairer exchange rates, lower transaction costs, and reduced exposure to risk due to increased transparency in trades.

1.6.4 Researchers and Academicians

Closing the current gap regarding pricing and regulatory inefficiencies in Kenya as a developing market and emphasizing problems of interest that require further attention by future academics will be beneficial to academicians and researchers. Given that forex trading is a new idea both domestically and internationally, this study could significantly add to the knowledge base, benefit the academic community, and serve as a base for future research.

1.7 Chapter Summary

This chapter gave background material on each of the study's themes and introduced them. The problem statement, which encapsulated the primary concerns that supported the study's conduct, was then stated. Research questions and objectives were also described. The parameters that constituted the study, such as the study duration, sample, research variables, target population, and location, were the main emphasis of the scope of the study. The importance of the study is finally discussed.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The theoretical and empirical reviews, the conceptual framework, the knowledge gap, and the operationalization of variables are all covered in this chapter. The theoretical review encompasses discussions related to underlying theories relevant to the study; the empirical review covers studies that were done by previous researchers and are closely associated with the study variables. In contrast, the conceptual framework shows a schematic diagram depicting the connections between the dependent and independent variables. The chapter finishes with the research gaps discovered and the operationalization of variables. The overarching goal is to understand how regulations and pricing can support greater market efficiency, financial inclusion, and micro and macroeconomic stability over the long run.

2.2 Theoretical Review

A theory is defined as a hypothesis that explains how a phenomenon operates or explains why things are as they are (Stewart et al., 2011). A theoretical review provides a structure that enables the development of a formal theory based on given research (Grant & Osanloo, 2016). The Purchasing Power Parity Theory and International Fisher Effect Theory will guide the study.

2.2.1 Purchasing Power Parity Theory

This theorem was initially advanced by Cassel (1918) when he posited that a currency's value depends on the number of services and goods that can be bought by a unit of the currency in the country of issue. Thus, when applying this concept to two countries, the relative value of one country's currency to the other is equivalent to the short-run equilibrium exchange rate. PPP explains the linkage between comparative prices of exchange rates and goods. According to the PPP theorem, when a floating exchange regime prevails, a comparative alteration in purchasing power parity for any pair of currencies is computed as a price ratio of traded goods would be inclined to be estimated by a change in the equilibrium rate of exchange between these two currencies (Shapiro & Rutenberg, 2016). Purchasing parity is essential in determining exchange

rates amongst different countries. (Edwards, 2019). The choice of PPP theory for this study is founded on the fact that exchange rate transactions are based on local and foreign currencies, thereby necessitating a comparison between two countries as envisioned in the PPP theory.

Dornbursch (1976) explained that the PPP theory makes two assumptions: prices across countries are equal in value, and each country's index basket has the same goods with the same weights. The PPP theory has faced several criticisms. The law of one price, which assumes that all commodities are homogeneous, has been found not to hold at all times and places (Engel & Rogers, 2001; Taylor & Taylor, 2004), and the assumption of identical suitable baskets has been perceived as unrealistic (Officer, 1976; Taylor & Taylor, 2004).

This study uses PPP as a theoretical instrument explaining the base pricing for exchange rates. There are several critics of the PPP theorem. PPP assumes that perfect competition is prevalent in every market, eliminating the need for tariffs, trade barriers, and other expenses. These requirements are rarely satisfied in practice, and PPP can vary for several reasons. PPP bases its computations on a basket of goods. The selection of items and how they are weighed can significantly influence the outcome. Opponents contend that different baskets could produce differing PPP values, changing the outlook for exchange rates. Though not all goods are traded internationally, traded goods are the main focus of PPP. For example, services are frequently left out of PPP calculations. This constraint may impact forecast accuracy, particularly in economies where services constitute a significant component. PPP assumes that trade barriers and transportation costs do not exist. These variables may affect costs and impede the quick modification of exchange rates necessary to attain PPP. In an efficient market adhering to PPP, FEBs' bid-ask spreads would primarily reflect transaction costs, such as administrative fees and currency handling expenses. Deviations from this could indicate pricing inefficiencies, including hidden fees, mark-ups, or exploiting information asymmetry with customers. Analysing how different regulatory burdens affect spreads can identify potential inefficiencies from regulatory costs. If competition among FEBs is limited, they might possess some market power, allowing them to deviate from PPP-based pricing to maximize profits.

2.2.2 International Fisher Effect Theory

This theory, which was advanced by Irving Fisher (1930), suggests that there is a downward trend in value exhibited by foreign currencies that are characterized by comparatively high interest rates owing to the reflection of the expected rate of inflation in the nominal interest rates (Iacoviello & Navarro, 2019). Additionally, variances in interest rates and resultant alterations in the spot exchange rates persist in the long run, but there are significant aberrations in the short run (Schmitt-Grohé & Uribe, 2022). The theory is not a good forecaster of short-run alterations in spot exchange rates (Deka & Cavusoglu, 2022). Underlying inconsistencies in the exchange rates can be attributed to several factors, including issues related to the supply and demand of foreign exchange, rising interest rates and inflation, balance of payments, and speculation. Thus, if the International Fisher Effect (IFE) holds, currencies that exhibit high interest rates are expected to depreciate. At the same time, the reverse is true for low-interest currencies, leading to low profitability. Even over an extended period of time, Hakkio (2016) discovered that there was an imperfect correlation between exchange rates and inflation rate differentials. Nevertheless, it was acknowledged that inflation differences may be used to predict long-term changes in exchange rates. This study uses IFE as a theoretical framework to explain foreign exchange bureaus' adherence to market efficiency theories.

As critics, Adam and Ofori (2017) argue that although IFE assumes that there are no limitations on the free flow of capital across national borders by investors, in actuality, regulatory obstacles, transaction costs, and capital controls can impede the free flow of capital, which affects how healthy interest rate differentials predict changes in exchange rates. Madura (2009) added that the IFE theory ignores the effect of risk premiums on exchange rates in favour of concentrating on inflation differentials and nominal interest rates. The actual movements of the exchange rate may be impacted by market participants' demands for more significant risk premiums when investing in high-interest-rate currencies. Shalishali (2012) opined that the fact that the theory admits large short-term deviations suggests that it might not be a good indicator of sudden swings in spot exchange rates. The IFE theory cannot adequately account for several variables that can cause short-term fluctuations, including speculative activity, market sentiment, and unforeseen events. IFE assumes that players in the market have reasonable expectations and can forecast inflation and

interest rates accurately. Nevertheless, behavioural biases, incomplete information, and irrational decision-making may cause the theory's predictions to differ in real-world markets.

On the effect of pricing and regulatory inefficiencies on foreign exchange bureaus, the IFE theory states that a nation's currency should weaken in response to higher nominal interest rates. Bid-ask spreads, transaction fees, and other fees levied by foreign exchange bureaus can lead to pricing inefficiencies in the foreign exchange market. Temporary arbitrage opportunities may arise if these bureaus fail to modify their pricing to reflect interest rate differentials promptly. Foreign exchange bureau pricing inefficiencies can present profitable opportunities for market players. Traders may take advantage of differences between the exchange rates implied by the IFE theory and the rates observed, mainly if foreign exchange bureaus are slow to adjust prices. This dynamic may cause short-term departures from the predictions of the theory. Thus, the IFE theory is appropriate for this study since it helps to explain how exchange rate volatility occurs and the means through which it can be controlled. Additionally, the linkage to pricing and government regulations has been established, given that bid-ask spreads have been well explained. In contrast, the impact of nominal interest rates, part of government regulations, has been covered.

2.3 Empirical Review

This is the systematic investigation of techniques and research methodologies about a study to provide answers to research questions (Cooper & Schindler, 2014). It also refers to the impartial assessment of quantifiable and experiential occurrences that lead to knowledge acquisition (Smith et al., 2011). The following sections will explore the empirical review of this study, featuring past studies of the study variables.

2.3.1 The Effect of Pricing on Financial Performance of Foreign Exchange Bureaus

Exchange rate fluctuations negatively correlate with Forex bureaus' pricing and financial performance. However, he also determined that this resulted from the firm's age and size (Jama, 2020). The study had conceptual gaps, given its specific focus on exchange rate fluctuations, and contextual and methodological gaps represent weaknesses in this study. The study's strength is that a similar theoretical framework supports it and investigates exchange rate fluctuations, which is central to this study. Njagi and Nzai (2022) established an adverse association between exchange rate volatility and banks' profitability since volatility interfered with the bank's ability to influence

the pricing of the input and output markets. The study focused on commercial banks rather than on Forex bureaus, and conceptual gaps, given the specific focus on exchange rate volatility rather than on general determinants of performance; these are weaknesses of this study.

Bureaus' tolerance for variability in earnings was a critical determinant of their financial performance (Ochieng, 2018). More specifically, the variability in currency spreads, particularly the differences in the average bid-ask spreads of different currency pairs, strongly impacted Forex Bureaux's financial performance. The study had conceptual gaps, given the specific focus on currency spread determinants. Given the importance of currency spreads in price determination, this is a strength of this study.

Gakuru (2022) established that whilst there has been growth in the Forex sector, including automated office operations, electronic funds transfer, and the adoption of mobile applications, other innovations, such as spot FX, have the potential to offer opportunities for profiting from trading cost differentials have yet to filter into the local market adequately. Indeed, the study recommends developing and adopting bespoke FX aggregators to enable the proliferation of this innovation.

Otieno (2014) indicated that adopting strategies such as money market hedging and currency speculation, where Forex retailers seek short-term gains from high-risk transactions, is strongly aligned with the financial performance of Forex bureaus. Cheruiyot et al. (2016) determined that Forex rates were influenced by, amongst other factors, speculation, which tended to lower the exchange rate given the absence of investment depth in the country's Forex market.

2.3.2 The Effect of Government Regulation on Financial Performance of Foreign Exchange Bureaus

In the Kenyan context, foreign exchange bureaus operate under a strict regulatory environment governed primarily by the Central Bank of Kenya (CBK). The foundational legal framework includes the Central Bank of Kenya Act (Cap 491) and Legal Notice No. 23 of 1996, which provide for the licensing, supervision, and regulation of forex bureaus. These laws set out key operational requirements, including minimum core capital, reporting obligations, and liquidity management standards that licensed bureaus must adhere to.

Mahmoud (2020) posited that the Government has compelled better risk management by enforcing more stringent corporate governance practices, such as the active involvement of the boards in oversight of the Forex bureaus. Additionally, the levies and fees charged by the Government have affected the operational costs of Forex bureaus and lowered their profitability. The study had conceptual gaps, given the specific focus on interest rate risk mitigation, and methodological gaps, given the choice of research instrument.

A study conducted by the International Organisation of Securities Commission (2013) on regulatory issues raised by changes in market structure. Several jurisdictions have made changes to their market structures within the financial sector, such as Canada, where it is a requirement for all foreign exchange traders to release information about their transaction fees to the public lest they face penalties for non-compliance to protect consumers from unfair pricing practices. In other jurisdictions, such as Kenya, the liberalization of the financial sector has led to more competition. As a further incentive for players in the industry, the Government has lowered its mandatory fees and levies for Forex bureaus (CBK, 2023).

All the Sub-Saharan Africa (SSA) countries under review had introduced more flexible nominal exchange rate regimes and capital account liberalization, making trading conditions more favourable for market players (Kaltenbrunner et al., 2022).

Several regulatory issues prevented Forex bureaus from automated Forex trading, including the inflexibility of the Government's licenses (Sowah, 2019). Whilst AML regulations have been positively correlated with financial sector development in developed countries, resource deficiencies have rendered AML regulations in developing countries ineffective in impacting financial sector development (Ofoeda et al., 2022). More specifically, players such as Forex bureaus have not been adequately provided for in these countries' nascent AML regulatory frameworks.

The continent had a mean AML regulation of 3.48 out of a possible 10, reflecting the lowest level of AML effectiveness. Furthermore, the average private credit by deposit money banks to GDP as a gauge of the size of the banking industry was just 39%, suggesting that the banking industry is extremely small (Issah et al., 2022). Consequently, the smaller players in the financial sectors of these countries, including Forex bureaus, were found to operate under constricted environments.

2.3.3 The Moderating Effect of Firm Size on the Relationship between the Determinants of Financial Performance and Financial Performance

The association between dynamic skills and sustainable performance does not appear to be significantly moderated by firm size. More specifically, regardless of an organization's number of branches, it had no significant impact on the relationship between sustainable performance and dynamic capabilities (Kitenga et al., 2020). This study had conceptual gaps, given the focus on dynamic capabilities and sustainable performance rather than financial performance. Mutunga and Owino (2017) determined a significant and positive moderating effect of firm size on the association between micronatural factors and Kenyan manufacturing firms' financial performance. Additionally, firms that were present in more geographical regions, such as counties, tended to expand their profile and reach a broader market, thereby improving their financial performance. This study had contextual gaps, given the focus on manufacturing firms rather than Forex bureaus, and it also had a different theoretical framework.

The association between financial leverage and financial performance was strongly moderated by firm size. Further, firms that were able to generate more revenue were able to attract more funding in the form of loans, which boosted their financial performance even more (Wanyongah & Mule, 2019). The study had contextual gaps, given the focus on non-financial firms, and conceptual gaps, given the emphasis on financial leverage.

Firm size strongly moderates financial uncertainty and financial performance. Indeed, firms with larger revenue bases could do so (Pila, 2022). The study's limitations included its focus on manufacturing firms and economic uncertainty. It also lacked a theoretical framework.

Kijkasiwat and Phuensane (2020) discovered that medium and small enterprise finance and company size had a moderating impact on innovation and firm performance. Additionally, given their relatively small size, firms with more employees could tap into a bigger talent pool, be more innovative, and realize better performance. The study had contextual gaps, given the focus on small and medium enterprises, and conceptual gaps, given the emphasis on innovation and general firm performance rather than financial performance.

Firm size has a major moderating effect on the connections among CEO pay, customer happiness, and company performance (Omamo et al.2022). The study also found that firms with more employees could better meet customer expectations on service delivery. The study had conceptual gaps, given the focus on CEO's compensation and customer satisfaction.

2.4 Research Gaps

Table 2.1 Research Gaps

Author	Topic	Methodology	Major Findings	Major Contribution	Research Gap	How the Study addressed the Gap
Abbott et al. (2010)	IMF and economic reform in developing countries	Quantitative analysis of panel dataset	IMF programs had little impact on growth but reduced inflation and current account deficits	Provided empirical evidence on the macroeconomic effects of IMF programs	Long-term growth effects, sustainability of results	A longitudinal study examining lasting impacts will provide a more comprehensive understanding of the long-term impact of IMF interventions.
Acharyya (2001)	Exchange rate policy and black-market premium on foreign exchange	Theoretical model and evidence from India	Sterilized intervention is ineffective at reducing premiums; liberalization benefited the economy.	Analysed the relationship between policies and unofficial market	Generalizability, role of other factors	Conduct cross-country comparisons under different economic conditions to support or refute the preliminary findings and offer information about the research's broader applicability.

