BINDURA UNIVERSITY OF SCIENCE EDUCATION

FACULTY OF COMMERCE

EFFECTIVENESS OF FOREIGN CURRENCY AUCTION SYSTEM IN STABILISING FOREIGN EXCHANGE RATES IN ZIMBABWE.

BY

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A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT FOR THE REQUIREMENTS OF THE BACHELOR OF BUSINESS STUDIES HONOURS DEGREE IN BANKING AND FINANCE.

JUNE 2022

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DISSERTATION TITLE Effectiveness of foreign currency auction system in stabilising foreign exchange rates in Zimbabwe.

DEGREE TITLE Bachelor of Commerce Honours Degree in Banking and Finance

YEAR OF COMPLETION 2022

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DEDICATION

I dedicate this dissertation to my wonderful family and friends. It is an honour to also extend my gratitude to my beautiful family for their continued sustenance throughout my life at the university. Above all, I am grateful to the Almighty God for enabling me to write this dissertation in full health and strength. I am forever grateful.

ABSTRACT

The study sought to investigate effectiveness of foreign currency auction system in stabilising foreign exchange rates in Zimbabwe. The paper looked at the impact of the Central Bank regulated Foreign Currency Auction System on the exchange rate in Zimbabwe. The exchange rate comprised of both the official interbank rate derived from the auction rates and the parallel exchange rate. The study adopted a descriptive research design and judgmental sampling was used to select the respondents. The study took a hybrid approach to research where both qualitative and quantitative methodologies were used. The target population constituted of 400 participants and stratified sampling and simple random sampling methods were used. The researcher made scheduled interview appointments with participants through the telephone and questionnaires were administered electronically and by hand. The participants constituted of mainly retail banking managers, economic analysts and other senior officers of commercial banks and bureau de change institutions. A thematic approach was adopted to come up with pure assumptions about the nature of the data, reality and presentation of the important themes about data in relation to the research questions. The study revealed that the auction system is falling short of market demands, Zimbabwe faces a severe foreign currency shortage in the formal sector due to inadequate foreign exchange liberalization thus making it difficult to stabilise the exchange rate. The major drawback of this auction system are the assumptions that there is effective demand and supply and that major economic players will solely depend on the formal regulated market for forex. The central bank, however need to efficiently allocate forex funds to active importers and impose directives which are independent of exchange controls to improve such a system.

ACKNOWLEDGEMENTS

I would like to thank all the contributors of this dissertation. These include writers, content developers and owners, various scholars and authors for their content which made this research a possibility. It is worth to mention my project mentor for her support, expertise, supervision and mentorship through the course of this project. I would like also to extend my acknowledgement to my friends for their academic support and guidance in writing this dissertation. Finally, I acknowledge The Almighty God for making this project possible.

Contents

CHAPTER I

INTRODUCTION

1.0 Introduction

Foreign exchange interventions as a possible tool needs to be weighed considering both the design and execution of monetary policy for this reason, the forms of foreign exchange intervention and their effectiveness in achieving exchange rate, since there were partial foreign exchange restrictions and less direct government controls in the foreign exchange market before Rossini et al (2017). The Reserve Bank of Zimbabwe announced the foreign currency auction system in June 2020. Initially foreign currency was only accessed from banks and was later decentralized ensuing in the licensing of several Bureau de Changes across the country in 2002 to 2019 era. There were several policy amendments, reversals and even de-licensing bureau de changes.

The chapter gives an introduction the background of the study, problem statement, delimitations and limitations of the study which are used that assist in highlighting of the effectiveness of foreign currency auction system in stabilizing foreign exchange rates in Zimbabwe. Moreover, the chapter gives an insight of the study and exploring some of the important areas of the study.

1.1 Background of the study

Central bank intervention in foreign exchange markets is a popular strategy for manipulating exchange rates. Although central bankers are confident in the effectiveness of their policies, econometric estimates of precise effects vary among studies. Although many central banks in developed nations, such as the United States Federal Reserve and the European Central Bank, no longer intervene in currency markets, instead allowing their exchange rates to float freely, monetary authorities in emerging market economies (EMEs) do. According to Fratzscher et al. (2019), these central banks intervene once a week on average. Furthermore, in most situations, central banks intervene against an appreciating trend in order to stabilise, if not weaken, their native currency, presumably with the intention of encouraging exports. Policymakers would benefit from carefully assessed consequences of prior interventions because EME nations routinely use foreign exchange interventions and the main developed countries may re-evaluate intervention

policies in the future. It is critical to distinguish between sterilised and unsterilised interventions in terms of intervention effects. Central banks use sterilised interventions to maintain the domestic monetary base stable. When a central bank sells domestic currency, it raises the domestic money supply. In an accompanying operation known as sterilisation, the bank will sell domestic government bonds, for example, in order to preserve an unchanging money supply. The influence on the exchange rate can thus be examined independently of confounding effects such as changes in interest rates or money supply. In the next sections, I will only examine trials including sterilised interventions.

With current account surpluses and significant capital inflows from the start of the global crisis until August 2011, the rupiah appreciated by as much as 14.9 percent in 2009, 4.6 percent in 2010, and 5.4 percent up to August 2011 – an appreciation that helped to mitigate imported inflation caused by high global commodity prices at the time. The scenario was reversed in September 2011, as the global crisis worsened with the lowering of the US ratings and the escalation of the Greek crisis. The immediate consequences were massive money outflows from Indonesia. Heavy pressures resulted in exchange rate overshooting, endangering overall macroeconomic and financial system stability as well as economic development momentum. Despite the fact that capital inflows restarted in 2012 as the world's economic market improved, exchange rate pressures persisted as the current account entered deficit territory due to falling global commodities prices. From August to December 2011, the rupiah fell 6.9 percent, and 6.6 percent in 2012. Graph 1 displays the foreign exchange market's supply and demand scenario, while Graph 2 depicts the related course and fluctuation of the rupiah exchange rate. Examining global investor behaviour is crucial for conducting foreign exchange regulation in Indonesia, given the impact of such conduct on the form and quantity of capital movements as well as currency rate fluctuations. Two factors must be examined. First, consider the various types of overseas investors, such as hedge funds and long-term investors. Hedge fund investors are primarily short-term operators seeking a currency gain (carry trade), and as a result, they frequently cause volatility in capital flows and exchange rates. Long-term investors seek better yields (interest and capital gains) based on economic fundamentals, and as a result, their behaviour in terms of capital flows and currency rates is steadier.

Exchange rates in rich and emerging countries have varied dramatically over time, as many countries switch between different types of exchange rate regimes. The changes have sparked interest in investigating the costs and advantages of various exchange rate regimes, the variables that may contribute for the volatility, and potential cures. Significant swings in nominal and real exchange rate values, in particular, have sparked speculation about whether exchange rates are governed in a regular manner by a narrow set of economic fundamentals discovered by scholars Boke and Doganay (2018). Given the importance of the exchange rate in economic performance, exchange rate regulation and determining an optimal and sustainable exchange rate arrangement have emerged as important macroeconomic policy concerns for many African monetary authorities and central banks.

Several factors affect the choice of exchange rate regime, including policymakers' intentions, the sources of shocks to the economy, and the economy's structural characteristics. Whichever regime is chosen, the authorities are expected to modify their macroeconomic policies (fiscal and monetary policies) to accommodate the chosen exchange rate policy. Monetary policy is used by governments to control monetary aggregates such as the money supply, interest rates, and exchange rate in order to achieve macroeconomic policy objectives such as high employment, price stability, a favourable balance of payments, and economic growth.

African economies have been hit by exogenous and endogenous shocks. In response to these shocks, short, medium and long-term policies have been put in place, with instances of short-term policies dominating long-term strategies that could secure future stability. The debate on whether such monetary and exchange rate policy responses have been appropriate is ongoing. This debate narrows down to the role of central banks in providing appropriate coping strategies amid the shocks, and in aligning their strategies with the African transformative policy agenda (ECA and African Union, 2016). Policy responses have been driven by the shocks themselves and the degree of exposure and policy flexibility in economies. The central banks must strike a balance between steering the economy through the shocks and confronting the looming threats resulting from the global shocks. Additionally, the central banks must confront and overcome possible conflicts between maintaining inflation-targeting regimes and intervening in foreign exchange markets to achieve price stability domestically.

Zimbabwe uses a managed float exchange rate mechanism for the Zimbabwean dollar in relation to the US dollar. In our scenario, true exchange rate movements can be derived by examining the parallel market, which shows that the Zimbabwean-US dollar value has deviated from the market exchange rate in reaction to market forces.

Given the growth of the exchange rate regime over the last three decades, many economies are faced with a new challenge of creating a workable currency arrangement, which has become more pressing as global commerce and finance markets have become more linked. Evidently, some emerging economies have recently undergone serious financial crises, prompting the recognition of the need to alter exchange rates and monetary policy, specifically taking into account the conditions in which these countries operate. As the global financial system matured, a new phenomenon known as dollarisation emerged, which was later reflected by reverse dollarisation or de-dollarisation Mecagni and Mauro (2015). As a result, a foreign exchange auction systems phenomenon has emerged to address the problem.

More than three years after the Multi-Currency Regime (MCR) was implemented in early 2009, the eventual choice of Zimbabwe's exchange rate and monetary policy regime remains a critical macroeconomic policy problem for Zimbabwe, as well as a topic of broader debate. It is widely agreed that the MCR ended hyperinflation, helped to stabilise the economy, and set the stage for the resumption of strong economic growth. It has also helped to stabilise the financial industry. The MCR, on the other hand, has always been regarded as a short-term solution. It was originally scheduled to continue until at least 2012, but was recently extended until at least 2015. (See 2009 National Budget Statement; Medium Term Plan, 2011- 2015). There was considerable debate on currency regime possibilities in 2009-10, shortly after the MCR was implemented, but there has been little meaningful debate or analysis since then. There appeared to be no actual consensus in the argument, as opinion was divided.

The monetary authority’s prime objectives of foreign exchange interventions in Zimbabwe have been mainly to defend the fixed exchange rate and to directly influence the levels of exchange rates. With a fixed exchange rate system, the country required adequate foreign currency reserves to defend the fixed exchange rate parity and to fund imports which were (are) in very nature price inelastic. However, there were other intervention motives, which include smoothing of exchange rate volatilities and for balance of payment management. The forms of interferences ranged from

direct intervention such as devaluation to indirect interventions such as the imposition of trade barriers.

RBZ has utilised various forms and motives of intervention in response to the exchange rate system and key macroeconomic challenges at each point in time. There was sterile and unsterile intervention, as well as direct and indirect involvement. Success ranges from the fixed exchange rate system, where the main reason for intervention was to defend the fixed parity; thus, success was primarily imminent from 1985 to 1995, when foreign exchange reserves were more than sufficient; however, reserves began to deplete around 2000, leading to the shift to the flexible exchange rate system, from the Auction system of 2003 to the actual flexible exchange rates, leading to the abandonment of the local currency. Following the establishment of the multicurrency system in 2008, intervention became indirect and somewhat successful. Depletion of foreign currency reserves due to continuous Balance of Payments deficits, deteriorating levels of production, vulnerability to natural calamities such as droughts, pervasive corruption, policy inconsistency, and incredibility are the reasons for ineffective intervention.

Zimbabwe has struggled to stabilise its currency since February 2019, when it abandoned a US dollar-dominated multi-currency system that had been in place for a decade, with its reinstated local unit losing dramatically against the greenback. For an economy that relies on imports for an estimated 60% of products consumed in the country, especially raw resources, the persistent depreciation of the indigenous currency has unleashed rampant inflation. The new auction-based foreign exchange management regime makes it easier to distribute scarce hard cash. The Zimbabwe government is still investigating this involvement as a company, but the anticipation is that it will be able to provide foreign cash to individuals in need from those who have it, which would be perfect. The assumption is that it must allow FX that is outside the formal system to enter the formal system; this is what we must strive for so that all money in the parallel market enters the formal system. The central bank's participation in the foreign exchange market serves primarily to accumulate foreign exchange reserves. As a result, the researcher's goal is to determine the effectiveness of the foreign currency auction mechanism in stabilising Zimbabwe's foreign exchange rates. To determine if Zimbabwe's foreign-exchange auction system will stay in effect during the projection timeframe. Because of significant constraints on access to US dollars via

official channels, the parallel market will continue operating at a significant discount to the official rate.

1.2 Statement of the Problem

The effectiveness of sterilised intervention on the exchange rate is a hotly discussed topic in the literature, and it is ultimately an empirical question. Notably, empirical estimates of effectiveness are seldom straightforward. Interventions affect the exchange rate, whereas exchange rate changes affect central bankers' behaviour and intervention decisions. A subsequent choice to interfere will be influenced by the exchange rate response to past interventions, which will influence the magnitude and duration of subsequent interventions. Furthermore, if the underlying shocks that cause exchange rate movements are not taken into account, the real intervention effect may be underestimated. For example, consider a central bank that purchases foreign currency to halt an appreciating trend of its domestic currency. Disadvantageous underlying market developments which caused the appreciation in the first place can dampen the intervention's effectiveness. The exchange rate might continue to appreciate and the intervention deemed unsuccessful if these fluctuating market circumstances are not controlled for using appropriate data. (Ministry of Finance and Economic Development, 2020). The socio-economic crisis resulting from the foreign currency shortages and inefficient foreign exchange market has also impacted on the lives of ordinary Zimbabweans who bear the brunt of negative growth estimated at -6.5% in 2019, rising unemployment and wage erosion, drawing the majority into poverty. When COVID-19 struck, there has been a sharp increase in the demand for foreign currency to procure necessary supplies and equipment to fight the pandemic. Zimbabwe still has an obligation to repay the longstanding debt burden to external creditors, putting additional pressure on the national focus and foreign currency in particular.

1.3 Research objectives

The study was guided by the following objectives;

i. To assess the effectiveness of the foreign currency auction system in replacing the fixed exchange rate system.
ii. To establish the extent to which foreign currency auction system has increased supply of foreign currency to meet demand.

iii. To examine the extent to which foreign currency auction system has curbed the parallel foreign exchange rates.

1.4 Research Questions

i. How do Auction Trading System able to replacing the fixed exchange rate system?

ii. To what extent do the Auction Trading System are able to achieve an increased supply of foreign exchange to match increased demand, a reduction in the erratic behaviour of the exchange rate, a decrease in the spread between the highest and lowest bid (or marginal exchange rates)?

iii. In what ways do the Auction Trading System are able to narrowing of the degree of divergence between the auction and the parallel rates?

1.5 Significance of the study

The study is extremely important to the Zimbabwean economy as it has the potential to unpack the problems of RBZ regulations on exchange rates. The researcher is going to write a report on the finding and propose the solutions. Also, other researchers can identify gaps for further studies on the effects of central bank regulation on exchange rate in Zimbabwe. Through the findings and recommendations of this study, the new auction system will help the central bank hoping to eliminate the parallel market. World over, trillions of dollars are traded each minute to meet the demand of buyers and sellers.

This research would help the government in the end because the auction system is a noble idea on paper, government has to be clear on whether it will allow market forces to determine the exchange rate for the local currency, while the printing machines at the central bank are decommissioned or the market completely adopts the US dollar by rejecting the local currency. The latter is very much in motion now, as such the auction system has to deliver at all costs.

The University will broaden the scope of its students' research interests. Finally, but not least, the researcher uses it to train in research skills. Following the investigation, the researcher intends to publish the findings on the internet in order to broaden the base of knowledge in the field of study. It is envisaged that the study will be useful to the central bank in determining the effectiveness of the foreign currency auction system in stabilising Zimbabwean exchange rates. The study would also be significant in that it would provide a useful foundation for future studies to be conducted

by other researchers in the same subject. The study findings would also provide essential literature for other scholars who might want to investigate the impact of internal control mechanisms on operational efficiency in local governments further.

1.6 Delimitations of the study

The research will be confined the population consist of the 400 financial statement users and directors in the central bank in Zimbabwe selected 165 as sample size. The researcher is going to use simple random sampling to select the sample focusing on the effectiveness of foreign currency auction system in stabilizing foreign exchange rates in Zimbabwe. In addition, the research targeted the management in the central bank.

1.7 Limitations of the study

Financial constraints

Due to this financial constraint, the researcher will resort to less costly ways, for instance the use of the internet where possible and limiting the research to the environment physically accessible to the researcher. Currently the economy is not stable and funds to cater high fares for the travelling expenses will be a limitation to the researcher to reach out participants. In order to reduce costs, the researcher is going to use emails to send questionnaires so as to avoid travelling expenses.

Confidentiality constraints

Financial information is highly confidential in most organisation hence the researcher assumes it will be difficult for the researcher to access relevant information for the research. Despite mutual assurances of ethical handling of research information, may remain restrictive especially to sensitive information. To compensate for the lack of information, the researcher will tell respondents that their responses would be kept private and confidential. The questionnaires will also have a confidentiality clause.

Time constraints

The researcher is a full time employed and part time student and due to these reasons, there will be a limitation in time to carry out the study. However, in order to meet to solve this limitation the researcher is going to schedule a time table for the interviews so that he can manage time

effectively. The researcher used the Parkinson's Law time management strategy. The strategy works by reducing the Time assigned to each task. The researcher will dedicate weekends and public holidays so as to successfully carry out the research and to write the research report.

1.8 Definition of terms

1.8.1 The foreign exchange (FX) auction is a monetary policy instrument through which the National Bank sells or buys foreign currency on the interbank FX market. Hence, inflows and outflows of government funds are managed through the NBG and government accounts bypass the foreign exchange market DiNapoli (2009).

1.8.2 An exchange auction is any regime where the allocation of a given amount of foreign exchange is determined through a bidding process. Within that, the institutional dimensions and features of the regime can vary greatly. This part of the paper describes the typical structure for the auction. In addition, it analyses the alternatives for solving various problems that may be encountered Hendrickse (2018)

CHAPTER II

LITERATURE REVIEW

2.1. Theoretical review

Many theories have been put forward to explain exchange rate behaviour. Models have been developed and modified by various economists over the years as stated below. In this section, the theoretical background and modifications of some of these models and some empirical studies used to inform the theoretical framework and conceptual framework and empirical review.

2.1.1 Purchasing power parity and interest rate parity

The theory of purchasing power parity (PPP) states that change in the exchange rate between currencies for any given time period is determined by change in the countries' relative price levels. It implies that the exchange rate between any two countries is in equilibrium when their domestic purchasing powers at that rate of exchange are equivalent. Accordingly, changes in price level are the main determinant of movements in the exchange rate Otuori (2016). The theory assumes that without transaction costs, identical goods would have similar prices in different markets, that is, the law of one price. Based on PPP, the percentage change in the exchange rate between two currencies is approximately equal to the difference in their respective countries' rate of inflation.

As the concept of PPP is derived from the law of one price, it is subject to the same limitations of inflation rate, transport and other transaction costs. It is, however, an important and recurrent concept in international finance, which is used in a number of theories of exchange rate and balance of payments Hallwood and McDonald (2016). This theory implies that price differentials (terms of trade) between two trading partners is the main determinant of the exchange rate of the two currencies. The theory of interest rate parity (IRP) suggests that the interest rate differential between two countries is equal to the differences between the two countries' spot exchange rate and forward exchange rate. This theory plays a critical role in exchange markets by connecting spot exchange rates, foreign exchange rate and interest rates. Interest rates, inflation and exchange rates are all highly correlated. It, therefore, implies that any changes in the interest rate by the

monetary authority influence the countries' exchange rate and inflation rate Alexius (2014). This happens through the capital account of balance of payment.

Higher interest rates attract capital inflows, raising the demand for domestic currency and the exchange rate. Interest rate parity can be stated in two ways: uncovered interest parity (UIP); and covered interest parity (CIP). Uncovered interest parity holds that the differences between the current spot exchange rate and the expected future spot rate of two currencies reflect the differences in the interest rate on short-term assets denominated in the two currencies. It holds when the interest differential just equals the expected premium or discount on foreign exchange. On the other hand, CIP refers to a condition in which the relationship between interest rates and the spot exchange rate and forward exchange rates between two countries are in equilibrium, leaving no room for interest arbitrage, Stavrakeva and Teng (2015). The frictions are the inability of investors to borrow at the risk-free government bond rate, counterparty risk, and the value at-risk constraints.

Stavrakeva and Tang (2015) reviewed the conventional and unconventional measures of monetary policy as drivers of nominal exchange rates. They found that shocks in monetary policy and changes in the expectations about future monetary policy have a significant impact on exchange rate variations in some countries.

2.1.2 Balance of Payments

Developed by Krueger (1969), the theory of balance of payments, also known as the demand and supply theory of exchange rate, suggests that the exchange rate is determined through the balance of payments depending on the balance between demand and supply of foreign exchange in the exchange market. Credits in the balance of payments constitute the supply of foreign exchange made by the exporting countries. On the other hand, debits constitute the economy's demand for foreign exchange emanating from the importing countries. Any surplus or deficit realized in the balance of payments results in changes in the demand or in the supply of foreign exchange, which leads to fluctuations in the foreign exchange rate. Favourable balance of payments raises a country's exchange rate above the long-run equilibrium exchange rate, which, in turn, reduces the country's competitiveness Kanamori and Zhao (2006).