Aggarwal et al. (2020)	Effects of mobile money in Malawi	Randomized control trial	Mobile money increased consumption but not income or asset accumulation	Provided experimental causal evidence on the impact of new technology	Long-term effects, general equilibrium impacts	Longitudinal data, broader sample
Aisen and Veiga (2013)	Effect of political instability on economic growth	Panel data analysis	Higher instability decreased GDP per capita growth rates	Narrow country focus	Broader factors influencing FX|	Assess the influence of political instability on economic growth.
Alam et al. (2023)	Afghan Forex markets	Descriptive analysis	Described historical context and recent dynamics	Provided case study background	Limited empirical analysis	Testing relationships over time

Caytas (2016)	Weaponizing finance: US and European options, tools, and policies	Legal and policy analysis	Causal identification of policy impacts	Discussed policy tools but did not evaluate impacts empirically	Raised important policy issues but lacked evaluation	Quantitative policy evaluation designs
Chaboud et al. (2014)	Algorithmic trading in FX	Event analysis	Algo trading affected liquidity and volatility	Empirical evidence on market impact	Endogeneity concerns	Exogenous shock identification

Cheruiyot et al., (2016)	Development of Forex bureaus in Kenya and their Impact on exchange rate against the us dollar	correlational	One of the main factors influencing an economy's exchange rates is its overall strength.	Regarding government policy, the monetary, in fact, has a significant impact on how much an economy's exchange rates fluctuate.	Generalizability, role of other factors	Conduct cross-country comparisons under different economic conditions to support or refute the preliminary findings and offer information about the research's broader applicability

Chaudhry et al. (2019)	Black market FX efficiency	Co-integration tests	The unofficial Pakistani market was inefficient	Assessed market quality	Limited period	The study's 1994–2001 time period might not have included more recent advancements and modifications to the unofficial foreign exchange market. To gain a more comprehensive understanding of how market dynamics have changed over time and how current events might affect managerial decisions, the analysis should be expanded to incorporate more recent data.
Christensen et al. (2021)	Bond flows and liquidity	Event study of bond market movements	Foreign demand affects liquidity both globally and locally	Isolated role of foreign participation in liquidity	Endogeneity, general equilibrium effects	Instrumental variables, multi-country study

Cohney et al. (2019)	Coin-operated capitalism	Legal and economic analysis of crypto currencies	Crypto currencies disrupt the politics of money and the role of the state	Provided framework but lacked empirical testing	Robustness of predictions in different contexts	Replicate the study in a micro set up to understand the innate variables affecting the individual firms and their impact.
Cumming et al. (2019)	Regulation of crypto-economy	Review of challenges and approaches	Discussed regulatory trade-offs and options facing policymakers regarding new technologies	Translated issues into regulatory policy discussion	Ability to evaluate the impacts of different regulatory choices	Quasi-experimental policy comparisons
Danisman & Demirel (2019)	Bank regulations and risk	Panel regression	Regulations curbed risk partly via market power -	Empirical relationship evidence	Endogeneity concerns	Instrumental variables approach
Dias (2021)	Capital regulation and bank risk-taking	Panel regression analysis	Risk-taking increased with leverage and high capital	Provided empirical evidence on bank behaviour	Endogeneity concerns regarding omitted variables	Using instrumental variables approach to account for Endogeneity

Dow (2019)	Monetary reform and digital currencies	Conceptual analysis	Discussed conceptual shifts in monetary systems and roles of central banks	Provided theoretical framework but lacked empirical analysis	Ability to test predictions and assess observed impacts of concepts	Building models to forecast and compare outcomes to actual effects
Fraj et al. (2018)	Exchange rates and governance	Cross section	Floats benefitted growth more under good governance	Contextualized Relationship	Limited datasets	Panel data across countries/time
Han et al. (2020)	Relationship between Baltic Dry Index and Forex rates	Co-integration and Granger causality tests	Shipping index incorporates Forex drivers but does not predict rates	Connected literature between the topics	Robustness of Relationship and ability to integrate expectation channel	Using structural VAR to test relationship and expectations mechanisms robustly
Hernandez & Montiel (2023)	Post-crisis exchange rate policies in Asia	Cross country comparison	Varied in independence, but all gradually adopted managed floats	Documented diverse policy responses	Endogenous nature of policy responses to economic conditions	Exploiting exogenous shocks in an event study design to isolate causal policy effects
Kiguel et al. (2016)	Parallel exchange rates	Conceptual models of causes and impacts	Parallel markets develop as responses to policy problems but with adverse consequences.	Provided hypothesized cause-effect links	Proving association versus external validity	Large sample study over long periods to test relationships across contexts

King et al. (2012)	Foreign exchange markets	Survey analysis	Described structure, role of banks, and heterogeneity	Consolidated descriptive knowledge -	Testing specific hypotheses regarding relationships	Employing econometric analysis to try links between market characteristics and outcomes
Krapl & Giaccotto (2015)	Forex risk and equity costs	Event study	FX affects industry financing costs	Connected literatures	Limited settings	Replicate the study in a micro set up to understand the innate variables affecting the individual firms and their impact.
Majone (2019)	Regulatory state in Europe	Concepts of political transaction cost	Framed critical regulatory theory insight	Testing long-term economic and political impacts empirically	Constraint orientation alone	Leveraging cross-country empirical data over extended periods to assess impacts
Malkiel (2003)	Efficient market hypothesis critique	Literature review	Proposed behavioural anomalies critiquing EMH	Stimulated further research, but no consensus	Resolving on-going debates regarding the hypothesis	Experimental market analysis of specific behavioural explanations

Ndlovu & Toerien (2020)	Impact of access to finance on poverty	Cross-sectional regression	Finance access reduced poverty, but effects vary	Provided association evidence	Ability to isolate causal effects from association	Leveraging panel data for fixed effects modelling to establish causality
Ndung'u (1997)	Kenyan price and exchange rate dynamics	VAR/VECM estimation	Exchange rate policy impacted prices there	Isolated domestic policy transmission channels	The broader context of other economies and dynamic impact	Cross-country studies using natural experiments to isolate generalizable relationships
Okello et al. (2018)	Mobile money, inclusion, networks	Cross section	Networks boosted mobile money's inclusion	Provided association evidence	Causality determination	Exploiting intervention variation
Park (2016)	RMB internationalization strategy	Document analysis	Detailed China's efforts to internationalize currency	Comprehensive case study but not formal analysis	Ability to evaluate impacts on outcome	Quantitative evaluation of relationships over time

Persaud & Persaud (2015)	Locus of financial regulation	Conceptual framework	Discussed concepts regarding multi-level economic governance	Provided context but absent empirical testing	Assessing domestic and international policy impacts	Replicate the study in a micro set up to understand the innate variables affecting the individual firms and their impact
Phengpis & Nguyen (2019)	Risk Premium Determinants in the EU	Panel regression	Identified macro variables driving EU risk premium	Provided empirical evidence	Relationship sensitivity and ability to inform policy	Experiments leveraging natural experiments
Reinhart & Rogoff (2001)	Modern exchange rate history	Descriptive analysis	Documented historical arrangements adopted	Consolidated knowledge of past	Limited predictive ability	Formal theoretical and empirical model development
Salzman & Ruhl (2019)	Currencies and commodification	Conceptual legal analysis	Framed thesis on the role of currencies in commodification	Provided framework absent testing	Ability to assess impacts on outcome	Empirical evaluation of commodification processes
Sawadogo (2020)	Impact of fiscal rules on access	Panel regression	Rules had little effect on access in developing nation	Provided empirical evidence in one domain	Limited external validity	Replicate the study in a micro set up to understand the innate variables affecting the individual firms and their impact.

Schiumerini & Steinberg (2020)	Political costs of the black market	Formal model and case studies	Parallel markets influence political condition	Modeled one mechanism only	External validity of causal impact	Quantitative analysis across diverse black market examples
Sukamulja & Sikora (2018)	Bitcoin price drivers	Regression	Macro variables explained prices partially	Empirical analysis of new asset	Volatility concerns	Alternate modelling techniques
Upham (2002)	The myth of the rule of law orthodox	Conceptual critique	Criticized assumptions within the rule of law literature	Advancement of ideas absent testing	Assessing impacts and boundaries of claim	Mixed methods evaluations of specific critiques and alternatives
Velickovski & Pugh (2011)	Exchange rate pass-through	Meta-regression	Identified constraints on ER flexibility in transition	Meta-analysis on a given topic	Ability to address changing currency environment	Studies leveraging recent data not included in the original analysis
Vora (2015)	Crypto currencies as innovation	Concepts analysis	Framed crypto currencies as financial innovation	Provided framing absent testing	Evaluating disruption potential and constraint	Empirical impact evaluations as technologies evolve

Kitenga et al., 2020	The moderating effect of firm size on the impact of dynamic capabilities on sustainable performance of food manufacturing firms Kenya	Descriptive analysis	On its own, company size has a strong correlation with firm performance, but it has no moderating effect on the relationship between performance and dynamic capacities.	Businesses with great dynamic capabilities—the capacity to quickly innovate, respond, and adapt—perform better.	The majority of research on business performance and dynamic capabilities has been done in developed nations. There was little empirical study that was unique to Sub-Saharan Africa or Kenya.	Provides a nuanced picture by challenging the moderating impact of firm size that is frequently assumed in literature.
Jama, (2020)	The effects of exchange rate fluctuations on financial performance of Forex bureaus in Nairobi.	Descriptive research design	The study found a statistically significant inverse relationship between the financial success of Forex bureaus (as determined by Return on Assets, or ROA) and changes in exchange rates.	The study validates a long-held belief in the foreign exchange literature by offering quantitative proof that exchange rate swings expose Forex bureaus to financial risk.	Limited Scope of Variables	The study admits that depending on the size of the Forex bureau, the influence of financial determinants may differ.

Gakuru, (2022)	The Impact of Digital Innovation on Financial Performance of Forex Bureaus in Kenya	Descriptive research methodology	Digital advances had a positive effect on Forex Exchange Bureaus' financial success.	Digital advances had a positive effect on Forex Exchange Bureaus' financial success.	Limited study settings	The adoption of digital technologies, such as mobile applications, electronic money transfers, and automated office procedures, was recognized and examined in the study. It addressed gaps in the body of research on how technology affects Forex performance in Kenya by directly connecting these advances to gains in financial performance.
Kaltenbrunner et al., (2022)	A structural examination of sub-Saharan African foreign exchange markets	Qualitative design	Large institutions and those with access to limited foreign exchange liquidity have the power to significantly impact market pricing, which in turn affects the efficiency and fairness of Forex markets.	The study offers detailed, practical insights into how FX markets function in lower-income African nations.	To measure the influence of Forex market features on macroeconomic outcomes (such as inflation, exchange rate volatility, and GDP growth), empirical, statistical, or econometric modelling is lacking.	Financial performance (as determined by Return on Assets, or ROA) and exchange rate swings were found to be statistically significantly correlated negatively.

Wang et al. (2023)	Fintech and cross-border M&A	Difference-in-difference	Fintech facilitated more outbound deals from China	Provided causal evidence in one domain	Limited external validity	Replicate the study in a micro set up to understand the innate variables affecting the individual firms and their impact.

The literature review had research gaps and none of the evaluated research particularly addressed how pricing strategies directly affect financial performance; instead, they concentrated on topics including currency liquidity (Ochieng, 2018), exchange rate variations (Jama, 2020), and interest rate risk reduction (Adow & Ochiri, 2018). This leads to a conceptual gap in our knowledge of how pricing directly affects Nairobi County's Forex bureaus' profitability. None of these studies specifically looked at how pricing methods (such as establishing commission structures, service fees, or exchange rate margins) affect Forex bureaus' profitability, despite their applicability. Pricing affects competitiveness and revenue generation, making it a crucial component of financial performance (Nagle et al., 2023). It is crucial for currency bureaus in Nairobi County to comprehend how pricing methods directly affect profitability. Forex bureaus may be able to maximize their revenue while maintaining their client appeal by using a pricing strategy that strikes a balance between profitability and competition. However, there is a conceptual gap that requires further research because of the paucity of studies on this particular link.

Previous studies looked at the difficulties caused by regulatory rigidity (Sowah, 2019) and financial risk management (Otieno et al., 2023), but they did not specifically address how firm size affects financial performance. Given that smaller Forex bureaus could encounter different difficulties than larger bureaus, this represents a conceptual and contextual divide. The research was carried out without making a precise distinction between big and small Forex bureaus. However, financial performance can be greatly impacted by the size of the company (Sowa, 2019). Larger Forex bureaus may enjoy economies of scale, a bigger market presence, and easier access to money, while smaller bureaus may face challenges with liquidity, higher operating costs compared to revenue, and a smaller customer base. There is a knowledge vacuum on how financial performance differs across businesses of different sizes because of the lack of research on firm size in the Forex bureau industry.

Despite highlighting resource inadequacies in adhering to Anti-Money Laundering (AML) requirements, there was no direct correlation between firm size and financial success (Ofoeda et al., 2022). Because businesses could perform better if they understood the availability of financial, human, and technological resources, this creates a theoretical and conceptual gap. It is possible that many currency bureaus lack the funding, staff, or technology needed to put strong AML procedures in place. Forex bureaus need: funds to maintain liquidity, withstand exchange rate

fluctuations, and grow the business. Human resources to guarantee competent pricing, risk management, and regulatory compliance decisions (Bhalla, 2020). Technological tools to improve customer service, security, and transaction efficiency. There is still a lack of understanding of how resource investment affects business success if these factors are not examined in connection to financial performance. Resource restrictions have mostly been discussed in the context of regulatory compliance in previous research (Issah et al., 2022). However, there is not a thorough theoretical framework that explains how financial performance in Forex bureaus is directly impacted by the availability of three essential resources: technology, human skill, and financial capital. Gaining knowledge of this connection may help currency bureaus better utilize their resources to increase sustainability and profitability.

A significant research gap that has not been thoroughly examined in other studies is the moderating influence of business size on pricing and governmental restrictions as predictors of the financial success of Forex bureaus in Nairobi County. In Kenya, there is still a dearth of studies on the precise function of business size in determining the degree and direction of the relationship between these factors and financial success. Kamau & Mwai (2016) while investigating the relationship between firm size and financial performance in Small and medium SMEs in Kenya found that larger firms generally performed better due to their ability to access capital, technology, and efficient scales of operations. The study suggested that this moderating effect transcends into other sectors like Forex bureaus. Mburu (2019) explored the impact of regulatory frameworks on the financial performance of small businesses in Kenya particularly focusing on the impact of tax regulations and licensing requirements. He found out that the more stringent regulations they faced reduced their profitability. Firm size can moderate the impact of these regulations on financial performance as larger firms can better cushion themselves. While this literature does exist, there is a need for more focused research on the moderating role of firm size in the context of Forex bureaus in Kenya, particularly Nairobi County.

2.5 Conceptual Framework

To provide answers to research questions, a conceptual framework lays the groundwork for what is necessary or pertinent for a particular study (Ravitch & Riggan, 2016). Alternatively, it is a structure that guarantees the connection with empirical literature, concepts, and significant theories

that are employed to methodically express the researcher's intended information (Adom & Agyem, 2018).

The Figure 2.1below illustrates the conceptual framework of the study.

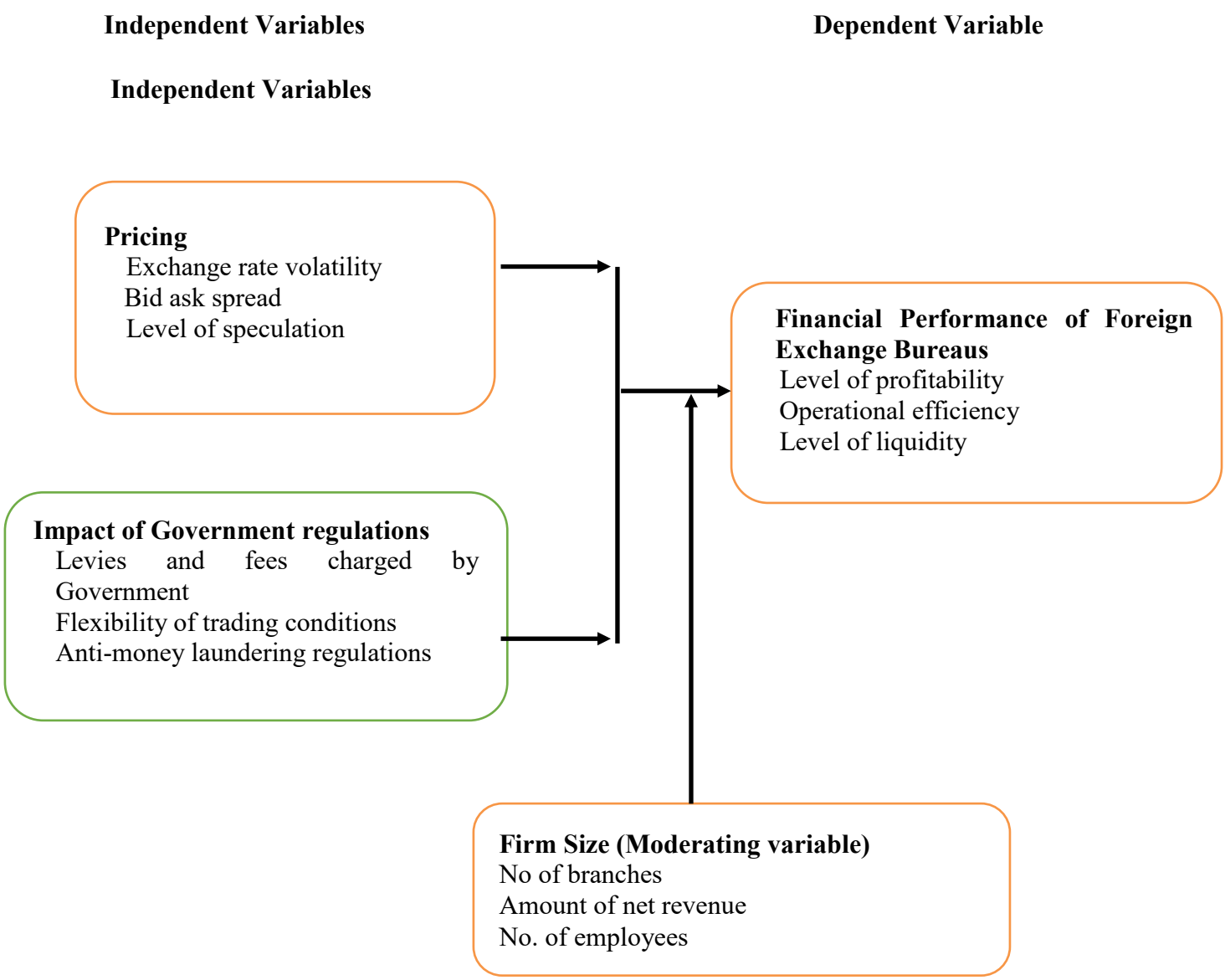


Figure 2.1 Conceptual Framework

2.5.1 Operationalization of Variables

The process that results in the formulation of the procedures, research concepts, and constructs used in the study as well as the measurement of these concepts and constructs is known as operationalization, according to Rao and Reddy (2013). According to Tariq (2015), variables are operationalized when they are defined by a reliable, quantifiable, and measurable index that can be used to control them.

The Table 2.2 below presents the operationalization of the variables.

Table2.2 Operationalization of Variables

Variable Name	Measurement of Variables	Supporting Literature
Pricing	● Exchange rate volatility ● Bid-ask spread ● Level of speculation	Jama (2020); Njagi and Nzai (2022); Ochieng (2018); Gakuru (2022); Otieno (2014); Cheruiyot *et al.* (2016)
Government Regulations	● Levies and fees charged by the Government ● Flexibility of trading conditions ● Anti-money laundering regulations	Mahmoud (2020); International Organisation of Securities Commission (2013); Kaltenbrunner *et al.* (2022); Sowah (2019); Ofoeda *et al.* (2022); Issah *et al.* (2022)
Firm Size	● No of branches ● Amount of net revenue ● No. of employees	Kitenga *et al.* (2020); Mutunga and Owino (2017); Wanyongah and Mule (2019); Pila (2022); Kijkasiwat and Phuensane (2020); Omamo *et al.* (2022)

Financial Performance	• Level of profitability • Operational efficiency • Level of liquidity	Adow and Ochiri (2018); Jama (2020); Ochieng (2018)

2.6 Chapter Summary

The chapter encompassed the study's theoretical review, including discussing the PPP and IFE theories. An empirical examination of the survey was conducted, incorporating earlier research conducted on the variables examined in this study. These studies articulated the connection between the independent variables, namely pricing and government regulation, with the dependent variable, financial performance. It then included discussions on the moderating variable i.e. the firm size. The chapter proceeded to highlight the gap in current literature, demonstrating the distinction between the existing literature and the present study. The conceptual framework detailing the interrelationships among the variables was also illustrated. The final section outlined the main points from the reviewed literature.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the methodological approach adopted to address the study's objectives. It discusses the guiding research philosophy and design, describes the sampling methods, target population, sample size, data collection methods, and the procedures applied in data analysis. The chapter explains the research approach, analytical tools used, and the data collection techniques used in exploring the multi-faceted issue surrounding pricing and regulatory inefficiencies and their impact on the regulated sector in Kenya. This section provides a clear rationale for the chosen methodology and explains why the selected research method effectively addresses the research questions. The research methods offer valuable insights that can aid policymakers, industry stakeholders, and academics in developing strategies to create a more stable and efficient Forex market in Kenya.

3.2 Research Philosophy

Research philosophy offers theories that explain the nature of reality regarding the subject under investigation (ontology) and how the knowledge of reality is produced and warranted (epistemology) (Maunther, 2020). A research philosophy can also be a perspective on the most effective methods for obtaining, analyzing, and applying evidence on a subject (Kenaphoom, 2021).

As highlighted by Saunders et al. (2015), selecting an appropriate research philosophy in the context of business and management studies requires an understanding of several foundational assumptions: ontological (concerning the nature of reality encountered in research), epistemological (focusing on what constitutes valid and credible knowledge), and axiological (regarding the influence of ethics and values within the research process). Several research philosophies are available to scholars, including positivism, which assumes a singular, observable reality measurable through objective means; interpretivism, which views reality as socially constructed and emphasizes contextual, subjective understanding; critical realism, which posits a real-world shaped by both observable phenomena and unobservable structures; and pragmatism,

which focuses on the practical resolution of problems irrespective of philosophical purity. A post-positivist research philosophy was adopted, aligning with the perspective presented by Fox (2008). Post-Positivist is a philosophical perspective that recognizes objective reality approaches but recognizes the limitations of absolute objectivity and allows for the integration of contextual factors and researcher subjectivity within the investigative process (Philips & Burbules, 2000)

3.3 Research Design

The research utilized a descriptive design approach. Descriptive research design focuses on gathering information to provide accurate representation of characteristics, relationships and trends (Creswel & Creswel, 2018). According to Siedlecki (2020), descriptive designs are often preferred because they produce statistically structured data, allowing researchers to perform basic statistical analyses to interpret the results effectively.

3.4 Target Population

A population is a collection of individuals, cases, or objects that share perceivable attributes (Cooper & Schindler, 2014). In this study, the population was made of 61 regulated Forex Bureaus in Nairobi County. The study population were key staff members in the 61 regulated Forex Bureaus.

3.5 Sampling Design

According to Taherdoost (2016), sampling is a practice, process, or method of extracting a sub-group or individuals from a larger population to get involved in investigative research or inquiry in a representative manner. Taherdoost (2016) explained two general sampling methods: probability or random sampling, where each population element has an identical selection opportunity, and non-probability or non-random sampling.

The study applied a convenience sampling technique to select all 61 Forex bureaus in Nairobi County based on the convenience of proximity and the prohibitive cost of covering all the Forex bureaus in Kenya. Two employees were selected using purposive sampling from each Forex

bureau to participate in the survey, including one manager and one assistant, based on their knowledge of operations, thus making the sample population 122 respondents.

3.6 Data Collection Methods

A questionnaire was used as the primary tool for data collection. Collection was done from official persons from the selected Forex bureaus. Approval and consent were sought from the management of the organizations involved in the study. The questionnaire was administered online; to enable tracking of the progress. There was also a drop-and-pick method where the questionnaire was dropped to participating firms and picked later. This ensured the respondents had enough time to answer. Closed-ended questions and open-ended questions were used to offer the researcher more control over the responses. The study design restricted data collection to participants directly involved in the research. This was accomplished by limiting follow-up visits and focusing on gathering only the most essential data during each interaction.

3.7 Data Analysis

The data collected was edited, coded, and entered into SPSS, assisting the data analysis. To analyze the data, both descriptive and inferential statistics were used. Frequency distribution tables, relative frequency measurements, and measures of central tendency (mean) and variability (standard deviation) for the descriptive analysis. Tables, charts, and graphs were used to present the data that had been analyzed. The purpose of the study was to use multiple ordinary least squares (OLS) regression analysis. Diagnostic tests were carried out to verify the validity and suitability of the OLS regression model for the investigation.

3.7.1 Diagnostic Tests

To validate the suitability of the multiple linear regression model, I carried out multiple diagnostic tests, including assessments for normality, multicollinearity, heteroscedasticity, and linearity. The subsequent sections discuss each of these tests in greater detail.

3.7.1 Heteroscedasticity Test

According to Abdul-Hameed and Matanmi, (2021), heteroscedasticity is a situation where; after incorporating predictor variables into a regression model, the variability of the residuals changes

due to the influence of variables not considered in the model. This phenomenon arises when the standard deviations of a predictor variable vary at distinct levels of the outcome variable. Heteroscedasticity challenges the assumption of homoscedasticity in regression analysis, which posits that the variance of the error term remains constant across all levels of the model. (Aditya, 2025). It can be visually tested using scatter plots, where a conical pattern in the data suggests the presence of heteroscedasticity. Because the variance value is inconsistent when the data exhibits this pattern, it cannot be used to do a standard linear regression. When a significant result is considered heteroscedastic, the Breusch-Pagan test, which employs a normal chi-square test, might be applied. This method needs the data to be regularly distributed; if not, it could lead to erroneous outcomes. Homoscedasticity was tested by visual inspection of the residual scatter plot.

3.7.2 Linearity Test

As per Hansen (1999) linearity is the condition where the predictor variables in a regression model exhibit a direct, linear relationship with the outcome variable. The presence of this relationship can be assessed by way of the Analysis of Variance (ANOVA), where the significance level indicates whether a linear association exists between the predictors and the outcome. A significance value greater than 0.05 suggests the presence of a linear relationship. A value below 0.05 indicates a deviation from linearity. In this study, the ANOVA output was utilized to assess the linearity of the relationship between the predictor and outcome variables.

3.7.3 Multicollinearity Test

According to Oke et al. (2019), multicollinearity arises when multiple predictor variables exhibit strong intercorrelations within a multiple regression model. This condition can distort the results, making it difficult to accurately determine the individual contribution of each variable in explaining the dependent variable. Multicollinearity can be detected by the following techniques; eigenvalue method, pairwise scatterplot and correlation coefficients, and variance inflation factor (VIF).

Using the correlation coefficients and pairwise scatterplot, whenever the Pearson correlation coefficient between two predictor variables is high (typically around 0.8 or above) it indicates a potential multicollinearity problem within the model. The VIF method is applied to quantify the

degree to which the correlation among independent variables inflates the variance of the regression coefficient. It is the inverse of the tolerance measure. A low tolerance value indicates an increased chance of multicollinearity among the independent variables. The eigenvalue method assesses the variance associated with linear combinations of predictor variables. Since the total of all eigenvalues equals the number of independent variables in the model, the presence of very small eigenvalues (typically around 0.05) signals potential multicollinearity. The study applied the VIF method to detect multicollinearity. SPSS was used to calculate a Variance Inflation Factor (VIF) for each predictor variable. VIFs start at one and have no upper limit. A value of 1 implies there is no correlation between this independent variable and the other predictors. VIFs between 1 and 5 suggest a slight correlation, nevertheless, the issue is not severe enough to require intervention. A value between 5 and 10 implies moderate collinearity while VIFs greater than 10 signify severe multicollinearity, leading to poorly estimated coefficients and questionable p-values.

3.7.4 Normality Test

Khatun (2021) explained that normality tests are applied to determine whether data follows a normal distribution. Normality can be assessed through several approaches. Visual techniques include examining data distributions using histograms, stem-and-leaf plots, box plots, probability-probability (P-P) plots, and quantile-quantile (Q-Q) plots. A bell-shaped distribution in the visual plots typically suggests that the data follows a normal distribution. However, due to the subjective nature and potential limitations of visual assessment, more robust statistical tests are often used to confirm normality. These include the Kolmogorov-Smirnov (K-S) test, the Lilliefors-corrected K-S test, the Anderson-Darling test, and the Shapiro-Wilk test, among others. Among these commonly used normality tests, the Kolmogorov-Smirnov (K-S) and Shapiro-Wilk tests are the most widely applied. These tests compare the distribution of sample data to a normal distribution with an equal mean and SD. If the test yields a significant result, the data is considered not normally distributed. Typically, the K-S test is preferred for sample sizes that are more than 50, while the Shapiro-Wilk test is more suitable for smaller samples although this is not a hard rule. To assess the normality of the data the researcher employed both the Shapiro-Wilk test, which is more powerful than the Kolmogorov-Smirnov test, and Q-Q plots.

Given the outcome of the diagnostic tests, the data failed normality and Multicollinearity and therefore the study used an ordinal variation of linear regression to conduct the analysis.

Ordinal linear regression aims to model the relationship between an ordinal dependent variable (with ordered categories) and one or more independent variables. It models the cumulative probabilities and connects them to the independent variables using a link function.

Prior to the model, a goodness-of-fit test was conducted to determine whether the model exhibits a good fit to the data.

3.7.5 The Model Equation:

The study used a variation of the regression model, the ordinal logistic model, due to the ordinal nature of the data set and multiple violations of key linear regression assumptions. Gelman, A., & Hill, J. (2007) highlighted how linear regression is inappropriate when dealing with ordinal dependent variables. They emphasize the importance of understanding the assumptions behind the statistical models you choose. Gelman and Hill advocate for ordinal logistic regression because it models the cumulative probability of being in a certain category or above, which is ideal for ordinal data, handles ordered but unequal categories unlike linear regression which assumes equal spacing between categories and it works well when the normality and homoscedasticity assumptions of linear regression fail because it does not require the residuals to be normally distributed or have constant variance.

The general form of the model equation (using the logit link) is:

$$\text{Logit}\,[P\,(Y \leq j)] = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \ldots + \beta N XN$$

Where:

•Logit [P (Y ≤ j)]: The log odds of the cumulative probability for category j (where j represents a specific category in the ordinal variable).

• β_0: The intercept for category j.

• β_1, β_2.... βN: The coefficients for the independent variables. These coefficients are assumed to be the same across all categories (proportional odds assumption).

•X_1, X_2.... XN: The independent variables (Pricing, Government Regulations, and Firm Size)

This study employed three independent variables with one moderating variable. The model therefore was adjusted to account for the interaction of the moderating variable. The model was expressed as:

$$\text{Logit}\,(P\,(Y \leq j)) = \alpha_j + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4\,(X_1\,X_3) + \beta_5\,(X_2\,X_3)$$

Where:

- α_j are the threshold parameters for each ordinal category
- $\beta_1, \beta_2, \beta_3$ are the coefficients for the predictor variables
- β_4, β_5 are the coefficients for the interaction between the moderating variable (firm size) and two independent variables (pricing and government regulations).
- X_1, X_2, X_3 are the independent (predictor) variables.

Substituting the variables into the model:

$$\text{Logit}\,(P\,(Y \leq j)) = \alpha_j + \beta_1\,\text{Pricing} + \beta 2\,\text{Government Regulations} + \beta 3\,\text{Firm size} + \beta_4\,(\text{Pricing*Firm size}) + \beta_5\,(\text{Government Regulations*Firm size})$$

3.8 Research Quality

It includes the procedures applied to ensure compliance with accepted data collection and analysis standards and the eventual attainment of research objectives (Cooper & Schindler 2014). This study applied the following procedures to ensure research quality: it sought approval from the National Commission for Science, Technology, and Innovation (NACOSTI) to conduct the study, it conducted the pilot test, it established the reliability and validity of the research instrument, it administered the research instrument to the primary study respondents, collecting data, and carrying out the data analysis. By the recommendations of Mugenda and Mugenda (2003), 10% of the sample population was used to conduct a pilot test in the study. As part of the pilot study, the study used the supervisor's expertise to establish content validity. In contrast, criterion-related validity was established by assuring the 12 pilot test participants that each would be equally able to respond to each question without bias. Construct validity was determined using Principal Factor Analysis.