The theory, also referred to as the general equilibrium theory of exchange rate, is, however, based on several unrealistic assumptions, including, among them, a contemporary integrated world

market, limited holding of stocks and long lags in market information dissemination. With the advancement of technology, information on commodity and financial markets is shared almost in real time. It also assumes perfect competition with no government intervention in the foreign exchange market. Other limitations of the theory are that it fails to explain the determinants of the internal value of a currency; it considers the balance of payments as a fixed quantity; it ignores the connection between the rate of exchange and the internal price level; and the theory is indeterminate at a time. These assumptions are unrealistic in the real-world scenario.

2.1.3 The monetary policy channel

A potentially important influence on the exchange rate is the relationship between interest rates at home and abroad. Changes in real interest rate differentials caused by monetary policy actions tend to move the exchange rate, especially if unanticipated through the transmission of monetary policy actions to the economy. There are linkages from sterilised intervention back to the monetary policy channel which operate through the existence of policy trade-offs - whereby inflation and real economy developments both enter the objective function of the monetary authorities - and through expectations of how those trade-offs will affect future policy

2.2 Conceptual review

The exchange auction blends the flexible exchange-rate regime with the rationing regime. A certain quantity of foreign exchange is rationed regularly through an auction, with the price of foreign exchange adjusting accordingly. Subsequent surrender of foreign exchange up until the next auction is made at this auction-determined rate less commissions, resulting in a ratchet-like flexible regime. The desired reserve accumulation, as well as other transactions discussed below, can be set aside, and the rest of the foreign exchange is auctioned. Most capital account transactions, however, are highly restricted. Before looking at the particular features of such a system, it is useful to highlight the conditions under which an auction compares favourably with the alternatives. In contrast to an administrative rationing system, an auction uses prices as a mechanism for rationing the available foreign exchange. A regime of increasingly restrictive administrative allocation of foreign exchange generally is viewed as more damaging to the resource allocation process and more encouraging to rent seeking behaviour than a price rationing mechanism, as summarized in Bhaghwati (2018).

In addition, the auction can establish a higher price for certain categories of supply of foreign exchange as well. The debate over the superiority of fixed or flexible exchange rate regimes is unresolved for both developed and developing countries. Nonetheless, following an exchange crisis, introduction of inflexible regime has certain advantages over a major devaluation and continued maintenance of a fixed-rate regime Stavrakeva and Teng (2015). Usually, at this stage, the equilibrium exchange rate is not known to policymakers with much precision. A float removes the need to select a rate. Also, setting quantity and not price assures a more certain path of reserves accumulation, which may be important in the country's relationship with the IMF and other international creditors.

An over devaluation under a fixed regime likewise increases the likelihood of adequate reserve accumulation, but the political costs typically present for any devaluation would be heightened. A crawling peg appears more similar to the exchange auction, except that the central bank regularly adjusts the price instead of the quantity Stavrakeva and Teng (2015). However, it appears that the public's perceptions as to the central bank's (and thus government's) role in determining the exchange rate may be different for the two regimes. Under an auction (or other flexible rate regimes), the central bank may not be perceived as determining the exchange rate, even though its reserve management (or intervention) decisions directly affect the quantity of foreign exchange in the market and, thus, its price Stavrakeva and Teng (2015). Vis-a-vis a flexible rate interbank market, an auction with many participants also may have an advantage since the banks can avoid being pinpointed as the economic agents responsible for the devaluations which may ensue.

Another situation in which an auction may make more economic sense than a freely floating market for both sales and purchases of foreign exchange is when the market is thin or characterized by infrequency of transactions Stavrakeva and Teng (2015). Under the auction system, foreign exchange purchases are accumulated before sales are made. Thus, the exchange auction may well be a sensible alternative to intensified administrative allocation, over devaluation, a crawling peg regime, -6- or a freely floating market as a way to stem the drainage on international reserves and allow them to be restored over time. We now turn to a discussion of the mechanics of the auction and the features introduced to address particular problems

2.2.1 Institutional Features of Exchange

Auctions an exchange auction is any regime where the allocation of a given amount of foreign exchange is determined through a bidding process. Within that, the institutional dimensions and features of the regime can vary greatly Stavrakeva and Teng, (2015). This part of the paper describes the typical structure for the auction. In addition, it analyses the alternatives for solving various problems that may be encountered. Much of the analysis is based on empirical evidence from the experiences of the three countries where exchange auctions have been used, Uganda (1982-85), Sierra Leone (1982-83), and Jamaica (1983-85) Stavrakeva and Teng (2015). Rather than describe the chronological development of these regimes, we focus on the issues that need to be addressed.

Auctions and bidding models on strategic behaviour have received considerable attention in other parts of economic literature, Stavrakeva and Teng (2015). Unfortunately for our purposes, they generally apply to auctions with structural characteristics other than those considered here, such as the auctioning of one indivisible object, but certain relevant results are presented.

Access to the exchange auction system is based primarily on the type of transaction for which the foreign exchange is to be used, Beatrice (2016). Normally, access is relatively unrestricted for current account transactions, but relatively restricted for capital account transactions. This feature reduces the impact that fluctuations in assets demand may have on the capital account, the exchange rate and. thus the rest of the economy. To ensure that the foreign exchange allocated through the auction is used for the stated purpose, certain documentation is submitted at the time of the bid. For imports, a pro-forma invoice may suffice. In cases where serious economic distortions can be removed only gradually and therefore the authorities do not wish to relinquish completely administrative influence over import allocation, an import licensing regime may continue to operate in parallel to the auction system, where an import license is required for access to the auction. For example, in Jamaica and Uganda, the import licensing regimes were gradually relaxed over time. However, a more liberal system broke down in Sierra Leone, where a list of prohibited imports was reintroduced after less than two months, Beatrice (2016). Typically, for capital and services account transactions, the prior approval of the central bank is required, and the nature of the controls remain the same as before the introduction of the auction. Largely excluded

from any access to official foreign exchange is any form of capital outflows, other than repayment of registered external debt.

Other approved transactions with access to the auction system tend to be limited to profit remittances, dividend payments, certain capital transfers of private non-bank agents such as emigrants and exchange rate cover for commercial banks, Beatrice (2016). Obviously, it is difficult to insulate the auction completely from private capital outflows, loosely referred to as "capital flight," but not necessarily more than under alternative exchange regimes. Although there has been a perception in Uganda and Sierra Leone that the auction provides an opportunity for over- and under invoicing to certain groups which would have been excluded from an administrative allocation system, controls to prevent over- and under-invoicing can be identical in both systems, David Faulkner and Konstantin Makrelor (2018). In fact, if one of the causes of capital outflows is an expected devaluation of an overvalued exchange rate, then the introduction of a floating system such as an auction serves to reduce short-term capital flight. This appears to be the result in Jamaica. Since access to the exchange auction for capital transactions remains highly restricted, presumably another illegal (black) market continues to exist. Nonetheless, its scope is largely reduced compared to the previous situation.

Central Bank Interventions (CBI) are direct purchases or sales of foreign currency on the spot market by central monetary authorities with the explicit goal of affecting the dynamics of the exchange rate. From 1985 through 2018, the Reserve Bank of Zimbabwe intervened in the foreign currency market in a variety of ways, including sterilised and unsterilized interventions, direct and indirect interventions (via quasi-fiscal operations), and often secret and money market activities. A distinction can however be drawn between (1) unsterilized intervention (the norm in fixed rate regimes) where the foreign exchange intervention is not offset by other domestic open market actions and, (2) sterilized intervention (the normal situation in floating rate regimes) where the foreign exchange intervention is offset by influencing domestic reserves market.

These are active purchases (sales) of foreign-currency by the central bank to neutralise or sterilise through sales (purchases) of bonds to banks in order to control the impact on the monetary base. Such types of intervention often called double-edged interventions. Under sterilized intervention the RBZ take deliberate action to offset foreign exchange market intervention with an equal change in the net domestic credit and this happens either simultaneously or with some short lag, while

leaving interest rates unchanged. Sterilised intervention constitutes an independent policy tool, Christopher Neely (2016). Note that, sterilised intervention does not affect domestic prices and interest rates directly hence, it does not influence the exchange rate through the two macroeconomic variables, but through the portfolio balance and the signalling channels as highlighted in the theoretical literature review below. When a monetary authority buys (sells) foreign exchange, the monetary base increases (decreases) by the amount of the purchase (sale). By itself, this type of transaction would influence exchange rates in the same way as domestic open market purchases (sales) of domestic securities. However, the RBZ routinely sterilize foreign exchange operations through reversing the effect of the foreign exchange intervention on the domestic monetary base by buying and selling domestic bonds, Edison (1993).

The link between currency rates and monetary control is largely determined by the balance sheets of central banks. The liabilities include base money (BM), which includes reserves, currencies, and the central bank's net value. There are two types of assets: net foreign assets (NFA) and net domestic assets (NDA) (NDA). Participation in the foreign currency market will cause NFA to alter, Simatele (2004). The balance sheet overview can be written as follows: Sterilization necessitates purposeful action by the central bank, such as open market operations (sales or purchases of securities) that result in an equivalent change in domestic assets. The monetary base varies without sterilisation; hence the size of sterilisation is largely determined by the extent to which parallel changes occur in NDA as NFA, Simatele (2004). Full sterilisation occurs when changes in NFA are completely offset by changes in NDA, resulting in the expression. There will be no effect on the monetary base with full sterilisation. Changes in larger money aggregates and interest rates will have an impact on expectations, capital inflows, and, ultimately, the exchange rate.

Zimbabwe was no-longer full sterilisation due to the continued loss of value of the domestic currency hence even the domestic currency denominated bonds became very risk assets and such interventions have contributed immensely to the continued price rises of the period 2003 to early 2009. Sterilised intervention usually affects the exchange rate through the portfolio balance channel and the signalling channel.

Unsterilised interventions are conducted without any deliberate action taken to offset the impact of interference on the monetary base. If interventions are not sterilised, purchases or sales of

foreign currency led to changes in the relative money stocks and/or relative interest rates thereby affecting the exchange rate. This have been the common form often instituted by the RBZ hence usually punctuated by the lowering of interest rates, capital outflows and over ballooning rates of domestic inflation resulting from excessive growth of money supply. Without sterilisation, the monetary base will be directly affected (as shown by the illustrations below) and the result will be mounting inflationary pressures in the economy emanating from increasing domestic money supply and the lowering of interest rates. If interventions were not fully sterilised, changes in the monetary base will be inevitable despite being less than that of the intervention, meaning that in some instances we have. There was also non-sterilized direct intervention by the central bank in the foreign currency market involves the buying and selling of currency without adjusting the monetary base. Unsterilized sale of foreign exchange was expected to appreciate the exchange rate through contraction of money supply and therefore interest rates. Conclusively, intervention is non-sterilized when it is conducted without any action taken to offset the impact of intervention, Makochekanwa (2007).