3.8.1 Validity of Research Instruments

Kimberlin and Winterstein (2008) emphasized that validity refers to the degree to which the interpretations and conclusions drawn from test results are appropriate and meaningful. In research, validity is typically categorized into three main types. The study used the expertise of the supervisor to establish content validity. In contrast, criterion-related validity was established by assuring the participants that each would be given an equal opportunity to respond to each question without bias. Construct validity was assessed through exploratory factor analysis (EFA), following the guidelines of Beaver et al. (2019). A factor loading threshold of 0.5 was applied to determine the adequacy of item representation within each construct.

3.8.2 Reliability of Research Instruments

Reliability refers to an instrument's ability to consistently measure the intended construct (Tavakol & Dennick, 2011). To assess internal consistency (the degree to which all items on a test measure the same concept) Cronbach's alpha is typically used. This statistic, derived from the average inter-item correlations and the number of items in the scale, ranges from 0 to 1, where values closer to 1 indicate high reliability and values closer to 0 suggest low reliability. This study yielded a Cronbach's alpha of 0.7 that is considered acceptable in line with the recommendations of Tavakol and Dennick (2011).

3.9 Ethical Considerations

According to Akaranga and Makau (2016) ethics is a framework encompassing activities, rules, values, and practices designed to assess whether actions are morally right or wrong. Ethical considerations in research include informed consent, ensuring participants agree voluntarily, knowingly, and intelligently; beneficence, which focuses on the researcher's commitment to do no harm; respect for anonymity (protecting participants' identities) and confidentiality (safeguarding sensitive personal information); respect for privacy (allowing individuals to control which information is shared); safeguarding vulnerable populations; obtaining consent from guardians or parents when interviewing minors; and conducting research with competence and integrity.

The study adhered to ethical principles by ensuring that all participants provided informed and voluntary consent prior to taking part, ensuring no physical or psychological harm, and safeguarding anonymity, confidentiality, and privacy throughout the research process.

CHAPTER FOUR

PRESENTATION OF RESEARCH FINDINGS

4.1 Introduction

In this chapter, the study findings are presented. This study intended to explore the determinants of the financial performance of foreign exchange bureaus in Nairobi County moderated by firm size. The research findings include an overview of the results, demographic data, descriptive statistics, and inferential statistics. The presentation of the conclusions will feature data from SPSS for each variable, displayed in tables and figures. This will be followed by an analysis and interpretation of the results, culminating in a summary of the key findings.

4.2 Response Rate

The response rate represents the ratio of completed responses to the total number of questionnaires or interviews initially targeted (Morton *et al.*, 2012). The response rate of this study is as in Table 4.1 below.

Table 4.1 Response Rate

	Number	**Percentage**
Questionnaires that were responded to	82	67.2%
Questionnaires that were not responded to	40	32.8%
Total Number of Questionnaires	122	100%

In this study 122 questionnaires were administered, and 82 responded, representing a response rate of 67.2%.

4.3 Demographic Characteristics

4.3.1 Gender Distribution

The first category of demographic characteristics of the respondents was gender distribution, and the results are illustrated in Figure 4.1 below.

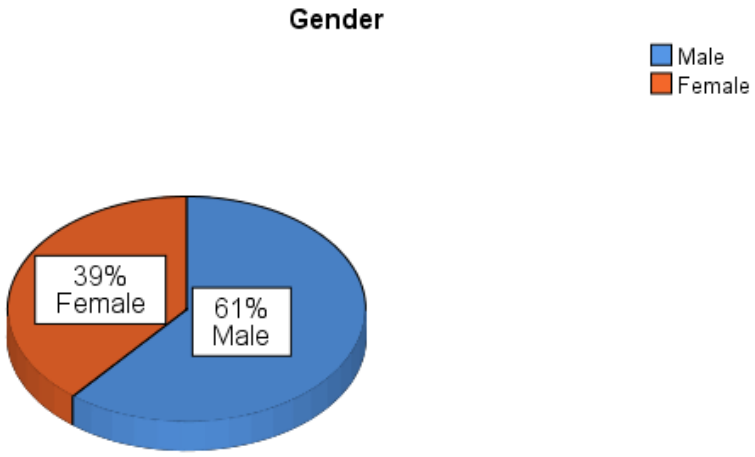


Figure 4.1 Gender Distribution

According to the results, out of 82 respondents, 50 were male, while 32 were female, representing 61.0% and 39.0%, respectively. This indicates that whilst there were more males, the level of gender diversity at the Forex bureaus was reasonably good.

4.3.2 Age Distribution

The second categorization of demographic characteristics of the respondents is the age distribution, the results of which are presented in Figure 4.2.

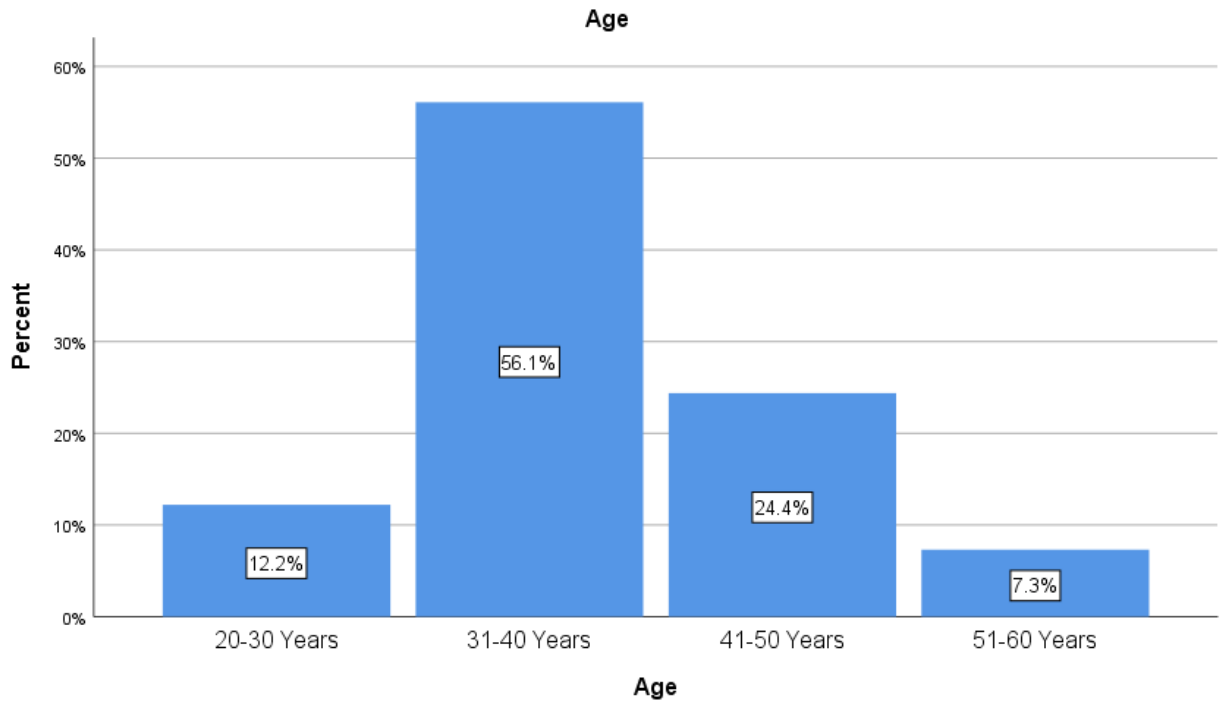


Figure 4.2 Age Distribution

According to the results, out of 82 respondents, 10 were aged between 21-30 years, 46 were aged 31-40 years, 20 were between 41-50 years, and six were between 51-60 years, representing 12.2%, 56.1%, 24.4%, and 7.3%, respectively. This indicates that the majority of the staff in the Forex bureaus were middle-aged.

4.3.3 Highest Level of Education

The third categorization of the demographic characteristics of respondents was based on the highest level of education.

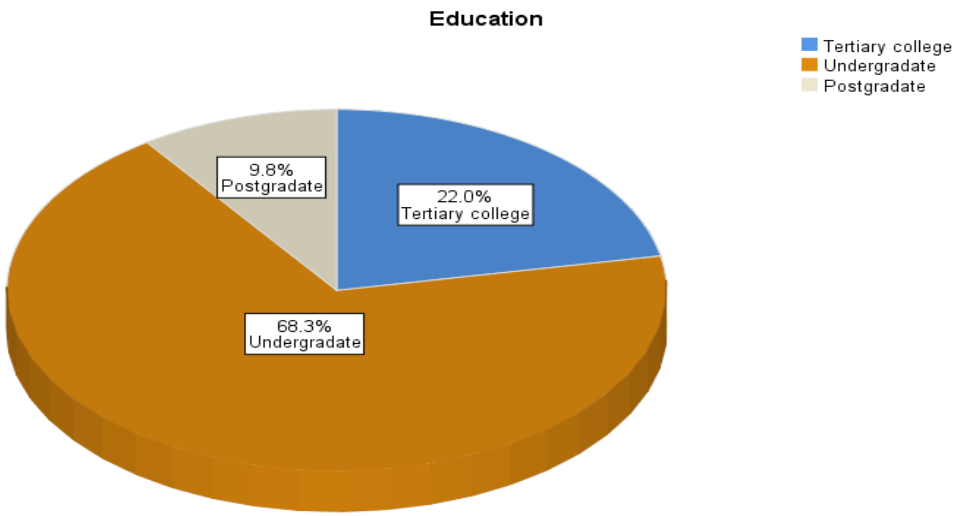


Figure 4.3 Highest Level of Education

The results captured in Figure 4.3 above, show that 18 had tertiary college qualifications, 56 had undergraduate qualifications, and 8 had postgraduate qualifications, representing 22.0%, 68.3%, and 9.8%, respectively.

4.3.4 Duration of Employment

The fourth categorization of the demographic characteristics of the respondents was based on the duration of employment, and the results are shown in Figure 4.4.

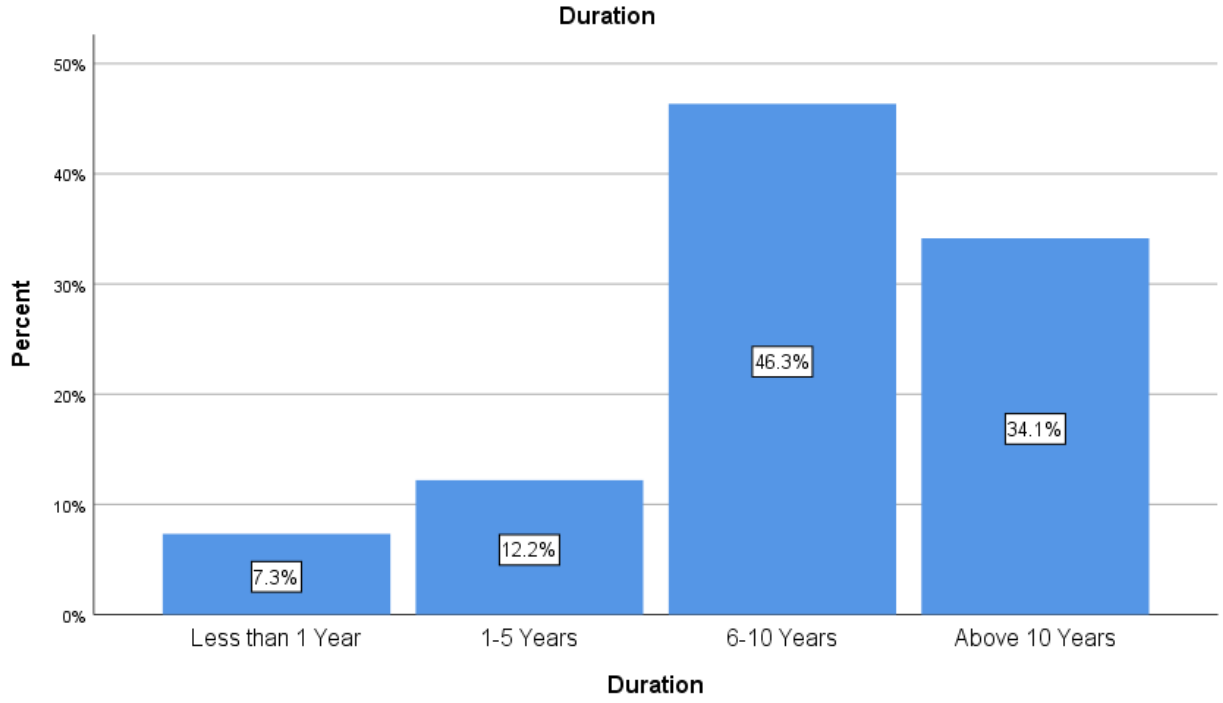


Figure 4.4 Duration of Employment

According to the results, out of a total of 82 respondents, six had worked for less than one year, 10 had worked for between 1-5 years, 38 had worked for 6-10 years, and 28 had worked for over 10 years, representing 7.3%, 12.2%, 46.3%, and 34.1 %, respectively.

4.4 Descriptive Statistics

4.4.1 The effect of Pricing on Financial Performance of Foreign Exchange Bureaus

The study sought to evaluate the effect of pricing on the financial performance of foreign exchange bureaus in Nairobi County. The findings of the effect of pricing on financial performance are shown in Table 4.2 and Figure 4.5 below.

Table 4.2 Findings on the Effect of Pricing on Financial performance

Measure	N (No of respondents)	Mean	Std. Deviation
Exchange rate volatility affects the profitability of the Forex bureau	82	4.12	1.082
Exchange rate volatility presented challenges in managing input and output prices.	82	4.09	1.033
Variations in bid-ask spreads across different currency pairs influence the profitability of the Forex bureau	82	3.99	1.117
The bureau has not fully taken up innovative trading strategies like spot FX.	82	4.09	0.958
While short-term trading strategies can offer profit opportunities, they expose the bureau to increased market volatility and potential losses.	82	3.98	1.018
Speculative activity in the foreign exchange market can contribute to exchange rate volatility.	82	4.13	.966
The periodic central bank's interbank rate influences the pricing decisions of the Forex Bureau.	82	4.16	1.048
Local market conditions, such as the availability of foreign currency in the local market, influence the bid-ask spreads offered by the Forex Bureau.	82	4.24	1.061
Average	**82**	**4.10**	**1.035**

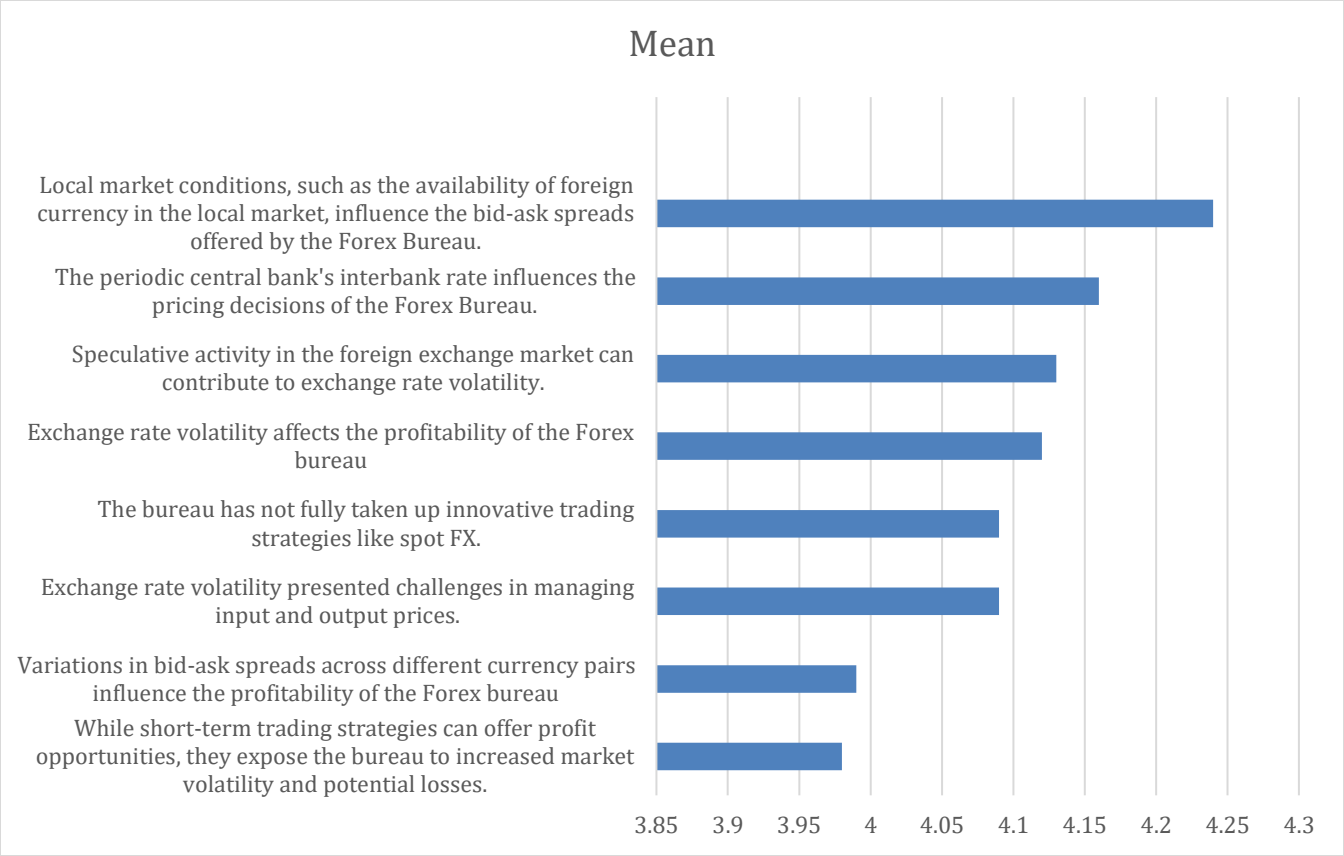


Figure 4.5 Ranking of the Effect of Pricing on Financial performance

The data from Table 4.2 and Figure 4.5 above indicates that local market conditions, such as the availability of foreign currency in the local market influencing the bid-ask spreads offered by the Forex Bureaus had the highest effect on financial performance. The periodic central bank's interbank rate influence on the pricing decisions of the Forex Bureaus had the second highest effect followed by speculative activity in the foreign exchange market contributing to exchange rate volatility. These top-ranking items underscore the huge effect of external macroeconomic factors on pricing strategies. Short-term trading strategies exposing the bureau to increased market volatility and potential losses had the least effect. Variations in bid-ask spreads across different currency pairs having an effect on the profitability of the Forex bureau had an almost equal effect suggesting that the effect of the two was perceived to pale in comparison to the broader macroeconomic factors.

Variations in bid-ask spread across different currency pairs had the highest variability (1.117), suggesting that experiences or strategies related to bid-ask spread management differ significantly

among bureaus. Conversely, the lowest variability was seen in the item on the limited adoption of innovative trading strategies like spot FX (SD = 0.958), implying a more consistent perception that the industry has yet to fully embrace trading innovations.

4.4.2 The Effect of Government Regulations on Financial Performance of Foreign Exchange Bureaus

The findings of the second objective on assessing the effect of existing Government regulations on the financial performance of foreign exchange bureaus in Nairobi County are presented in Table 4.3 and Figure 4.6 below.

Table 4.3: Findings on the Effect of Government Regulations on Financial Performance of Foreign Exchange Bureaus

Measure	N (No of respondents)	Mean	Std. Deviation
Government-imposed fees and levies have influenced the operational costs and profitability of the bureau	82	4.21	.828
Current regulations have made it more difficult for the Forex Bureau to compete effectively.	82	4.26	.991
The shift towards more flexible exchange rate regimes has implications for the profitability of the Forex Bureau.	82	4.45	.834
The current regulatory framework has hindered the Forex Bureau's adoption of automated trading technologies.	82	4.29	.762
The current AML regulatory framework may not sufficiently address the specific challenges faced by your Forex bureau.	82	4.33	.930
The current regulatory framework provides sufficient flexibility for your Forex bureau to adapt to changing market conditions.	82	4.37	.809
Average	**82**	**4.32**	**.859**

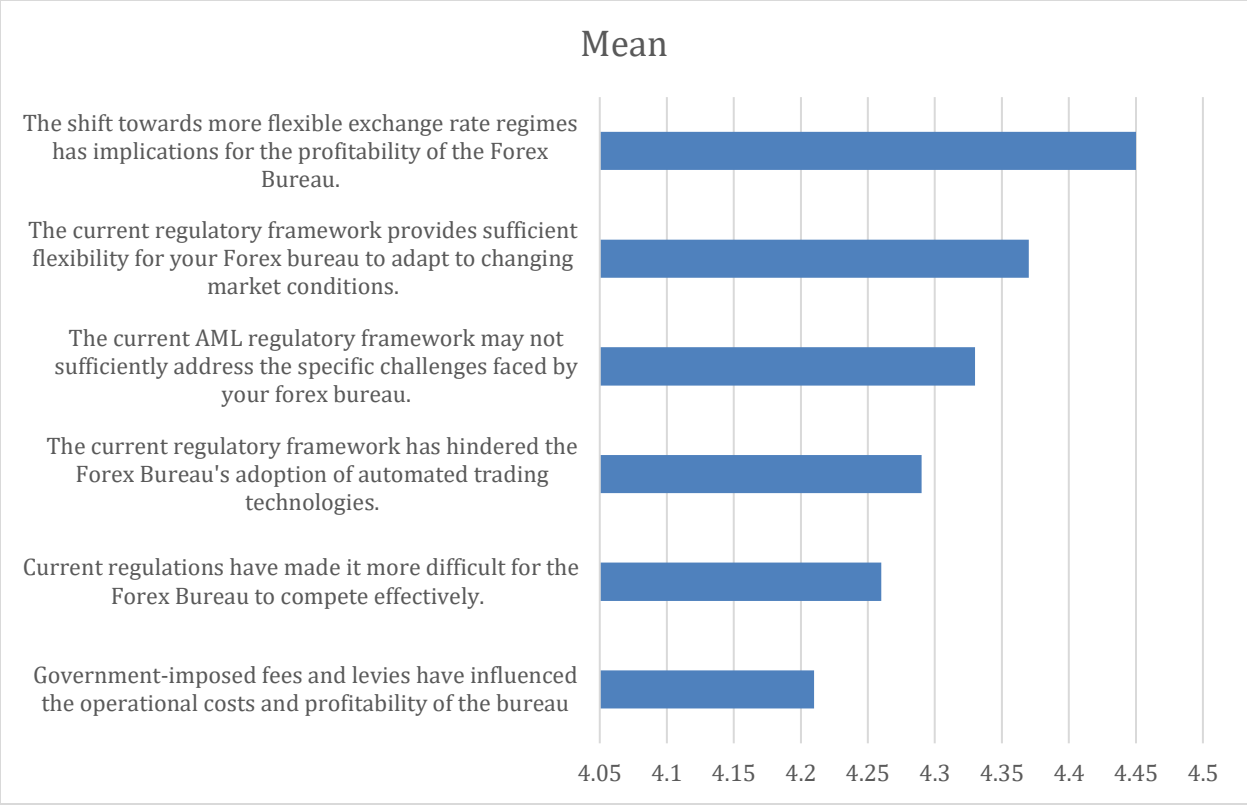


Figure 4.6: Ranking of the effect of Government Regulations on Financial Performance

The findings indicate the shift towards more flexible exchange rate regimes having implications for the profitability of the Forex Bureau had the highest effect and that the current regulatory framework provides sufficient flexibility for the Forex bureaus to adapt to changing market conditions (mean=4.37) was a close second. There is an indication that the current AML regulatory framework may not sufficiently address the specific challenges faced by the Forex bureaus with the item having the third highest effect.

Government-imposed fees and levies influence the operational costs and profitability of the bureau had the least effect even though it still was a strong one. Current regulations have made it more difficult for the Forex Bureau to compete effectively and the framework's hindrance to the bureau's adoption of automated trading technologies had the second and third lowest respectively.

There was moderate variability in the above responses with the highest variability observed on the current regulations having made it more difficult to compete effectively (SD=0.991). Conversely, the lowest variability was seen in the item "The current regulatory framework has hindered the

Forex Bureau's adoption of automated trading technologies" (SD = 0.762) indicating a more uniform perception.

4.4.3 The Effect of Firm Size on Financial Performance

Another objective of this study was to investigate the moderating role of firm size on the determinants of financial performance of foreign exchange bureaus in Nairobi County. The study assessed the individual effect of firm size on the financial performance of the Forex Bureaus. This effect's interaction with the determinants of financial performance assessed the moderation effect. The descriptive statistics of firm size are presented in Table 4.4 and Figure 4.7.

Table 4.4: Findings on the Effect of Firm Size on Financial Performance

Measure	N (No of respondents)	Mean	Std. Deviation
The number of branches your firm operates does appear to influence the relationship between dynamic capabilities and performance	82	4.18	.904
Your firm's presence in geographical regions such as counties expands your profile and reaches a broader market, thereby improving financial performance.	82	4.12	.908
The more revenue the Forex Bureau generates, the more funding it attracts in the form of loans, boosting its financial performance.	82	4.04	.974
The more employees the bureau has, the bigger the talent pool it can tap into, be more innovative, and realize better performance.	82	4.13	.966
The more extensive the revenue base the bureau has, the better it can cushion itself against the worst effects of financial uncertainty and perform better financially.	82	4.18	.818
The more employees the Forex Bureau has, the better its ability to meet customer expectations for service delivery.	82	4.33	.944
Average	**82**	**4.16**	**.919**

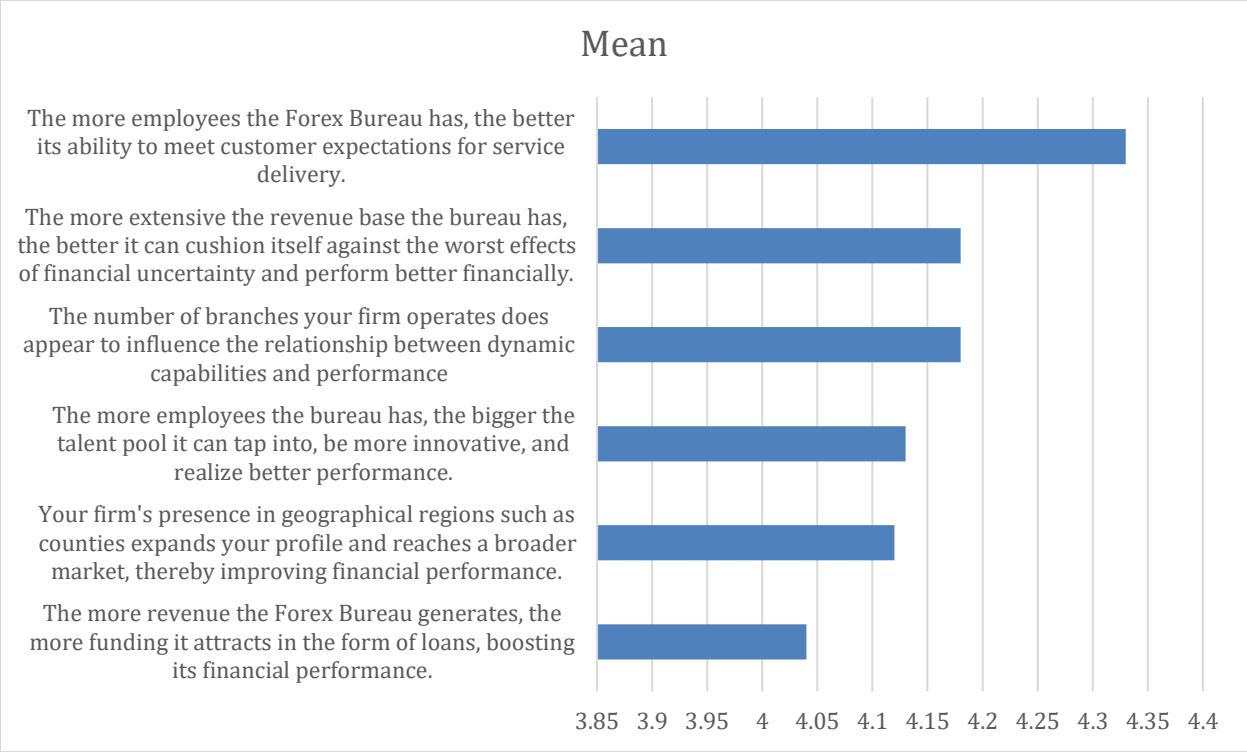


Figure 4.7: Ranking of the Effect of Firm Size on Financial Performance

The more employees the Forex Bureau has, the better its ability to meet customer expectations for service delivery had the highest effect on financial performance (mean = 4.33), emphasizing the critical role of a larger workforce in enhancing customer service and satisfaction. Additionally, the more extensive the revenue base the bureau has, the better it can cushion itself against the worst effects of financial uncertainty and perform better financially. The number of branches a firm operates appears to influence the relationship between dynamic capabilities and performance also had a high effect. This suggests that branch expansion and revenue diversification is perceived as key factors for ensuring financial resilience and competitive advantage.

On the other hand, the more revenue the Forex Bureau generates, the more funding it attracts in the form of loans, boosting its financial performance and resulting in the least effect on financial performance, indicating that while revenue generation is seen as important for securing funding, there is greater variability in how strongly this relationship is perceived. The higher standard deviation (0.974) suggests that some Forex bureaus may not find revenue as directly linked to their ability to attract loans or boost their financial performance.

4.4.3.1 Summary of the Effect on Financial Performance

Table 4.6: Summary of the Effect on Financial Performance

Variable	N (No of respondents)	Mean	Std. Deviation
Pricing	82	4.10	1.035
Government regulations	82	4.32	.859
Firm size	82	4.16	.919

In summary, the data suggests that government regulations have the most perceived impact on financial performance, followed closely by firm size, which also plays a significant role but with a slightly broader range of views. Pricing is also seen as important, though with more variability in how it's perceived across different bureaus.

4.4.4 Financial Performance of Foreign Exchange Bureaus

This study employed three measures to assess the financial performance of the bureaus over the previous year. The descriptive statistics of these measures of financial performance are presented in Table 4.6 and Figure 4.9 below.