Money was also printed to meet the civil servants' salaries. This printing has thus contributed towards the loss in value of the local currency, the Zimbabwe dollar and the rising inflation. This was not sterilized by the purchase of foreign currency to neutralize the increase in the domestic currency that have affected the asset holdings of the economic agents through the portfolio balance channel basing on the perfect imperfect substitutability of domestic and foreign currency denominated assets. The loss of value of the domestic currency resulted in Zimbabwe $ denominated assets being risk hence it triggered a serious portfolio adjustment from domestic to foreign currency denominated financial assets thereby increasing the demand for the already scarce foreign currency to aid the portfolio adjustments. Dollarization amplifies the reaction of financial intermediaries to sharp movements in their funding or to high exchange rate volatility. As a result, the economy is prone to credit booms and busts associated with flows of foreign currency deposits, foreign credit lines or other capital flows, and to exchange rate movements that affect the quality of the credit portfolio. Dollarization therefore alters the transmission mechanism of monetary policy and increases the liquidity and solvency risks of the financial system. Rossini et al (2013). Secrete interventions are done usually to maximize and or minimize market impact and for portfolio adjustment. Owing to mistrust and lack of sound credibility by the public to the central

bank of Zimbabwe, the monetary authorities were left with no option but to institute secret foreign exchange interventions in some cases between 2014 and current.

United States	Price	Day	%	Weekly	Monthly	YoY	Date	
	US30	31138	255	-0.81%	-5.40%	-3.37%	-9.46%	02:28
	US500	3854.21	46.65	-1.20%	-6.48%	-3.83%	-9.42%	02:28
	USNDX	11639	194	-1.64%	-7.60%	-4.92%	-17.60%	02:28

Europe	Price	Day	%	Weekly	Monthly	YoY	Date
GB100	7318	159	-2.12%	-3.82%	-0.41%	2.57%	Jun/10
DE40	13762	437	-3.08%	-4.83%	-0.48%	-12.31%	Jun/10
FR40	6187	171	-2.69%	-4.60%	-1.32%	-6.26%	Jun/10
IT40	22547	1,229	-5.17%	-6.70%	-4.96%	-12.33%	Jun/10
ES35	8391	321	-3.68%	-3.83%	0.94%	-8.85%	Jun/10
MOEX	2286	8	-0.37%	-0.98%	-4.26%	-40.51%	Jun/10
NL25	682	18	-2.52%	-2.67%	-0.11%	-6.38%	Jun/10
BIST 100	2543	28	-1.11%	-2.24%	3.63%	74.08%	Jun/10
CH20	11085	238	-2.10%	-3.86%	-4.06%	-6.39%	Jun/10
Stockholm	1991	53	-2.61%	-3.80%	0.67%	-12.63%	Jun/10

Europe	Price	Day	%	Weekly	Monthly	YoY	Date
WIG	54308	1,133	-2.04%	-4.48%	0.76%	-17.98%	Jun/10
BE20	3770	82	-2.14%	-2.87%	-4.75%	-10.02%	Jun/10
Oslo	1419	30	-2.04%	-2.20%	5.08%	16.52%	Jun/10
ATX	3185	131	-3.96%	-5.48%	3.36%	-9.35%	Jun/10
Copenhagen	1665	25	-1.48%	-1.94%	2.82%	3.17%	Jun/10
Helsinki	10777	267	-2.41%	-2.63%	1.28%	-13.50%	Jun/10
Helsinki 25	4738	114	-2.36%	-2.68%	1.60%	-11.35%	Jun/10
ISEQ	6806	254	-3.60%	-4.88%	-2.40%	-18.35%	Jun/10
Athens General	863	24	-2.72%	-3.83%	-0.01%	-6.83%	Jun/10
PSI Geral	4545	96	-2.07%	-0.89%	6.47%	20.29%	Jun/10
PSI 20	6088	214	-3.39%	-2.16%	5.15%	18.29%	Jun/10
PX	1315	30	-2.21%	-1.11%	1.28%	11.72%	Jun/10
BET	12354	126	-1.01%	0.74%	1.01%	7.24%	Jun/10
BUX	38951	712	-1.80%	-5.70%	-4.83%	-20.26%	Jun/10
PFTS	519	0	0.00%	0.00%	0.00%	-2.25%	Jun/10
SAX	371	1	-0.36%	0.00%	-3.33%	0.06%	Jun/10
LuxX	1594	36	-2.23%	-5.64%	-1.58%	-1.87%	Jun/10
CROBEX	2101	2	-0.09%	0.40%	-0.13%	6.69%	Jun/10

Europe	Price	Day	%	Weekly	Monthly	YoY	Date
SOFIX	620	0	-0.04%	0.71%	1.97%	14.30%	Jun/10
SBITOP	1181	2	0.20%	2.35%	6.00%	3.39%	Jun/10
Vilnius	921	2	-0.25%	-0.12%	1.29%	-1.21%	Jun/10
BELEX 15	827	3	-0.38%	-1.28%	0.90%	5.77%	Jun/10
Riga	1134	1	-0.11%	3.69%	9.68%	-6.11%	Jun/10
ICEX	2320	20	0.89%	0.82%	-2.41%	5.11%	Jun/10
MBI 10	5993	34	-0.56%	-1.88%	-3.92%	11.32%	Jun/09
MSE	3738	8	-0.20%	-1.15%	0.43%	-6.76%	Jun/10
SASX-10	1026	9	0.85%	5.94%	5.98%	26.70%	Jun/10
Tallinn	1827	6	-0.35%	-0.47%	-1.02%	9.91%	Jun/10
EU350	1705.35	45.26	-2.59%	-3.82%	-1.14%	-6.38%	Jun/10
EU1200	2935.19	83.76	-2.77%	-5.86%	-0.95%	-11.84%	Jun/10
CSE General	71	1	-1.27%	-0.88%	4.17%	11.11%	Jun/10
EU50	3599	125	-3.36%	-4.88%	-1.33%	-12.78%	Jun/10
EU100	1191	32	-2.62%	-3.61%	-0.43%	-6.96%	Jun/10
EU600	422.71	11.67	-2.69%	-3.95%	-1.14%	-7.61%	Jun/10
Monex	10872.40	30.80	0.28%	1.01%	5.63%	-2.71%	Jun/10

America	Price	Day	%	Weekly	Monthly	YoY	Date
US30	31138	255	-0.81%	-5.40%	-3.37%	-9.46%	02:28
US500	3854.21	46.65	-1.20%	-6.48%	-3.83%	-9.42%	02:28
USNDX	11639	194	-1.64%	-7.60%	-4.92%	-17.60%	02:28
Ecuador General	1260	0	0.00%	-0.26%	-1.09%	-4.69%	Jun/10
CATSX	20275	289	-1.41%	-2.48%	2.21%	0.68%	Jun/10
IBOVESPA	105481	1,612	-1.51%	-5.06%	1.04%	-18.51%	Jun/10
IPC Mexico	48472	819	-1.66%	-4.37%	-1.63%	-5.49%	Jun/10
Peru General	20228	144	-0.71%	-3.11%	2.49%	2.11%	Jun/10
Merval	89141	272	0.31%	-2.87%	3.94%	34.87%	Jun/10
IBC	6219	94	1.54%	0.34%	10.05%	25.74%	Jun/10
COLCAP	1531	4	0.26%	-5.16%	1.44%	21.33%	Jun/10
IGPA	27548	306	1.12%	-2.05%	14.10%	27.18%	Jun/10
BVPSI	397	1	0.34%	0.32%	0.25%	6.16%	Jun/10
BSX	2242	0	0.00%	1.09%	-5.67%	-12.74%	Jun/10
JSE	398230	83	0.02%	-1.08%	-4.55%	-7.00%	Jun/10

Asia	Price	Day	%	Weekly	Monthly	YoY	Date
JP225	27087	738	-2.65%	-2.93%	2.07%	-7.08%	02:28

Asia	Price	Day	%	Weekly	Monthly	YoY	Date
SHANGHAI	3285	46	1.42%	1.50%	7.39%	-8.49%	Jun/10
CSI 300	4239	63	1.52%	1.75%	6.60%	-18.87%	Jun/10
SHANGHAI 50	2900	31	1.09%	2.62%	5.78%	-18.93%	Jun/10
CH50	14100.30	222.33	1.60%	2.67%	6.57%	-21.17%	Jun/10
SENSEX	54303	1,017	-1.84%	-2.63%	0.40%	3.48%	Jun/10
DSE Broad	6431	49	-0.75%	-1.01%	0.01%	6.55%	Jun/12
JCI	7087	96	-1.34%	-1.34%	3.97%	16.26%	Jun/10
TASI	12322	282	-2.23%	-2.64%	-6.29%	13.08%	Jun/12
TAIEX	16460	161	-0.97%	-0.88%	2.84%	-4.38%	Jun/10
ADX General	9628	16	-0.16%	-2.12%	-1.70%	43.67%	Jun/10
SET 50	988	6	-0.56%	-0.77%	2.70%	-0.32%	Jun/10
FKLCI	1494	16	-1.04%	-2.85%	-3.98%	-5.16%	Jun/10
STI	3182	28	-0.87%	-1.55%	-1.37%	0.75%	Jun/10
TA-125	1870	70	-3.59%	-5.46%	-4.65%	5.10%	Jun/12
HK50	21806	63	-0.29%	0.70%	10.00%	-24.39%	Jun/10
PSEi	6530	229	-3.38%	-3.14%	-1.59%	-5.47%	Jun/10
KSE 100	42015	279	0.67%	1.69%	-1.98%	-13.02%	Jun/10
KASE	2679	4	0.13%	1.77%	-4.21%	-20.50%	Jun/10

Asia	Price	Day	%	Weekly	Monthly	YoY	Date
QE	12918	182	-1.39%	0.87%	0.32%	20.28%	Jun/12
HNX	306.44	6.30	-2.01%	-1.30%	-7.99%	-3.24%	Jun/10
VN	1284	24	-1.81%	-0.30%	-1.34%	-5.01%	Jun/10
MSM 30	4126	9	-0.21%	0.06%	-0.44%	2.11%	Jun/12
ASPI	7899	18	0.22%	-1.94%	1.86%	3.79%	Jun/10
Blom	1471	15	1.02%	-0.20%	41.61%	60.29%	Jun/10
ASE	2437	6	-0.24%	-0.83%	-0.88%	17.27%	Jun/12
LSX Composite	566	3	-0.52%	-2.70%	-2.11%	0.51%	Jun/10
MSE 20	34769	285	0.83%	2.27%	-2.34%	3.66%	Jun/10
DFM General	3377	3	0.08%	-0.30%	-4.31%	18.79%	Jun/10
Kuwait All Share	7467.42	142.00	-1.87%	-2.70%	-3.03%	17.99%	Jun/12
JPVIX	21.27	1.05	5.19%	11.89%	-25.60%	18.63%	Jun/10
NIFTY 50	16202	276	-1.68%	-2.31%	0.21%	2.55%	Jun/10
TEDPIX	1520298.00	4,911.00	0.32%	-1.41%	-1.29%	31.99%	Jun/08
Estirad	1870.08	13.06	-0.69%	-1.77%	-5.12%	20.45%	Jun/12

Australia	Price	Day	%	Weekly	Monthly	YoY	Date
AUALL	7145	95	-1.31%	-4.38%	-2.18%	-5.70%	Jun/10

Australia	Price	Day	%	Weekly	Monthly	YoY	Date
AU200	6932	88	-1.25%	-4.24%	-1.88%	-5.20%	Jun/10
AU50	6798	75	-1.09%	-4.06%	-1.42%	-3.79%	Jun/10
NZX 50	10973	163	-1.47%	-3.05%	-1.71%	-12.59%	02:27

Africa	Price	Day	%	Weekly	Monthly	YoY	Date
NSE-All Share	53201	31	0.06%	0.55%	0.69%	35.87%	Jun/10
SA40	61348	1,079	-1.73%	-4.62%	-0.71%	-0.16%	Jun/10
SAALL	67804	1,107	-1.61%	-4.40%	-0.90%	0.12%	Jun/10
EGX 30	10098	138	-1.35%	1.12%	-4.15%	2.13%	Jun/12
CFG 25	12565	47	-0.37%	-0.36%	-0.67%	0.82%	Jun/10
Nairobi 20	1677	7	-0.41%	-1.37%	-4.44%	-12.31%	Jun/10
Nairobi All Share	130	0	0.01%	0.37%	-10.53%	-24.63%	Jun/10
DSEI	1870	172	10.12%	-1.13%	0.35%	-5.89%	Jun/10
TUN	7349	7	0.09%	0.10%	1.10%	-0.40%	Jun/10
GGSECI	2552	0	0.00%	0.03%	-1.33%	-5.94%	Jun/10
SEMDEX	2193	10	0.46%	0.26%	-2.94%	25.66%	Jun/10
USE All Share	1243.57	0.01	0.00%	-1.12%	0.89%	-15.64%	Jun/10
NSX Overall	1677	58	-3.35%	-6.02%	1.63%	15.42%	Jun/10

Africa	Price	Day	%	Weekly	Monthly	YoY	Date
Gaborone	7216	3	-0.04%	-0.01%	-0.15%	9.34%	Jun/10
ZSI Industrials	79556.50	10.21	-0.01%	1.72%	0.73%	296.54%	Jun/10

This page provides stock market indexes quotes for several countries including the latest price, weekly, monthly and yearly percentage changes.

The foreign exchange market involves firms, households, and investors who demand and supply currencies coming together through their banks and the key foreign exchange dealers.

Hendrickse, (2018) carried out a study on the effects of monetary intervention on dollar-mark and dollar-yen for USA, German and Japan for the period 2013 to 2018. Results from this study indicated that interventions increase volatility of the exchange rate. The study shows that some traders have knowledge that the central bank is intervening at least an hour before the public release of the information in newswire reports. Evidence from this study also shows that timing of the intervention is significant.

Michel B. et al (2019) also carried a study on the effect of central bank interventions of DEM-USD and YEN-USD exchange rates. Allowing for regime dependent specifications, it was found that coordinated interventions either destabilise or stabilise the exchange rate depending on the level of volatility prevailing.

Simwaka K. and Mkandawire (2018) used monthly exchange rate and official intervention data applying the GARCH (1, 1) model for Malawi to analyse the effectiveness of central bank intervention. The analysis revealed that intervention by the central bank affect the Kwacha during the period 2012 to 2018. It was found out that net sales of dollars depreciate rather than appreciates the Kwacha. The intervention also reduces volatility of the Kwacha thus achievement of the central bank objective of smoothing out fluctuations of the Kwacha. Therefore, intervention was seen as an effective tool for moderating fluctuations and that CBIs have long lasting, quantitatively significant effect.

Simatete (2019) used a GARCH (1.1) model to investigate the simultaneous effect of the central bank intervention on the mean and variance of the Zambia Kwacha and results indicated that central bank intervention in the foreign exchange market reduces the Zambian Kwacha volatility. However, the inefficiency of using of proxying CBIs with the fluctuations in national foreign currency reserves especially on the part of many developing countries like Zimbabwe ultimately resulted in the study being qualitative. This is due to the fact that much of the fluctuations are due mainly not to CBIs but to other unproductive, corruptive and non-forex market interventions. Despite the ineffectiveness of Reserves, fluctuations being used as the dependent variable of intervention, unavailability of the reserves fluctuation data also limited this study to be qualitative in nature. If the fluctuations may happen to affect the exchange rate, they will be more or less indirect hence difficult to capture with the fluctuations in reserves.

Njuguna (2019) assessed whether the exchange rate was affected by monetary policy in Kenya between 2015 and 2019, and whether such effects (if they exist) are permanent or transitory. Carrying out causality tests and using quarterly data, the empirical results showed that the nominal exchange rate was determined by real income growth, inflation rate, growth in money supply, the real exchange rate cycles, and the monetary shocks. The results further revealed that there were feedback effects between monetary shocks and the cyclical movements of the real exchange and that the cyclical component appreciated the nominal exchange rate, while growth in money supply depreciated the nominal exchange rate. It was concluded based on the study that the exchange rate policy was not supported by an appropriate monetary policy. This is because monetary shocks were found to affect the real exchange rate, and at the same time the exchange rate policy accommodated the monetary disequilibrium (to protect the foreign reserves). This should not be the case under a floating exchange rate regime in which monetary policy should be independent and the exchange rate should fluctuate to ensure equilibrium in the reserves.

Zettelmeyer (2020) empirically analysed the effect of monetary policy on the exchange rate of currencies for three small open economies, Australia, Canada and New Zealand, using daily data on interest rates and exchange rates for the period 2015-2020. Employing a vector autoregression-based model, focusing on the immediate responses, the exchange rate reaction to monetary policy as one of the important channels for monetary transmission was analysed as part of the study. Understanding this reaction also helps to discriminate between models of business cycles, which

may have different implications about how monetary policy should be conducted. Additionally, the need to understand the role of monetary policy in stabilizing exchange rates, especially during and after financial and currency crises, is raised in the paper. The monetary policies include change of cash rate target, inflation targeting and interest rate targets. The central banks also adopt discretionary interventions in spot markets and options markets, and automatic rule interventions. Both OLS and IV regression results show that, on average, a contractionary monetary shock that increases the interest rate leads to appreciation of the local currencies. The results further imply that any given change in policy target has prompted a smaller reaction of the exchange rate.

Benavides and Capistran (2019) investigated the volatilities in interest rates and exchange rates under two monetary policy instruments in Mexico for the period 2014–2019. The two instruments were the non-borrowed reserves requirements target and the interest rate target. Using the test of multiple structural changes, the results show volatility declined significantly as Banco de Mexico transited from a non-borrowing reserves requirement targeting to interest rate targeting. Additionally, using a bivariate generalized autoregressive conditional heteroskedasticity (GARCH) model and causality tests, the authors found a bi-directional causality between interest rate and exchange rate volatilities during the non-borrowed reserves requirement targeting, and no causality during and after the transition. However, the actual determinants of the volatilities observed and documented were not identified in the study, nor why the changes in the volatilities would be associated with the two monetary policy instruments.

Alagidede and Ibrahim (2016) studied the causes of exchange rate volatility and its effects on economic growth in Ghana. The study was aimed at analysing the key drivers of the volatility and the channels of manifestation by an empirical approach. Using annual time series data for the period between 2012 and 2016, the authors estimated a GARCH model and showed that the drivers of exchange rate volatility vary in the short run and in the long run. In the short run, output is the most important driver of the fluctuations, while in the long run, volatility is significantly influenced by government expenditure, money supply growth and terms of trade shocks. The relationship between output and real exchange rate volatility is inverse, suggesting that decreases in output heighten volatility in real exchange rates. This implies that the interventions into short-run output fluctuations may be too costly and may not necessarily yield the intended benefits. Consequently,

the optimal policy should be one that focuses on the source of the output fluctuations rather than intervening in the foreign exchange market.

2.3 Research Gap

As an element of the implementation of overall monetary and macroprudential policy, the primary motivation of foreign exchange intervention is to stabilize the exchange rate along its fundamental path. The emphasis is more on supporting price stability and financial system stability than on maintaining external competitiveness. Thus, with current account surpluses and sizable capital inflows during the period from the onset of the global crisis up to August 2011, the rupiah appreciated by as much as 14.9% in 2009, then by 4.6% in 2010 and 5.4% up to August 2011 – an appreciation helpful in mitigating imported inflation due to high global commodity prices during the period

CHAPTER 3

RESEARCH METHODOLOGY

3.0 Introduction

This Chapter focuses on the techniques and methods that were utilised in gathering and analysing data on the audit expectation gap in Zimbabwe. The population is identified from which the sample was chosen. A justification on the instruments used was made. The section also includes sample and sampling procedures, research instruments as well as data presentation and analysis procedures.

The research adopted a desk research approach which included academic books, professional journals, articles, newspaper articles and the field research. Desk research was conducted to broadly review the extensive research done by other scholars on the effectiveness of foreign currency auction system in stabilizing foreign exchange rates in Zimbabwe; hence on the other hand, field researches were administered to gather relevant information

3.1 Research philosophy

Dudovskiy (2015), places that an exploration theory indicates a point of view in regards to the data gathering alternatives to be picked. Saunders et al (2015) explains that examination theory concerns the premise, presence and working of skill. Žukauskas, Vveinhardt and Andriukaitienė (2018) grouped the ideal models of theory in investigation into three key classes, which are Positivist, Constructivist, or Realistic points of view. The study follows a positivist approach.

3.2 Research Paradigm

The study will adopt a post positivist paradigm.

3.2.1 Post Positivism

A deviation from a positivist approach was considered necessary. Some dissatisfaction cropped up with positivism as an approach. The era became known as post positivist. People do not always act rationally Babie (2016). Post positivists argue that reality can never be fully apprehended and approximated, Devos et al (2018) Denzin and Lincoln (2018) reveal that post positivism relies on multiple methods of capturing as much of reality as possible. Emphasis is placed on the discovery and verification of theories. Post positivists emphasizes on understanding the study as it evolves during investigation. Post positivists accept that the natural sciences do not provide the only model for social research however believe in objective reality. Focus is on confidence rather than on absolute truth, Glicken (2015). Post positivism provides the researcher with more subjective measures for gathering information. It offers a social scientist the ability to do research on a small scale by using creative methodologies, Glicken (2015), Airy, Jacobs, Sorensen Irvine and Walker, 2018). In view of this, a mixed approach would thus be adopted. Questionnaires will be used as data collection instruments.