Table 4.7: Measures of Financial Performance

Measure	N (No of respondents)	Mean	Std. Deviation
The profitability of the bureau has steadily increased in the last year.	82	3.96	1.012
The bureau achieved satisfactory operational efficiency last year.	82	4.15	1.067
The bureau has not had significant liquidity challenges during the last year.	82	4.13	1.097
Average	**82**	**4.08**	**1.059**

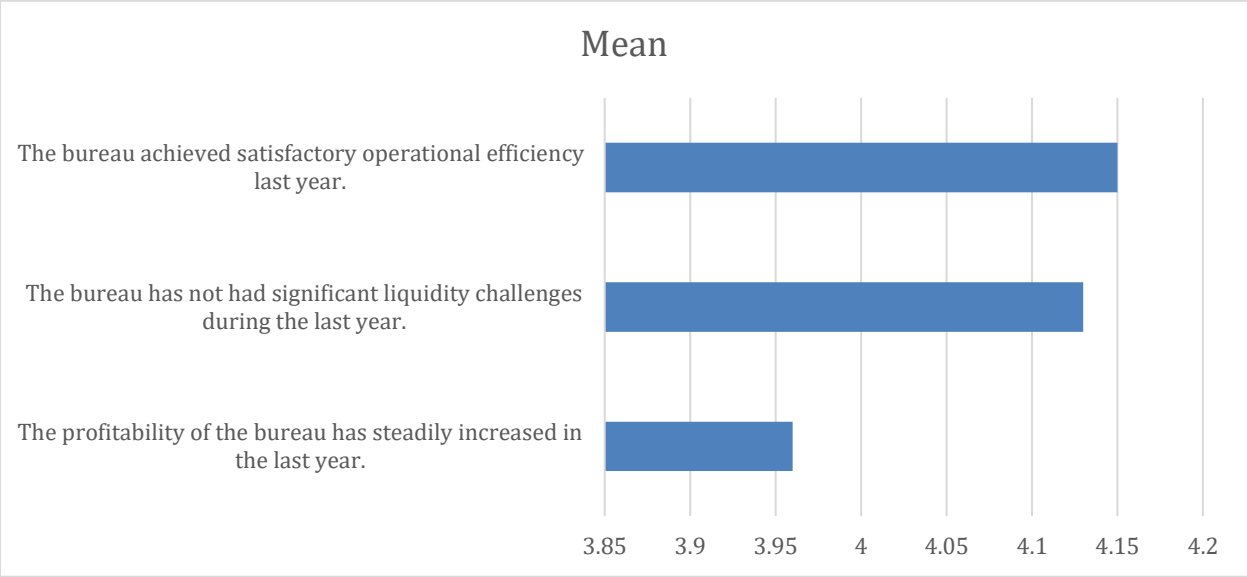


Figure 4.8: Ranking of the Measures of Financial Performance

The data indicates that most bureaus achieved satisfactory operational efficiency last year suggesting bureaus performed efficiently in terms of operations. The findings also suggest most bureaus felt they were able to maintain sufficient liquidity to manage day-to-day operations without facing significant challenges. The standard deviation of 1.097 indicates some variability in responses, pointing to differing experiences among bureaus, where some may have struggled with liquidity, while others may have had more stable financial conditions. There is an indication that the profitability of the bureau moderately increased in the last year. The standard deviation of 1.012 indicates divergence in profitability, with some bureaus likely experiencing stronger profits while others may have faced challenges in maintaining profitability.

These results show that overall, the financial performance of foreign exchange bureaus in Nairobi County as assessed through three key measures, mainly reflects a positive outlook. The overall average mean for the three measures is 4.08 (SD = 1.059), suggesting that, on average, the bureaus have experienced a moderate level of financial success in the past year.

4.5 Inferential Statistics

4.5.1 Diagnostics tests

Before embarking on inferential analysis, the study assessed the type of tests that will be applied to the data; parametric or non-parametric. Parametric tests rely on certain assumptions to deliver credible and replicable results Diagnostic tests play a crucial role in the application and validation of parametric tests to evaluate whether all the underlying assumptions are met. They will provide a systematic approach to assess the suitability of parametric methods to the dataset, and suggests data transformations or alternative non-parametric tests.

4.5.1.1 Normality tests

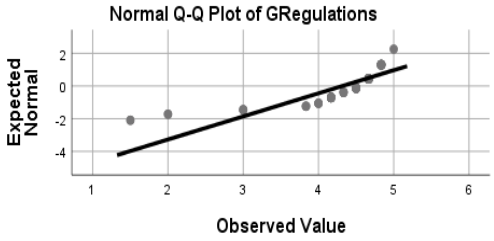
To test the normality of the data, the study employed both statistical tests and graphical methods. The Shapiro-Wilk and Kolmogorov-Smirnov tests were applied and Q-Q plots were used for visual analysis. Table 4.7 shows the results of the normality tests.

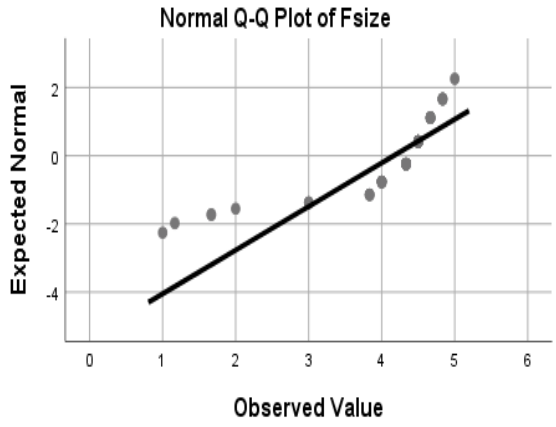
Table 4.8: Tests of Normality

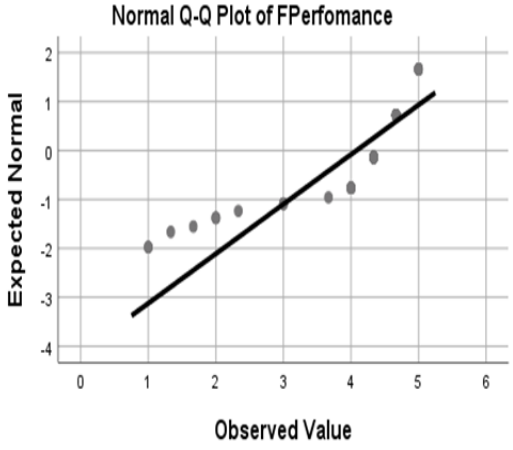
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Financial performance	.426	82	.000	.569	82	.000
pricing	.237	82	.000	.736	82	.000
Government Regulations	.212	82	.000	.741	82	.000
Firm size	.399	82	.000	.556	82	.000

a. Lilliefors Significance Correction

All the Shapiro-Wilk and Kolmogorov-Smirnov P-values are less than 0.05; hence, they are all statistically significant at a 5% significance level. This implies that the variables are not normally distributed. Additionally, to approximate normality the plots for the variables were inspected as shown below in Figures 4.10.







Figures 4.10 Q-Q plots

Data points on a normal Q-Q plot of observed values plotted against expected normal values tend to lie on or near the expected regular line. From the above plots, it is evident that most of the observations don't lie near or on the expected regular line, which affirms non-normality.

Tests of Normality using Lognormal (Log)

Given the violation of the normality test, data transformation was conducted on the dataset through Log transformation. Normality testing was then carried out on the Log –transformed data.

Table 4.9: **Tests of Normality after lognormal transformations**

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Log pricing	.308	82	.000	.612	82	.000
LogGregulations	.262	82	.000	.638	82	.000
LogFsize	.339	82	.000	.514	82	.000
LogFperformance	.361	82	.000	.583	82	.000

a. Lilliefors Significance Correction

All the P-values of the Log transformed variables are less than 0.05 hence statistically significant at a 5% significance level. This shows that even after the logarithmic transformation of the variables, non-normality was still observed. The test of normality is therefore violated.

4.5.1.2: Homoscedasticity

This assumption, also known as the homogeneity of variance assumption, assumes that the variance of the errors is constant across all independent variables. That's to say that, whatever value an independent variable assumes, the variability of the residuals would be the same. It is a very important assumption in parametric statistical tests. In linear regression for instance, if this assumption is violated, the estimates of the regression coefficients cannot be trusted and their

standard errors cannot be deemed reliable. The presence of variance of errors is termed heteroscedasticity. In this case, visual methods (scatter plot of residuals plotted against predicted values) to assess for homogeneity of variance were employed. The results are as indicated in the Figure 4.11 below.

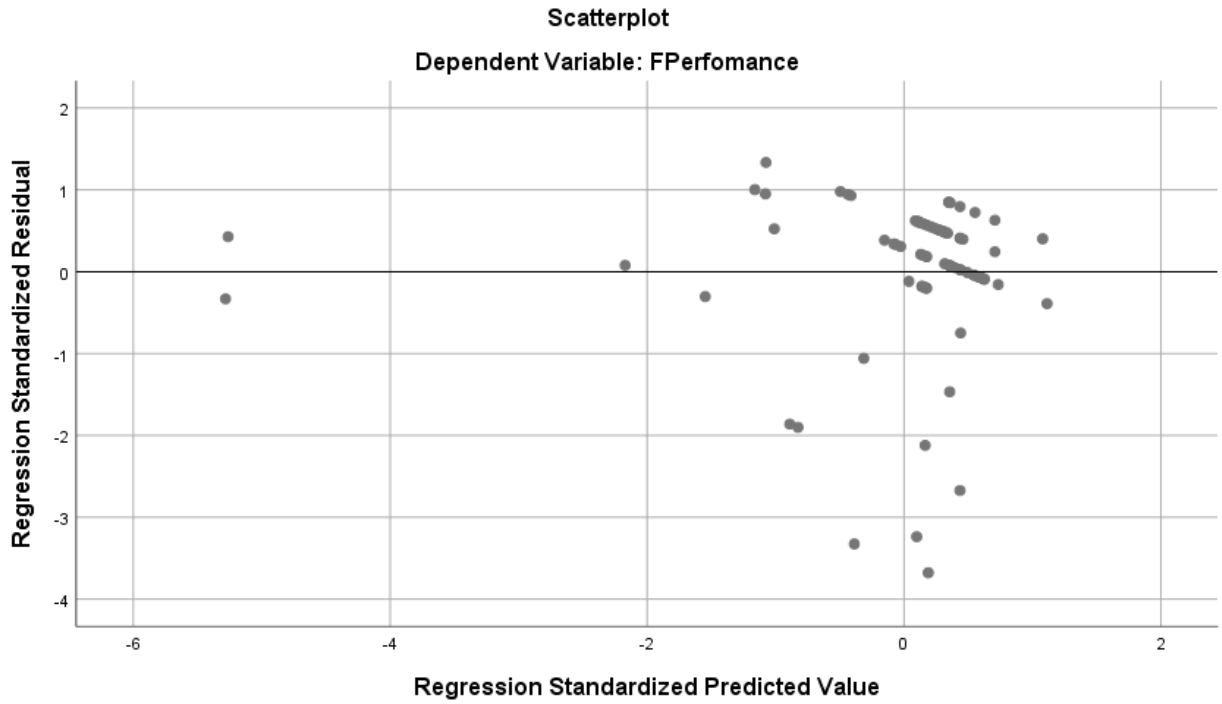


Figure 4.11: Scatter plot of Residuals and Predicted values

In a case where the variance is homogenous, the data points are evenly scattered around the zero line with no discernible pattern therefore the residuals are homoscedastic. If a cone shape is observed (where the spread of the values increases or decreases as the predicted values increase) then there is evidence of heteroscedasticity.

This plot's funnel shape shows that the spread of residuals is not constant, therefore the assumption is violated. There's no homogeneity of variance, suggesting heteroscedasticity. In this case one can conclude that the standard errors of a linear regression model would not be trusted. This study employed robust standard errors for more reliable inference.

4.5.1.3: Multicollinearity

Multicollinearity in linear regression analysis occurs when independent variables in the equation are correlated. Estimating the coefficients of the regression model becomes problematic in cases of multicollinearity as it becomes quite difficult for a researcher to determine the individual effect of each independent variable on the dependent variable. This study assessed multicollinearity via a Variance inflation factor (VIF) statistic and tolerance values which are the inverse of VIF values.

If the VIF value = 1 therefore the independent variables have no correlation. If it falls below 10, there would be correlation but not problematic. If it's greater than 10 then there is multicollinearity which is problematic. A low tolerance value close to 0 is an indicator of high multicollinearity. A high tolerance value close to 1 indicates low multicollinearity.

Table 4.11: Collinearity Diagnostics

Coefficients[a]

	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
Model	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1(Constant)	-1.190	1.258		-.946	.347		
pricing	1.217	.157	.940	7.761	.000	.097	10.269
GRegulations	.116	.342	.060	.339	.736	.046	21.668
Firmsize	.097	.289	.083	.337	.737	.024	42.181
FirmsizePricing	-.002	.036	-.007	-.042	.966	.046	21.954
FirmsizeGregulations	-.016	.074	-.072	-.213	.832	.013	79.869

a. Dependent Variable: Financial Performance

All the Variance inflation factors (VIF) values are greater than 10 with tolerance values close to 0 hence the multicollinearity assumption is violated. There is high multicollinearity.

4.5.1.4: Summary

Following a thorough assessment of the underlying assumptions required for parametric tests, several violations were identified that informed the decision to adopt more robust methods. The assumption of normality was violated, as indicated by normality tests, and approximate normality was confirmed violated through Q-Q plots. Attempts to normalize the data using log transformations were unsuccessful, suggesting that the data did not meet the requirements for parametric tests such as Pearson's correlation or ordinary linear regression. The assumption of equal variance was also violated; raising concerns about the reliability of standard error estimates in ordinary least squares (OLS) regression. High levels of multicollinearity among predictor variables further compromised the stability and interpretability of parametric regression models.

Given these assumption violations, Spearman's correlation was used instead of Pearson's to assess associations between variables, as it does not assume normality and is more appropriate for ordinal or non-normally distributed interval data. As the dependent variable was ordinal in nature, and the data violated key assumptions for linear regression (normality, homoscedasticity), ordinal logistic regression was chosen as the most appropriate model. This model accommodates ordinal outcomes without requiring equal intervals between categories or normally distributed residuals. Additionally, robust standard errors were employed to account for potential heteroscedasticity and ensure more reliable inference.

4.5.2: Correlation Analysis

Correlation coefficients are metrics that assess how strongly one variable is associated with variations in another (Schober et al,2018). This study employed Spearman's Rank correlation, which is particularly useful in Likert-scale cases, to gauge the extent and direction of association between financial performance and the predictor variables. The equation for Spearman's Rank Correlation Coefficient is as follows:

$$\rho=1-[6\sum d_i^2/n(n2-1)]$$

Where:

ρ = Spearman's Rank correlation coefficient.

d_i = the difference between the ranks of each corresponding pair of data points.

n = the number of data pairs.

$\sum d_i^2$ = the sum of the squared differences between the ranks.

A Spearman's Rank correlation coefficient value of +1 is indicative of a perfect positive monotonic relationship while -1 indicates a perfect negative monotonic relationship between the variables with a value of 0 interpreted as the absence of any relationship between the variables. A value $0 < \rho < 1$ means a positive correlation exists albeit not a perfectly linear one while $-1 < \rho < 0$ values imply a negative correlation with the strength increasing as ρ gets closer to +1 and -1 respectively. Spearman Rank correlation tells how well the relationship between two variables can be described using a consistently increasing or decreasing function. It does not produce a predictive equation. To make an inference on the magnitude and direction of the effects of pricing, government regulations, and firm size on the financial performance of the Forex Bureaus, Spearman's Rank correlation was conducted. The results of the study's Spearman's Rank correlation coefficients are presented in Table 4.11.

Table 4.12: Spearman's Rank Correlation

			GRegulations	pricing	Financialperfomance	Firmsize
Spearman's rho	GRegulations	Correlation Coefficient	1.000	-.016	-.020	.259*
		Sig. (2-tailed)	.	.886	.859	.019
		N	82	82	82	82
	pricing	Correlation Coefficient	-.016	1.000	.747**	.098
		Sig. (2-tailed)	.886	.	.000	.382
		N	82	82	82	82
	Financialperfomance	Correlation Coefficient	-.020	.747**	1.000	.180

		Sig. (2-tailed)	.859	.000	.	.106
		N	82	82	82	82
	Firmsize	Correlation Coefficient	.259*	.098	.180	1.000
		Sig. (2-tailed)	.019	.382	.106	.
		N	82	82	82	82

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

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

From Table 4.9 above, it's notable that financial performance has a weak negative statistically non-significant correlation with government regulations (r = -0.20). This means that the ranking in financial performance decreased with an increase in the rankings of government regulations. This increase was minimal and statistically non-significant. Pricing has a strong positive and significant relationship with financial performance, as indicated by the correlation coefficient r = 0.747, which is significant at a 10% significance level. This implies that the ranking in the financial performance increases with an increase in the rankings of pricing indicators. This means that higher pricing strategies tend to be associated with better financial performance in foreign exchange bureaus. This finding suggests that pricing strategy could be a key factor in determining the success of these bureaus. Firm size's correlation with financial performance was weak and statistically non-significant (r = 0.18). This suggests that firm size does not have a strong or statistically meaningful effect on financial performance.

4.5.3 Ordinal Logistic Regression Analysis

Ordinal logistic regression models the relationship between an ordinal dependent variable and one or more independent variables. The ordinal dependent variable has more than two categories with a meaningful order, but the distances between the categories are not necessarily equal.

4.5.3.1 Model Fitting Information

The Model Fitting Information plays a crucial role in understanding how well my model fits the data and whether the variables included are significantly improving the model. This information

assesses the effectiveness of the predictors i.e. pricing, government regulations, and firm size in explaining financial performance. The model fitting information below contains the likelihood ratio chi-square test for the intercept-only model and the final model with full predictors. -2 Log Likelihood is a measure of model fit. The change in -2 Log Likelihood from the Intercept Only model to the Final model shows how much the inclusion of pricing, government regulations, and firm size improves the model's ability to explain the variation in financial performance.

Table 4.13: Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	Df	Sig.
Intercept Only	153.555			
Final	46.531	107.024	5	.000

Link function: Logit.

Table 4.12 above indicates that at a 5% significance level the final model significantly improved fit over the null model without predictors because the P-value .000 < 0.05 meaning the predictors pricing, government regulations, and firm size collectively improve the fit of the model. It shows that the independent variables are relevant in explaining financial performance.

4.5.3.2 Goodness-of-Fit

The Goodness of Fit Tests provides valuable information about how well the model fits the data. In this case, the two tests used are the Pearson Chi-Square and the Deviance Chi-Square tests. A model that fits the data well ensures that the results and relationships from the analysis on the effects of pricing, government regulations, and firm size on financial performance are valid and reliable. The model's fit confirms whether the predictors are appropriately modelling the relationship with financial performance.

Table 4.14: Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	56.794	291	1.000
Deviance	46.531	291	1.000

Link function: Logit.

The goodness-of-fit test table above contains the Deviance and Pearson Chi-square tests. Non-significant test results (p value > .05) suggest that the model provides a good fit to the data.
From the results it's evident that both the Deviance Chi-square test ($\lambda^2(291) = 46.531$, p value = 1.00) and the Pearson Chi-square test($\lambda^2(291) = 56.794$, p value =1.00) were non-significant. This suggests the model is a good fit. The Goodness of Fit Test results (both Pearson and Deviance with p = 1.000) confirm that the ordinal logistic regression model fits the data well, providing a solid foundation for the conclusions drawn regarding the influence of pricing, government regulations, and firm size on the financial performance of foreign exchange bureaus in Nairobi County. The model is a good representation of the relationships in the study.

4.5.3.3 Test of Parallel Lines

Ordinal logistic regression assumes that the relationships between the independent variables are the same across all possible comparisons involving the dependent variable, an assumption otherwise known as the proportional odds assumption. This was assessed through the test of parallel lines with the results being as indicated in Table 4.14 below.

Table 4.15: Test of Parallel Lines

Model	-2 Log Likelihood	Chi-Square	df	Sig.-
Null Hypothesis	46.531			
General	75.346[b]	46.531	15	.912

The null hypothesis states that the location parameters (slope coefficients) are the same across response categories with the alternative hypothesis stating that the location parameters are not the same across response categories.

The test of parallel lines yielded a non-significant p-value of 0.912, indicating that the assumption holds, as the null hypothesis—that the location parameters are the same across response categories—cannot be rejected.

4.5.3.4 Test of model Effects

This test is used to assess the effects of individual independent variables on the dependent variable. This study employed a Likelihood ratio Chi-Square test that compares the likelihood of the full model with predictors against the null model without predictors. It assesses whether each independent variable significantly improves the model fit.

Table 4.16: Test of model effects

Source	Type III Likelihood Ratio Chi-Square	df	Sig.
Pricing	18.499	1	.000
GRegulations	.827	1	.363
Firmsize	.214	1	.644
pricing * Firmsize	.718	1	.397
GRegulations * Firmsize	.706	1	.401

Dependent Variable: Financial Performance

Model: (Threshold), pricing, GRegulations, Firm size, pricing * Firmsize, G Regulations * Firm size

The null hypothesis states that the model with predictors does not provide a better fit than the null model and is rejected if the p-value is significant. Pricing improves the null model (p-value = 0.000). All other independent variables have non-significant p-values. In those cases, the null hypothesis is not rejected, leading to the conclusion that they do not significantly improve the null

model. This confirms that pricing strategies have a strong influence on the financial success of foreign exchange bureaus in Nairobi County. Government regulations and firm size, however, do not significantly affect financial performance, nor does firm size significantly moderate the relationship between pricing and financial performance.

4.5.3.5 Ordinal Logistic Regression Estimates

This section presents the regression coefficients and significance tests for each of the independent variables in the model. The regression coefficients are interpreted as the predicted change in the log-odds of being in a higher (versus lower) category on the dependent variable, for each one-unit increase in an independent variable, while controlling for the effects of the other variables in the model.

A positive estimate (b) indicates that for every one-unit increase in an independent variable, there is a predicted increase in the log-odds of being at a higher level of the dependent variable. This suggests that as scores on an independent variable increase, the probability of being at a higher level of the dependent variable also increases. Conversely, a negative estimate (b) implies that for each one-unit increase in the independent variable, the log-odds of being at a higher level of the dependent variable decrease. Therefore, as scores on the independent variable increase, the likelihood of being at a higher level of the dependent variable diminishes.

Table 4.17 Ordinal Logistic Regression Estimates

Parameter Estimates											
Parameter		a	Std. Error	95% Wald Confidence Interval		Hypothesis Test			Exp(B)	95% Wald Confidence Interval for Exp(B)	
				Lower	Upper	Wald Chi-Square	df	Sig.		Lower	Upper
Threshold	[Financialperfomance=1.00]	23.732									
	[Financialperfomance=2.00]	30.495									
	[Financialperfomance=3.00]	35.646									
	[Financialperfomance=4.00]	38.881									
Pricing		5.683	1.4280	2.884	8.481	15.835	1	.000	293.712	17.881	4824.546
GRegulations		3.495	3.6815	-3.721	10.711	.901	1	.342	32.948	.024	44826.111
Firmsize		2.039	4.7918	-7.353	11.431	.181	1	.670	7.683	.001	92105.056
pricing * Firmsize		.417	.3027	-.177	1.010	1.896	1	.169	1.517	.838	2.746
GRegulations * Firmsize		-.791	.9421	-2.637	1.056	.705	1	.401	.454	.072	2.874

From Table 4.16 of the ordinal logistic regression estimates above, it is evident that pricing was a positive and significant predictor (p value = 0.000) with a 5.863 predicted increase in the Log odds of being in a higher category of financial performance for every incremental unit. Government regulations (p value = 0.634) were a positive non-significant predictor of financial performance with a predicted increase of 3.495 in the Log odds of being in a higher category of financial performance. Firm size was also a positive non-significant predictor with a predicted increase of 2.039 in the Log odds of higher categorization in financial performance. When moderated by firm size, pricing's effect becomes non-significant in the model with the predicted increase in log odds reducing to 0.417 with the direction remaining unaltered. When government regulations are moderated by firm size, there is a predicted decrease in the Log odds by 0.791, indicative of a change in direction. The interaction terms between pricing and firm size, and government regulations and firm size, are not statistically significant, suggesting that firm size does not significantly modify the relationship between these predictors and financial performance.

4.5.3.6 Odds Ratios

The odds ratios (found in the Exp(B) column of Table 4.16) represent the multiplicative change in the odds of being in a higher category on the dependent variable while holding the other independent variables constant. An odds ratio greater than 1 indicates an increased probability of being at a higher level on the dependent variable as the independent variable increases. Conversely, an odds ratio less than 1 suggests a decreased probability of being at a higher level with increasing values of the independent variable. An odds ratio equal to 1 implies no predicted change in the likelihood of being in a higher category as the independent variable increases.

The odds of being in a higher category of financial performance increase for every unit increase in pricing (odds ratio= 293.7). For each one-unit increase in pricing, the odds of being in a higher category of financial performance are 293.7 times greater. The p-value (0.000) suggests that this relationship is statistically significant. For each one-unit increase in government regulations, the odds of being in a higher category of financial performance are 32.95 times greater. While the odds ratio is high, the p-value (0.342) is not statistically significant, meaning that government regulations do not have a significant impact on financial performance in the model. For each one-unit increase in firm size, the odds of being in a higher category of financial performance are 7.7

times greater but the p-value (0.670) is not statistically significant, meaning the effect of firm size is not significant in this model.

The odds ratio for the interaction between firm size and pricing suggests that for each one-unit increase in both pricing and firm size, the odds of being in a higher category of financial performance increase by 1.517 times while for each one-unit increase in both government regulations and firm size, the odds of being in a higher category of financial performance decrease by a factor of 0.454. The respective p-values of 0.169 and 0.401 suggest that these interaction effects are not statistically significant.

4.5.3.7 Ordinal Logistic Regression Model

The general model for an ordinal logistic regression can be expressed as:

$$\text{Logit}\,(P\,(Y \leq j)) = \alpha_j + \beta_1 X_1 + \beta_2 X_2 + \ldots\ldots\ldots + \beta_k X_k$$

Where:

- $P(Y \leq j)$ is the cumulative probability that the outcome Y (financial performance) is less than or equal to category j i.e. Strongly disagrees to strongly agree.
- α_j are the threshold parameters for each ordinal category
- $\beta_1, \beta_2 \ldots\ldots, \beta_k$ are the coefficients for the predictor variables
- $X_1, X_2 \ldots\ldots, X_k$ are the independent(predictor) variables

This study employed three independent variables with one moderating variable. The model therefore was adjusted to account for the interaction of the moderating variable. The model was expressed as:

$$\text{Logit}\,(P\,(Y \leq j)) = \alpha_j + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4\,(X_1\,X_3) + \beta_5\,(X_2\,X_3)$$

Where:

- α_j are the threshold parameters for each ordinal category
- $\beta_1, \beta_2, \beta_3$ are the coefficients for the predictor variables
- β_4, β_5 are the coefficients for the interaction between the moderating variable (firm size) and two independent variables (pricing and government regulations).
- X_1, X_2, X_3 are the independent (predictor) variables

Substituting the variables into the model:

Logit (P (Y≤ j)) = α_j + β_1 Pricing + β_2Government Regulations + β_3Firm size + β_4 (Pricing*Firm size) + β_5 (Government Regulations*Firm size)

Table 4.18: Thresholds and Coefficients

Parameter		B
Threshold	[Financialperfomance=1.00]	23.732
	[Financialperfomance=2.00]	30.495
	[Financial performance=3.00]	35.646
	[Financial performance=4.00]	38.881
Pricing		5.683
G Regulations		3.495
Firm size		2.039
Pricing * Firm size		.417
G Regulations * Firm size		-.791

From Table 4.17 above, extracted from the ordinal regression estimates, the thresholds and coefficients of the model are as follows:

Thresholds:

- α_1(Strongly disagree vs. Disagree) = 23.372
- α_2(Disagree vs. Neutral) = 30.495
- α_3(Neutral vs. Agree) = 35.646
- α_4(Agree vs. Strongly Agree) = 38.881

Estimates:

- $\beta_1 = 5.683$
- $\beta_2 = 3.495$
- $\beta_3 = 2.039$
- $\beta_4 = 0.417$
- $\beta_5 = -0.791$

The resultant ordinal logistic regression model is as follows:

Logit (P (Y≤ j)) = α_j +5.683Pricing + 3.495Government regulations + 2.039Firm size +0.417(Pricing*Firm size) – 0.791(Government regulations* Firm size) with the thresholds substituted individually for the log odds of respective individual categories.

4.6 Chapter Summary

This chapter presents the research findings, including general information, descriptive statistics, and inferential statistics aligned with the study's objectives. It covers demographic details of the respondents, descriptive statistics for both the independent and dependent variables, and inferential statistics, including correlation and ordinal logistic regression analysis, to examine moderation effects in accordance with the research goals.

From the study it's evident that pricing has a statistically significant effect on financial performance. Local market conditions, such as the availability of foreign currency in the local market influencing the bid-ask spreads offered by the Forex Bureaus had the highest ranking of all pricing items. Government regulations proved to not have a statistically significant effect on performance. There was also insufficient evidence to affirm that firm size had a moderating effect on pricing or government regulations.

It is important to note that while government regulations and firm size had more perceived effect on financial performance than pricing, pricing had a very strong correlation with financial performance. This implies that while bureaus may acknowledge regulations and firm size to be more impactful, they don't directly or measurably affect how well the bureaus perform financially. The data shows that differences in pricing practices across bureaus are more closely linked to differences in financial success.

CHAPTER FIVE

DISCUSSIONS, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

The study sought to find out the determinants of the financial performance of foreign exchange bureaus in Nairobi County moderated by firm size. The identified determinants were pricing and government regulations. In this regard, primary data was collected from official persons from the selected Forex bureaus. This chapter interprets the research findings and compares them with the study's objectives. It is organized into sections covering the data analysis, conclusions, recommendations, suggestions for future research, and the limitations of the study.

5.2 Summary of Findings

The first objective of the study was to evaluate the effect of pricing strategies on the financial performance of foreign exchange bureaus in Nairobi County. According to the results, there was a positive relationship between increases in price and the financial performance of Forex bureaus in Nairobi County. The second objective of the study was to assess the influence of existing government regulations on the financial performance of Forex bureaus in Nairobi County. The results showed that there is no strong association between government regulations and the financial performance of Forex bureaus in Nairobi County. The third objective was to establish the moderating effect of the determinants of the financial performance of Forex bureaus in Nairobi County. The findings indicated that firm size’s moderating role on the determinants of financial performance of Forex bureaus in Nairobi County could not be affirmed.

5.3 Discussion of Findings

5.3.1 Pricing and Financial Performance

The study found a positive and significant relationship between pricing and the financial performance of Forex bureaus in Nairobi County. The implication is that market players who consider the pricing of Forex when making decisions related to the financial performance of Forex bureaus since higher processes have an adverse effect on firm profitability profit. The study contradicted Cespa et al. (2022) who found that whilst pricing was an important determinant, it

was heavily moderated by the availability of reliable data indicating a critical moderating role played by information asymmetry in the relationship between pricing and financial performance. The results echoed the findings of Jama (2020), Ochieng (2018), and Gakuru (2022) who all found that pricing is a significant determinant of financial performance of Forex bureaus. The study found that local market conditions, such as the availability of foreign currency in the local market influencing the bid-ask spreads offered by the Forex Bureaus had the highest effect of all pricing factors studied. The periodic central bank's interbank rate influence on the pricing decisions of the Forex Bureaus and speculative activity in the foreign exchange market contributing to exchange rate volatility also ranked high underscoring the huge effect of external macroeconomic factors on pricing strategies. The findings further indicate that while the interaction effect between firm size and pricing was not statistically significant in the ordinal logistic regression, it's worth noting that the coefficient was positive and the odds ratio was greater than 1. This suggests that there might be some interplay between firm size and pricing strategies, although further investigation is needed to understand this relationship fully.