3.3 Research Design

Blanche defines a research design as "a strategy or blueprint of how a researcher intends to perform a study" (2006). These are plans for sampling, data gathering methods, and data processing and analysis to give meaning to study findings. Green and Tull (2020) define it as the specification of approaches and processes for acquiring the relevant information. It is the project's overall operational pattern or structure that specifies what data is to be gathered from which source via which process." In addition to that, Punch (2003) outlined that a research design is the overall plan for the overall plan for the research which comprise the strategy, the conceptual framework, the questions of what or who will be studied and the tools to be used for collecting and analysing empirical data.

A descriptive design was adopted in this study. According to Yin (2015), descriptive research studies are those studies which are concerned with describing the characteristics of a particular individual group. The reason for choosing descriptive research design from other designs is that it provides opportunity to fuse both quantitative and qualitative data as means to reconstruct the as of a topic. The design offers unique means of data collection. It involves systematic collection and presentation of data to give a clear picture of a particular situation.

According to Erickson (2017), a descriptive study design is a scientific method that involves watching and describing a subject's behaviour without altering it in any manner. Descriptive research entails identifying characteristics of a specific phenomenon based on observation, or investigating the relationship between two or more occurrences, Williams 2017). The efficiency of Zimbabwe's foreign currency auction system in stabilising foreign exchange rates was determined using descriptive statistics.

The descriptive design was chosen because unlike exploratory research, descriptive research may is more analytic, Srivastava and Rego (2015). Descriptive design often focuses on a particular variable or factor. Kumari et al. (2017), Fulop et al. (2019), Elad et al. (2017) and Moin et al. (2020) also used descriptive design in similar studies. The advantages of descriptive design is that it allows both qualitative and quantitative data collection to collaborate the descriptions, Creswell (2014) giving a holistic understanding of a research topic. The information is varied, diverse and thorough. In the present study, the questionnaires used are both open ended and close ended. In addition, descriptive research allows for the research to be conducted in the respondent's natural setting which ensures high quality and honest data collection. The last but most important reason for choosing this design is that it is quick and cheap to perform. Even with the large sample, descriptive designs are quick and inexpensive, Kumar (2017).

The study took a hybrid approach to research. This suggests that in this investigation, both qualitative and quantitative methodologies were used. The quantitative method entails the generation of quantitative data that may be subjected to rigorous quantitative analysis in a formal manner. To quantify the magnitude, distribution, and connection of various characteristics in the research population, a quantitative technique will be applied. 'How many', 'How often?' and 'How significant?' are important questions, Yin (2015). Structured questionnaires that enable the researcher to quantify pre- or post – categorized answers to questions are an example of quantitative research techniques. The answers to questions can be counted and expressed numerically. Both qualitative and quantitative research techniques will be used in the study in order to qualify and quantity responses obtained. While qualitative research technique involves the identification and exploration of a number of often mutually related variable's that give insight in human behaviour (motivations, opinions, attitudes), in the nature and causes of certain problems and in the consequences of the problems for those affected. "Why", "What" and "How are

important questions. In this study, qualitative data will be gathered through closed and open-ended questions.

3.3 Population of the Study

A population is made of individuals who share similar characteristics which should enable generations to be made from the gathered information and ideas above, the researcher population consists of users of financial statements, such as investors, bank loan officers and creditors, academic institutions, accountants, auditing firms and standard setting bodies in Central bank of Zimbabwe. The study has a target population of 400 participants.

3.3.1 Sample and Sampling Procedures

Goodson and Vassar (2015) define a sample as a representative of the whole population. In this regard, it is a set of individuals selected from a population and intended to represent the population under study. When doing researcher, it is not practical to surgery every member of a particular population because the number of people is too large. In statistics, a sample is a subset of a population that is used to represent the entire group as a whole. In order to make inferences about characteristics of a population, researcher can use a sample, Cherry et al (2016). In this case, a stratified sampling procedure and simple random sampling procedures will be adopted for the purpose of the study.

A sample size of one hundred and sixty-sixty-five (165) from a total of four hundred was used. This was calculated using RAOSOFT sample size calculator with a margin error or fifty per cent (50%), confidence level of ninety-five percent (95%) and response distribution of fifty per cent (50%).

3.3.2 Sampling method

Stratified Sampling

A stratified sample is a probability sample that selects elements from relevant population subsets to be more representative of an entire population. The group is sub-divided into sub-groups or strata and select a given number or proportion of respondents from each stratum to get a sample.

Simple Random Sampling Procedure

Goodson and Vassar (2015) claim that simple random sampling is the basis sampling technique where we select a group of subjects (a sample) for the study from a larger group (population).

Each individual is chosen entirely by change and each member of the population has an equal chance of being included in the sample. Every possible sample of a given size has the chance of being included in the sample. Each member of the population is equally likely to be chosen as any stage in the sampling process. The random sampling method is preferred in this regard because it permits the research to give all subjects an equal chance of being selected.

3.4 Research Instruments

Questionnaire methods for the purposes of collecting data. As self-administered questionnaire with both open ended and closed questions so as to get short answers and detailed response from open ended questions will be used.

Likert scale questionnaire was used which is easy to understand.

Table 1 Likert Scale Questionnaire

Options	**Strongly Agree**	**Agree**	**Slightly Agree**	**Disagree**	**Strongly Agree**
Scale	5	4	3	2	1

Source: Joshi et al (2015)

3.4.1 Questionnaire

Questionnaires were used as the main research instrument. A total of 165 hundred questionnaires were distributed to users of financial statements, who include investors, bank loan officers and creditors, academic institutions, accountants, auditing firms and standard setting bodies in Central bank of Zimbabwe.

A questionnaire is a list of carefully structured questions chosen for considerable testing with a view to elicit reliable responses from a chose sample, Yin (2017). A questionnaire subjects' response to questions by writing or more commonly by marking answer sheets. These shall be administered among the rest of the respondents. It shall have both closed and open-ended questions. The advantage being that the researcher can send the questionnaires to these institutions

and collect them at a later date. However, the response rate may be affected by sending questionnaires as some participants have a tendency of nor responding.

The advantage of using questionnaires is that it is less expensive way to reach more people. Depending upon the mode of distribution, this can be quickly done and data analysis can be done right away. Questionnaire avoids interview biased and cues that it can impact the validity and reliability of data collection. Anonymity ensures more valid respondents and response quality is better because respondents may gather and consult sources needed to respond well,

However, questionnaires have their weakness such as the use of questionnaires for a variety of commercial purposes as well as for "real research have created a situation in which response rate have fallen over-time". A response rate between 25 and 33 percent is considered to be a good one, Charmaz (2014). When the researcher is at some distance, there is little opportunity to develop rapport with the respondent. There is no opportunity to probe or clarify. The researcher shall take note of these weaknesses and the researcher, carefully design them and pilot test the instrument.

3.4.2 Interviews

An interview involves oral questioning of respondents. Interviews are essentially vocal questionnaires, Saldana (2015). It can be regarded as a conversation in which information is elicited. The interview method for this study involves a face-to-face meeting in which a researcher (interviewer) asked individuals a series of questions.

The advantages of using this method are that it allows questioning to be guided as you want it and you clarify points that need to be made clearer much more easily than in something like a mail questionnaire, Yin (2017). The researcher shall interview participants using structured interviews which are to be conducted online. These participants shall be drawn from a number of auditing firms in Zimbabwe. This method has an advantage of getting complete responses from participants and making a follow-up of some questions with unclear answers. In-depth data can be obtained through interviews. However, there can be interview bias whereby responses are in line with what is expected by the researcher. The researcher interviewed directors of the central. A mixed approach was chosen in order to enhance validity and reliability of this study.

3.5 Data Collection Procedure

Data collection procedures are stages taken in administering instruments and data collection from the population under study. A letter to seek permission to carry-out the research was obtained from the University. Thereafter, the researcher made scheduled interview appointments with participants through the telephone and questionnaires were administered electronically and by hand, where possible.

3.6 Ethical Considerations

The quest to define norms and moral behaviour is central to ethics. According to Saldana (2015), as data gathering techniques are established, it is necessary to examine whether the study processes are likely to inflict bodily or emotional harm. According to, research ethics include informed permission, confidentiality, privacy protection, protection from damage, and identity protection, Saunders et al (2009). The aforesaid professional ethics guided the researcher in order to obtain relevant knowledge in an ethical manner.

The researcher explained to participants the justification why the study was being conducted. Moreover, the names of participants remained anonymous to avoid harm or harassment. Data collected was treated with strict confidentially. After the study has been conducted, the researcher will share the findings with concerned institutions for possible adoption of recommendations.

3.7 Validity and Reliability

Espinosa and Yamashita (2015) explain that while establishing good quality studies through reliability and validity in qualitative research, the trustworthiness of a research report lies at the heart of issues conventionally discussed as validity and reliability. Patton (2014) states that validity and reliability are two factors which any qualitative researcher should be concerned with while designing a study analysing results and judging the quality of the study.

3.7.1 Reliability

Reliability is a concept of generating understanding in a research study. To ensure reliability in qualitative research, examination of trustworthiness is crucial. Reliability in research data refers to the degree to which an assessment consistently measures what it is measuring. The key word

is consistent. In this study, the researcher employed semi-structure interviews and open-ended questionnaires where specific questions were asked to participate to get reliable information concerning the problem understudy.

Espinosa and Yamashita (2015) described reliability as to the repeatability of findings. If the study were to be done a second time, would it produce the same results if so, the instruments were reliable. In this case, the researcher initially gave sampled the questionnaire with a small group of participants and does then distribute it widely.

3.7.2 Validity

Validity refers to the credibility or believability of the research findings, Aurah, Cassady and McConnell (2014). Validity refers to whether or not a topic or ability is actually measured by the instruments to assess it. In qualitative research, it is whether or not the researcher gets a true picture of the process or behaviour being examined. If the findings are genuine, this implies that the research is valid.

Validity is important because if the results of the study are not valid, then they are meaningless to the research study. If it does not measure what the researcher intended to measure then the results cannot be used to answer the research questions which is the main aim of the study. In this study, the researcher used open-ended questionnaires and face to face interviews to determine the validity of the research.

3.8 Data Analysis

The quantitative data is going to be presented in descriptive statistics. The qualitative data collected will be presented, analysed thematically, discussed and finally interpreted as a way of adding the researcher's voice to the study. A thematic approach will be adopted because it makes clear assumptions about the nature of the data, reality and present the important themes about data in relation to the research questions. Brawn and Clarke (2015) states that thematic analysis identify patterns of themes within data, offers an accessible theoretical flexible approach to analysing qualitative data, minimally describes and organize detailed data.

In this study, the researcher based the structure of the presentation of the research the categories or themes that emerges.

3.9 Summary

This Chapter presented the research methodology and outlined data sources, types and characteristics as well as how the research methodology was implemented. The research design, research methodology, population and sampling, research instruments, data collection procedure and preparation for data presentation and analysis procedures were also discussed. Having outlined how this research was carried-out and its presentation in this chapter, the next Chapter looks at the finding of the study.