5.3.2 Government Regulations and Financial Performance

The study determined that there was a positive but non-significant relationship between government regulations and the financial performance of Forex bureaus in Nairobi County. This implies that key decision makers within the Forex bureaus need to take cognizance of government regulations in order to enhance the financial performance of their firms. The study did not find strong linkages with the PPP theory since it contradicted the theory’s inherent assumption of perfect competition which negates the need for tariffs and other government regulations. This contrasted with Askarova et al. (2024) who established that following the integration of government regulations Forex operations had been refined in terms of risk management such that the initial drop in profitability had been arrested due to prudent management. The findings were consistent with Mahmoud (2020), Kaltenbrunner et al. (2022), and Sowah (2019). The findings indicate the shift towards more flexible exchange rate regimes having implications for the profitability of the Forex Bureau had the highest effect and that government-imposed fees and levies influence on the operational costs and profitability of the bureau had the least effect even though it still was a strong one. The interaction effect between firm size and government regulations was also not statistically significant in the ordinal logistic regression. However, the

coefficient was negative and the odds ratio was less than 1, suggesting a potential negative interplay between these factors. This could imply that larger firms might be more negatively affected by regulations than smaller firms, although further investigation is needed.

5.3.3 The Moderating Effect of Firm Size on the Relationship between the Determinants of Financial Performance and Financial Performance

The study found that there was a potential change in the relationship between the determinants of the financial performance and financial performance as the direction of some of the determinants does change with variation of the level of the moderator. However, this moderation was statistically non-significant, and no confident conclusion can be drawn regarding its existence. This echoed Kitenga et al. (2020) who affirmed that there was an absence of a significant moderating impact of firm size on the relationship between dynamic capabilities and sustainable performance. These findings were not aligned with the findings of Wanyongah and Mule (2019) and Kijkasiwat and Phuensane (2020) whose research pointed to firm size as a significant moderating variable. Additionally, in my analysis of firm size as an independent variable, data showed that the more employees the Forex Bureau has, the better its ability to meet customer expectations for service delivery and the greater the impact on financial performance, emphasizing the critical role of a larger workforce in enhancing customer service and satisfaction.

5.4 Conclusions

The study found a positive and significant relationship between pricing and the financial performance of Forex bureaus in Nairobi County. The finding that pricing is a significant determinant of financial performance of Forex bureaus is consistent with Jama (2020), Ochieng (2018), and Gakuru (2022). The study agrees with the existing body of literature based on this finding.

The finding that government regulations is a non-significant determinant of financial performance of Forex bureaus is in disagreement with Mahmoud (2020), Kaltenbrunner et al. (2022), and Sowah (2019). The finding that government regulations is a non-significant determinant of financial performance neither supports nor validates the PPP theory since it contradicts the theory's inherent assumption of perfect competition which negates the need for tariffs and other government regulations.

The results of the study indicate that, although firm size shows a potential moderating effect on the relationship between determinants of the financial performance and the financial performance of Forex bureaus, this conclusion cannot be made with statistical reliability. This finding is not aligned with the findings of Wanyongah and Mule (2019) and Kijkasiwat and Phuensane (2020). It echoed Kitenga et al. (2020) who affirmed that there was an absence of a significant moderating impact of firm size on the relationship between dynamic capabilities and sustainable performance. This finding neither supported nor validated the PPP or the IFE theories from a firm size perspective since both theories are based on factors that are mainly beyond the control of the Forex bureaus such as interest rates. Further studies need to be conducted preferably on secondary data to affirm the moderating effect of firm size.

5.5 Recommendations

The study makes critical contributions to the existing body of knowledge by providing fresh insights into the determinants of the financial performance of Forex bureaus. This is especially important given the dearth of research in the context of Forex bureaus. Additionally, by focusing on the moderating effect of firm size, the study provides a unique perspective of the interplay between each of these variables and the determinants of the financial performance of Forex bureau

5.5.1 Policy Recommendations

The CBK needs to carry out workshops to appraise market participants on applicable laws and standards relevant to FX business and the need for the establishment of appropriate compliance frameworks, particularly those applicable to risk management so that they can reinforce their resilience systems in face of increasing volatility which will enhance their financial performance. Additionally, the CBK should ensure optimal local market conditions which will support market participants' pricing decisions such as those pertaining to bid-ask spreads by focusing on the availability of foreign currency in the local market.

The CBK should revise its current regulatory framework since it has hindered the Forex Bureaus' adoption of automated trading technologies. The CBK should consider re-evaluating the compliance burden placed on Forex bureaus. While regulations are essential for transparency and consumer protection, overly burdensome requirements may hinder profitability, particularly for larger firms. The study recommends the regulator to develop a regulatory framework that balances

financial stability, competition and innovation. This can include the improvement of policies related to inclusion of trading robots that are capable of analysing currency quotes and executing different trades on the basis of traders' settings so as to minimise the negative effect of emotion in investment decisions. The data suggest regulations may be seen as a burden, regular consultations with Forex bureaus are recommended to gather feedback on the practical implications of regulations and identify areas where compliance burdens can be reduced without compromising regulatory goals.

5.5.2 Managerial Recommendations

Given the strong link between pricing and financial performance bureaus need to fully take up innovative trading strategies like spot FX so as to ensure more informed decision making in financial markets. This would also aid in improving risk management. For instance, position trading can ensure that the traders are better able to keep up with major market trends and potentially earn significant profits. The management of the FX should also utilise matching or natural hedging as well as spot transactions in order to reduce the impact of speculation.

The study recommends that Forex bureaus should prioritize investments in technology that enable fast and accurate pricing strategies. Notably, they should implement systems capable of linking real-time interbank rates (as issued by CBK) to their internal pricing models to ensure competitive and responsive pricing.

Given the potential negative impact of regulations on competition and innovation, Forex bureaus should actively engage with industry associations and regulatory bodies to advocate for a more balanced regulatory environment. This could include providing data and feedback on the impact of existing and proposed regulations.

Forex bureaus should recognize the strategic value of firm size in enhancing financial performance. Although the study found a negative coefficient and an odds ratio of less than (suggesting a possible adverse impact of larger size under certain regulatory conditions), scaling through growth strategies, partnerships, and service diversification can still offer resilience and improve market competitiveness, especially for smaller bureaus.

5.6 Limitations of the Study

The study only focused on pricing and government regulations as determinants of financial performance of Forex bureaus while there are a number of other factors including financial risk management, interest rates, currency spread determinants, market volatility, and Gross Domestic Product. The contextualisation of the study on Forex bureaus limited the amount of empirical literature available. Thus, the majority of the specifically relevant literature was from a small pool of countries that have Forex bureaus.

5.7 Suggestions for Further Research

This study has focused on two determinants the direct effect of pricing and government regulations on the financial performance of Forex bureaus, as well as the moderating effect of firm size. Research should be conducted on more than two independent variables as well as other moderating and controlling variables by other researchers. The study conducted was cross-sectional; to better understand the causal impact of policy shifts, longitudinal studies could track changes in financial performance before and after regulatory adjustments—such as changes to licensing, capital requirements, or compliance protocols. The study was also restricted to Forex bureaus in Nairobi County; other research should be conducted on Forex bureaus in other parts of the country.

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Appendix 2 – Ethical Review

Strathmore UNIVERSITY

11th October 2024

Mr Mutua Murithi Earnest,
earnest.mutua@strathmore.edu

Dear Mr Mutua,

RE: The Moderating Role of Firm Size and the Determinants of the Financial Performance of Foreign Exchange Bureaus in Nairobi County

This is to inform you that SU-ISERC has reviewed and **approved** your above **SU-masters** proposal. Your application reference number is **SU-ISERC2298/24.** The approval period is from **11th October 2024 to 9th October 2025.**

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-ISERC.
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-ISERC within 72 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-ISERC within 72 hours.
v. Clearance for the 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 the expiry of the approval period. Attach a comprehensive progress report to support the renewal.
vii. Submission of an executive summary report within 90 days of completion of the study to SU-ISERC.

Before 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 obtain other clearances needed.

Yours sincerely,

Mr Ambrose Rachier,
Chairperson; SU-ISERC

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 –Research Licence

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: 596988

Date of Issue: 13/November/2024

RESEARCH LICENSE

This is to Certify that Mr.. Earnest Murithi of Strathmore University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nairobi on the topic: THE MODERATING ROLE OF FIRM SIZE AND THE DETERMINANTS OF THE FINANCIAL PERFORMANCE OF FOREIGN EXCHANGE BUREAUS IN NAIROBI COUNTY for the period ending : 13/November/2025.

License No: NACOSTI/P/24/42077

596988

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.

See overleaf for conditions

THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013 (Rev. 2014)
Legal Notice No. 108: The Science, Technology and Innovation (Research Licensing) Regulations, 2014

The National Commission for Science, Technology and Innovation, hereafter referred to as the Commission, was the established under the Science, Technology and Innovation Act 2013 (Revised 2014) herein after referred to as the Act. The objective of the Commission shall be to regulate and assure quality in the science, technology and innovation sector and advise the Government in matters related thereto.

CONDITIONS OF THE RESEARCH LICENSE

1. The License is granted subject to provisions of the Constitution of Kenya, the Science, Technology and Innovation Act, and other relevant laws, policies and regulations. Accordingly, the licensee shall adhere to such procedures, standards, code of ethics and guidelines as may be prescribed by regulations made under the Act, or prescribed by provisions of International treaties of which Kenya is a signatory to
2. The research and its related activities as well as outcomes shall be beneficial to the country and shall not in any way;
    i. Endanger national security
    ii. Adversely affect the lives of Kenyans
    iii. Be in contravention of Kenya's international obligations including Biological Weapons Convention (BWC), Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO), Chemical, Biological, Radiological and Nuclear (CBRN).
    iv. Result in exploitation of intellectual property rights of communities in Kenya
    v. Adversely affect the environment
    vi. Adversely affect the rights of communities
    vii. Endanger public safety and national cohesion
    viii. Plagiarize someone else's work
3. The License is valid for the proposed research, location and specified period.
4. The license any rights thereunder are non-transferable
5. The Commission reserves the right to cancel the research at any time during the research period if in the opinion of the Commission the research is not implemented in conformity with the provisions of the Act or any other written law.
6. The Licensee shall inform the relevant County Director of Education, County Commissioner and County Governor before commencement of the research.
7. Excavation, filming, movement, and collection of specimens are subject to further necessary clearance from relevant Government Agencies.
8. The License does not give authority to transfer research materials.
9. The Commission may monitor and evaluate the licensed research project for the purpose of assessing and evaluating compliance with the conditions of the License.
10. The Licensee shall submit one hard copy, and upload a soft copy of their final report (thesis) onto a platform designated by the Commission within one year of completion of the research.
11. The Commission reserves the right to modify the conditions of the License including cancellation without prior notice.
12. Research, findings and information regarding research systems shall be stored or disseminated, utilized or applied in such a manner as may be prescribed by the Commission from time to time.
13. The Licensee shall disclose to the Commission, the relevant Institutional Scientific and Ethical Review Committee, and the relevant national agencies any inventions and discoveries that are of National strategic importance.
14. The Commission shall have powers to acquire from any person the right in, or to, any scientific innovation, invention or patent of strategic importance to the country.
15. Relevant Institutional Scientific and Ethical Review Committee shall monitor and evaluate the research periodically, and make a report of its findings to the Commission for necessary action.

National Commission for Science, Technology and
Innovation(NACOSTI).
Off Waiyaki Way, Upper Kabete.
P. O. Box 30623 - 00100 Nairobi, KENYA
Telephone: 020 4007000, 0713788787, 0735404245
E-mail: dg@nacosti.go.ke

Appendix 4 – Research Instrument

SECTION A: DEMOGRAPHIC INFORMATION

1. Gender of Respondent ☐ Male ☐ Female
2. What is your age? (Kindly tick one below):

   ☐ 20-30 years

   ☐ 31-40 years

   ☐ 41-50 years

   ☐ 51-60 years

   ☐ Above 60 years
3. What is your highest level of education? (Kindly tick one below):

   ☐ Primary School or lower

   ☐ High School

   ☐ Tertiary College

   ☐ Undergraduate

   ☐ Postgraduate

   ☐ Above 60 years
4. How long have you worked for the Forex Bureau? (Kindly tick one below):

   ☐ Less than 1 year

   ☐ 1-5 years

   ☐ 6-10 years

   ☐ Over 10 years

SECTION B: Influence of Pricing on Financial Performance.

Kindly (√) tick appropriately on a scale of 1-5. 1-Strongly Disagree (SD), 2-Disagree (D), 3-Neutral (N), 4-Agree (A), 5-Strongly Agree (SA).

	Statement	SD	D	N	A	SA
1.	Exchange rate volatility affects the profitability of the Forex Bureau.					
2.	Exchange rate volatility presented challenges in managing input and output prices.					
3.	Variations in bid-ask spread across different currency pairs influence the profitability of the Forex Bureau.					
4.	The bureau has not fully taken up innovative trading strategies like spot FX.					
5.	While short-term trading strategies can offer profit opportunities, they expose the bureau to increased market volatility and potential losses.					
6.	Speculative activity in the foreign exchange market can contribute to exchange rate volatility.					
7	The periodic central bank's interbank rate influences the pricing decisions of the Forex Bureau.					
8	Local market conditions, such as the availability of foreign currency in the local market, influence the bid-ask spreads offered by the Forex Bureau.					

SECTION C: Influence of Government Regulations on Financial Performance.

Kindly (√) tick appropriately on a scale of 1-5. 1-Strongly Disagree (SD), 2-Disagree (D), 3-Neutral (N), 4-Agree (A), 5-Strongly Agree (SA).

	Statement	SD	D	N	A	SA
7.	Government-imposed fees and levies have influenced the operational costs and profitability of the bureau.					
8.	Current regulations have made it more difficult for the Forex Bureau to compete effectively.					
9.	The shift towards more flexible exchange rate regimes has implications for the profitability of the Forex Bureau.					
10.	The current regulatory framework has hindered the Forex Bureau's adoption of automated trading technologies.					
11.	The current AML regulatory framework may not sufficiently address the Forex Bureau's challenges.					

12.	The current regulatory framework provides sufficient flexibility for your Forex bureau to adapt to changing market conditions.					

SECTION D: The Moderating Effect of Firm Size on the Relationship between the Determinants of Financial Performance and Financial Performance.

Kindly (√) tick appropriately on a scale of 1-5. 1-Strongly Disagree (SD), 2-Disagree (D), 3-Neutral (N), 4-Agree (A), 5-Strongly Agree (SA).

	Statement	SD	D	N	A	SA
13.	The number of branches your firm operates does not appear to influence the relationship between dynamic capabilities and performance.					
14.	Your firm's presence in geographical regions such as counties expands your profile and reaches a broader market, improving financial performance.					
15.	The more revenue the Forex Bureau generates, the more funding it attracts in the form of loans, boosting its financial performance.					
16.	The more employees the bureau has, the bigger the talent pool it can tap into, be more innovative, and realize better performance.					
17.	The more extensive the revenue base the bureau has, the better it can cushion itself against the worst effects of financial uncertainty and perform better financially.					
18.	The more employees the Forex Bureau has, the better its ability to meet customer expectations for service delivery.					

SECTION E: Financial Performance.

Kindly (√) tick appropriately on a scale of 1-5. 1-Strongly Disagree (SD), 2-Disagree (D), 3-Neutral (N), 4-Agree (A), 5-Strongly Agree (SA).

	Statement	SD	D	N	A	SA
19.	The profitability of the bureau has steadily increased in the last year.					
20.	The bureau achieved satisfactory operational efficiency last year.					
21.	The bureau has not had significant liquidity challenges during the last year.					

Thanks for your participation!

Appendix 5 – Budget

The budget for the research is as follows:

Description	Quantity	Unit Cost	Total Cost
Printing of letters	20	80	1,600.00
Questionnaires for pre-test	12	80	960.00
Questionnaires for final	122	80	9,760.00
Binding of reports	10	80	800.00
Costs of data collection			40,000.00
Printing of reports	10	1,200.00	12,000.00
Cost of internet	2	6,000.00	12,000.00
Costs of transportation	10	1,000.00	10,000.00
Costs of pilot study	10	1,500.00	15,000.00
Miscellaneous costs			30,000.00
TOTAL			**132,120.00**