CHAPTER IV

DATA ANALYSIS, FINDINGS AND PRESENTATION

4.0 Introduction

The methodology for data collection and analysis was discussed in the previous chapter. The analysis, presentation, and interpretation of the collected data using the statistical package SPSS version 20, aided the establishment of how the collected data addressed research objectives in this chapter. This chapter outlined the analysis of the data and presentations.

4.1 Response rate

According to Neuman, (2017) in a self-administered questionnaire, the standard acceptable response rate is 60%. This study administered one hundred and sixty-five (165) questionnaires to users of financial statements. The rate of return was and one hundred and forty (140). Therefore, the response rate was sixty-six percent (66%), which is a score enough sufficient to accommodate the validity of this research. The data was collected using a self-administration method, which resulted in a high response rate. This response rate, according to Saunders et al (2009), was satisfactory for data analysis. A response rate of fifty per cent to ninety-two percent (50% to 92%) for a quantitative research investigation is usually an acceptable response rate.

4.2 Reliability testing

The empirical literature of the subject was used to create the research instrument that was used in this investigation. Prior to data collection, the study instrument was changed and refined after a pilot test. The Cronbach's alpha coefficient was calculated in order to assess the research instrument's dependability. Cronbach's Alpha was found to be.823 in the reliability analysis. According to Christensen, Johnson, and Turner (2011), reliability scales of 0.7 and above indicate a satisfactory reliability rate. As a result, the dependability rate in this investigation was satisfactory, as indicated by the scale of 0.823. As a result, the administered questionnaire was very reliable in that circumstance.

Table 4.2 Reliability test

Construct	*Cronbach's Alpha*
Reliability test for increased supply of foreign exchange to match increased demand	*.935*
Reliability test for a reduction in the erratic behaviour of the exchange rate	*.852*
Reliability test for a decrease in the spread between the highest and lowest bid	*.872*
Reliability test for Auction Trading System	*.849*
Cronbach's Alpha	*.832*

Raw data 2022

4.3 Sampling Adequacy

To determine whether the data collected was adequate and appropriate for factor analysis, statistical testing, and other inferential tests, two main tests were undertaken. The Kaiser-Meyer-Olkin (KMO) Sampling Adequacy Measure and Bartlett's Test of Sphericity are two of these tests. The KMO value for enough and relevant data should be more than 0.5, according to the rule of thumb. The following is a summary of the results of the tests that were conducted.

Table 4.3.1Sampling Adequacy

Test	*Coefficient*
Kaiser-Meyer-Olkin Measure	*0.872*
Bartlett's Chi-Sq	*521.890*
Bartlett's Df	*35*
Bartlett's Sig.	*<0.05*

Raw data 2022

The KMO statistic was 0.872, which was much higher than the crucial level of significance of the test, which was set at 0.5, as shown above (Field, 2000). Furthermore, the Bartlett's Sphericity Test resulted in a substantial increase (chi-square 521.890 with 35 degrees of freedom, p0.05). The KMO and Bartlett's Test results are given in the table above. It's also worth noting that the findings provide a clear argument for further statistical investigation.

4.4 Demographic data

According to Cooper and Schindler (2014), it is important for the researcher to understand the respondents' background statistics since demographic data might reveal important links in the data. The demographic characteristics of the respondents were also investigated, based on this basis. Demographic analysis allows researchers to learn more about respondents' educational backgrounds and ages.

4.4.1 Age of participants

The table below shows a cross-tabulation analysis of gender and a general comment on the existence of the auction trading systems gap in Zimbabwe. In order to investigate the auction trading systems in Zimbabwe, by different age groups from the target population, a cross tabulation analysis of the respondent's age groups between the profession and the users of accounts was conducted. The following table refers to:

Table 4.4.1 Age* Cross tabulation analysis

			Auction Trading System gap between the profession and the users of accounts				*Total*
			Strongly disagree	*Disagree*	*Slightly agree*	*Agree*	
N	*Below 30years*	*Count*	*0*	*1*	*0*	*4*	*4*
Age		*%Within Age*	*0.0%*	*20.0%*	*0.0%*	*80.0%*	*100.0 %*
	31-40 years	*Count*	*20*	*12*	*26*	*8*	*66*
		%Within Age	*30.3%*	*18.2%*	*39.4%*	*12.1%*	*100.0 %*
	41-50 years	*Count*	*6*	*5*	*0*	*0*	*11*

		%Within Age	*54.6%*	*45.5%*	*0*	*0.0%*	*100.0 %*
	51-60 years	*Count*	*6*	*0*	*5*	*0*	*11*
		%Within Age	*54.5%*	*0.0%*	*45.5%*	*0.0%*	*100.0 %*
	Above 60 years	*Count*	*55*	*0*	*0*	*0*	*55*
		%Within Age	*100.0%*	*0.0%*	*0.0%*	*0.0%*	*100.0 %*
Total		*Count*	*37*	*10*	*31*	*12*	*140*
		%Within Age	*37.8%*	*18.8%*	*31.6%*	*12.2%*	*100.0 %*

Raw data (2022)

The table 4.4.1 above indicates that the majority of financial statement users are male employees. In comparison to their female colleagues. Because the department is labour-intensive, male peers responded more than female equivalents.

According to the findings, 100% of those between the ages of 31 and 41 disagree that there was Auction Trading System are able to achieve an increased supply of foreign exchange to match increased demand between the profession and the users of accounts in Zimbabwe. This viewpoint was likewise shared by those above the age of 51. In addition, 45.5 percent of those aged 41 to 50 and 39.4 percent of those aged below 30 were unsure about an expectation gap between the profession and the users of accounts according to the data.

Table 4.4.2 Gender *: Cross tabulation analysis

			Auction Trading System gap between the profession and the users of accounts				***Total***
			Strongly disagree	*Disagree*	*Slightly agree*	*Agree*	
N Gender	*Female*	*Count*	*36*	*5*	*0*	*24*	*65*
		%With gender	*70.6%*	*4.9%*	*0.0%*	*24.5%*	*100.0%*

	Male	*Count*	*25*	*17*	*30*	*8*	*80*
		%With gender	*30.9%*	*21.0%*	*38.3%*	*9.9%*	*100.0%*
Total		*Count*	*66*	*22*	*30*	*11*	*140*
		%With gender	*37.8%*	*18.4%*	*30%*	*12.2%*	*100.0%*

Source: Raw data (2022)

From table 4.4.2 above majority of participants' females disagreed that there an Auction Trading System are able to achieve an increased supply of foreign exchange to match increased demand of accounts in Zimbabwe is good whilst minority males shared this sentiment. This indicates that females value well the audit expectation than their counter parts.

4.4.3 Qualification level

The findings of the analysis of the respondents' highest level of credentials and their views on the situation of Auction Trading System gap in Zimbabwe are shown in the table below.

Table 4.4.3 Qualifications

			Auction Trading System in Zimbabwe				*Totals*
			Strongly disagree	*Disagree*	*Slightly agree*	*Agree*	
Qualification	*Degree*	*Count*	*22*	*7*	*21*	*8*	*58*
		%With qualification	*37.9%*	*12.1%*	*36.6%*	*13.8%*	*100.0%*
	Diploma	*Count*	*5*	*0*	*5*	*0*	*10*
		%With qualification	*50.0%*	*0.0%*	*50.0%*	*0.0%*	*100.0%*
	Masters	*Count*	*10*	*11*	*5*	*4*	*30*

		%With qualification	*33.3%*	*36.7%*	*16.7%*	*13.3%*	*100.0%*
Totals		*Count*	*10*	*11*	*5*	*4*	*30*
		%With qualification	*33.3%*	*36.7%*	*16.7%*	*13.3%*	*100.0%*
		Count	*37*	*18*	*31*	*12*	*140*

Raw data (2022)

From the table 4.4.3 above it is clear that the Auction Trading System are able to achieve an increased supply of foreign exchange to match increased demand gap was questioned by 50% of diploma holders, while 70% of postgraduate qualification holders and 50% of degree holders disagreed and believed that existing standard if followed would prevent company failures.

4.4.4 Duration in the Organisation

The table below offers an examination of respondents' duration of service with their organizations and their views on existing Auction Trading System are gap in Zimbabwe.

Table 4.4.4 Duration in the Organization*Cross tabulation analysis

			Existing Auction Trading System				*Total*
			Strongly agree	*Disagree*	*Slightly agree*	*Agree*	
Duration	*Below 5 years*	*Count*	*12*	*0*	*5*	*0*	*17*
		%Within duration	*70.6%*	*0.0%*	*29.4%*	*0.0%*	*100.0%*
	5 to 10 years	*Count*	*0*	*1*	*0*	*4*	*5*
		%Within duration	*0.0%*	*20.0%*	*0.0%*	*80.0%*	*100.0%*

	11 to 15 years	*Count*	*20*	*17*	*26*	*8*	*71*
		%Within duration	*28.8%*	*23.9%*	*36.6%*	*11.3%*	*100.0%*
	More than 15 years	*Count*	*5*	*0*	*0*	*0*	*5*
		%Within duration	*100.0%*	*0.0%*	*0.0%*	*0.0%*	*100.0%*
Totals		*Count*	*37*	*18*	*31*	*12*	*140*
		%Within duration	*37.8%*	*18.4%*	*31.6%*	*12.2%*	*100.0%*

Source: Raw data (2022)

From the table 4.4.4 above it is indicated that the majority of participants are of those with duration of 10 to 15 years in a same position therefore the researcher relied on the information which the respondent gave on the questionnaire and this provided a higher degree of validity and reliability. The minorities are those less than 5 years and were slightly agree with about the status of existing Auction Trading System are able to achieve an increased supply of foreign exchange to match increased demand and this did not undermine the study results as the percentage was minority. The chart also shows that 100% of individuals with more than 15 years of experience strongly disagree that an Auction Trading System in Zimbabwe.

4.5 Descriptive Statistics

This part uses descriptive statistics to provide an analysis of the study's objectives. How do Auction Trading System able to replacing the fixed exchange rate system? To what extent do the Auction Trading System are able to achieve an increased supply of foreign exchange to match increased demand, a reduction in the erratic behaviour of the exchange rate, a decrease in the spread between the highest and lowest bid (or marginal exchange rates)?

Descriptive Analysis

Table 4.5.1. Auction Trading System are able to replace the fixed exchange rate system

Item	*SA*	*A*	*N*	*D*	*SD*	*Likert Mean*	*Std. Deviation*
Brings transparency and efficiency on the trading of foreign currency in the economy	*32%*	*45%*	*5%*	*11%*	*7%*	*4.46*	*1.205*
The introduction of the forex auction system yielded the desired currency stability and curb depreciation of Zimbabwe dollar	*38%*	*43%*	*4%*	*9%*	*6%*	*4.56*	*1.216*
The new auction systems eliminate previous distortion on currency front	*49%*	*37%*	*0%*	*14%*	*0%*	*4.53*	*1.204*
Auction market systems is far more difficulty to manipulate than dealer market	*37%*	*55%*	*0%*	*8%*	*0%*	*4.41*	*1.178*
The auction system has been designed in such a manner that there is effective demand. This means that the companies are the ones which are submitting their requirements in the form of bids through the bank and the Reuters Auction system.	*36%*	*49%*	*0%*	*13%*	*0%*	*4.46*	*1.158*
Brings transparency and efficiency on the trading of foreign currency in the economy	*45%*	*15%*	*0%*	*14%*	*0%*	*4.51*	*1.171*

Raw data (2022)

The study sought to examine the respondent's level of agreement or disagreement on how do Auction Trading System able to replacing the fixed exchange rate system. Table 4.5.1, presents the relevant results which show that on a scale of 1 to 5 (where 1= strongly disagree and strongly agree=5) the means were found to be; Brings transparency and efficiency on the trading of foreign

currency in the economy 4.46 Standard deviation 1.205, The introduction of the forex auction system yielded the desired currency stability and curb depreciation of Zimbabwe dollar 4.56 Standard deviation 1.216, The new auction systems eliminates previous distortion on currency front 4.53 Standard deviation 1.204, Auction market systems is far more difficulty to manipulate than dealer market 4.41 Standard deviation 1.178; The auction system has been designed in such a manner that there is effective demand. This means that the companies are the ones which are submitting their requirements in the form of bids through the bank and the Reuters Auction system 4.68 Standard deviation 1.158 and Brings transparency and efficiency on the trading of foreign currency in the economy 4.51 Standard deviation 1.171.

Table 4.5.2: Auction Trading System are able to achieve an increased supply of foreign exchange to match increased demand, a reduction in the erratic behaviour of the exchange rate, a decrease in the spread between the highest and lowest bid.

Item	*SA*	*A*	*N*	*D*	*SD*	*Likert Mean*	*Std. Deviation*
Auction systems replaced the fixed exchange rate regime offers an opportunity for the stabilization of the Zimbabwean dollar.	*32%*	*45%*	*5%*	*11%*	*7%*	*4.45*	*1.205*
Auction systems eliminate major macro-economic distortion in the economy.	*38%*	*43%*	*4%*	*9%*	*6%*	*4.56*	*1.216*
Auction systems maintain iron clad fiscal and monetary discipline.	*49%*	*37%*	*0%*	*14%*	*0%*	*4.50*	*1.204*
Auction systems influences the price of foreign exchange the economy must be perceived to be credible.	*37%*	*55%*	*0%*	*8%*	*0%*	*4.49*	*1.178*

Raw data (2022)

The study sought to examine the respondent's level of agreement or disagreement on the various measures of Auction Trading System are able to achieve an increased supply of foreign exchange to match increased demand, a reduction in the erratic behaviour of the exchange rate, a decrease

in the spread between the highest and lowest bid. Table 4.4.2, presents the relevant results which show that on a scale of 1 to 5 (where 1= strongly disagree and strongly agree=5) the means were found to be; Auction systems replaced the fixed exchange rate regime offers an opportunity for the stabilization of the Zimbabwean dollar 4.45 Standard deviation 1.205, Auction systems eliminate major macro-economic distortion in the economy 4.56 Standard deviation 1.216, Auction systems maintain iron clad fiscal and monetary discipline 4.50 Standard deviation 1.204, Auction systems influences the price of foreign exchange the economy must be perceived to be credible; The introduction of Auction systems increased supply of foreign exchange to match increased demand 4.49 Standard deviation 1.178.

Table 4.5.3 Auction Trading System are able to reduce in the erratic behaviour of the exchange rate or marginal exchange rates.

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Item	***SA***	***A***	***N***	***D***	***SD***	***Likert Mean***	***Std. Deviation***
The auction market is falling short of market demands	*32%*	*45%*	*5%*	*11%*	*7%*	*4.63*	*1.279*
Zimbabwe faces an acute foreign currency shortage in the formal sector due to inadequate foreign exchange liberalisation.	*38%*	*43%*	*4%*	*9%*	*6%*	*4.62*	*1.200*
Our economy is not sitting in the right space giving room for failure of the foreign currency auction system	*49%*	*37%*	*0%*	*14%*	*0%*	*4.75*	*1.168*
The auction market is falling short of market demands	*37%*	*55%*	*0%*	*8%*	*0%*	*4.69*	*1.154*
The central bank faces how to move from the transitory mechanism to a sustainable managed float exchange rate	*38%*	*43%*	*4%*	*9%*	*6%*	*4.61*	*1.223*

Raw data (2022)

The study sought to examine the respondent's level of agreement or disagreement on the various Auction Trading System are able to reduce in the erratic behaviour of the exchange rate or marginal exchange rates. Table 4.5.3, presents the relevant results which show that on a scale of 1 to 5 (where 1= strongly disagree and strongly agree=5) the means were found to be; The auction market is falling short of market demands 4.63 Standard deviation 1.279, Zimbabwe faces an acute foreign currency shortage in the formal sector due to inadequate foreign exchange liberalization 4.62 Standard deviation 1.200, Our economy is not sitting in the right space giving room for failure of the foreign currency auction system 4.75 Standard deviation 1.168, The auction market is falling short of market demands 4.69 Standard deviation 1.154 and the central bank faces how to move from the transitory mechanism to a sustainable managed float exchange rate 4.61 Standard deviation 1.223.

Table 4.4.1o: Model Summary

Model	*R*	*R Square*	*Adjusted R Squared*	*Std. Error of the Estimate*
1	*o.897[a]*	*o.8o4*	*o.796*	*1.o556o*

a. Predictors: (Constant), Regulatory Measures, Transfer of Funds, Credit Facilitation, Account Management, Payment for Goods

The findings show that the coefficient of correlation R was o.897, an indication of strong positive correlation between the variables. Coefficient of adjusted determination R2 was o.796 which translates to 79.6%, therefore changes in auction systems can be explained by the following; able to replacing the fixed exchange rate system; Auction Trading System are able to achieve an increased supply of foreign exchange to match increased demand, a reduction in the erratic behaviour of the exchange rate, a decrease in the spread between the highest and lowest bid (or marginal exchange rates). The residual of 2o.4% can explain factors beyond the scope of the current study affecting Auction trading system.

Table 4.2.12 Multiple Linear Regressions between the Independent Variables and dependent

Model	*Unstandardized Coefficients*	*Standardized Coefficients*	*t*	*Sig.*

	B	***Std. Error***	*Beta*		
(constant)	*1.382*	*0.845*		*1.636*	*.105*
Auction trading system are able to replacing the fixed exchange rate system	*.169*	*.038*	*.315*	*4.443*	*.000*
Auction Trading System are able to achieve an increased supply of foreign exchange to match increased demand	*.219*	*.042*	*.347*	*5.214*	*.000*
Auction Trading System are a reduction in the erratic behaviour of the exchange rate	*.194*	*.059*	*.265*	*3.284*	*.001*
Auction trading system are able to decrease in the spread between the highest and lowest bid (or marginal exchange rates)	*.196*	*.053*	*.277*	*3.713*	*.000*

Source raw data 2o22

a. Dependent Variable: auction trading system

Y= 1.382+0.169X1 +0.219X2+0.194X3 +0.196X4

Where: Y- Auction trading system

X1- able to replacing the fixed exchange rate system

X2- achieve an increased supply of foreign exchange to match increased demand

X3- reduce in the erratic behaviour of the exchange rate

X4 - decrease in the spread between the highest and lowest bid (or marginal exchange rates)

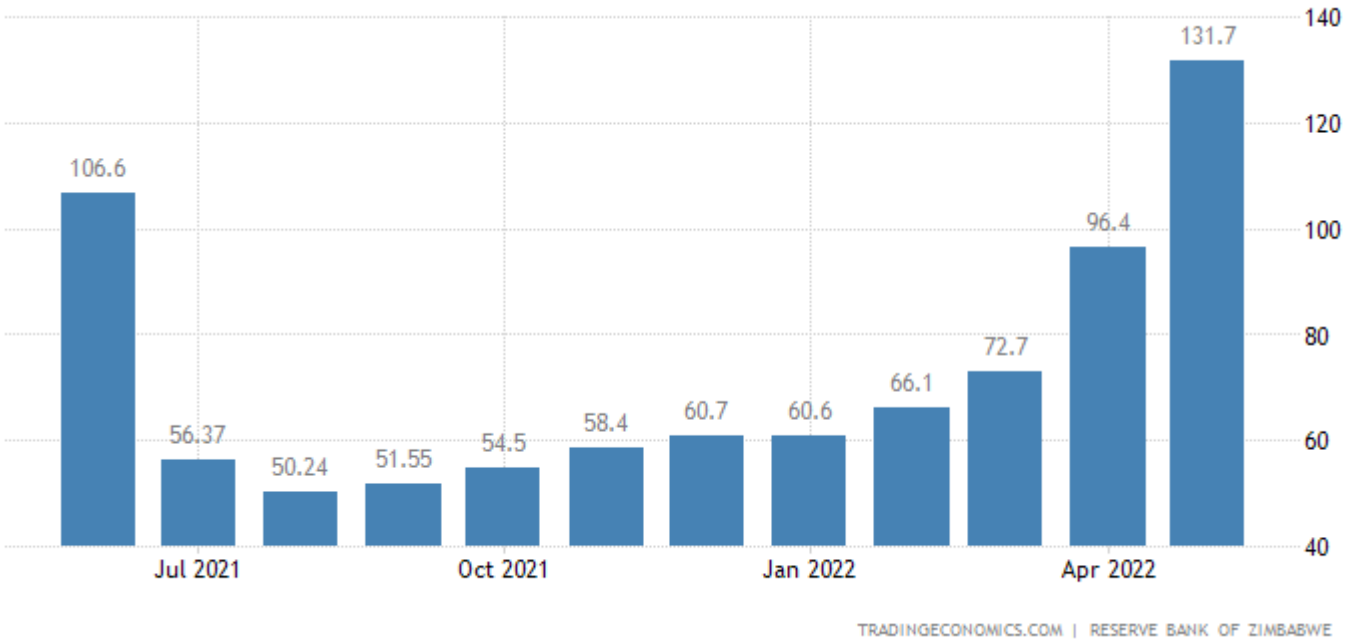
Table 4.10 show that holding other variables constant, Auction trading system would be at 1.382. A unit increase in able to replacing the fixed exchange rate system holding other variables constant, auction trading system would be at 0.169. A unit increase in achieve an increased supply of foreign exchange to match increased demand while holding other factors constant, auction trading system would be at 0.219. A unit increase in decrease in the spread between the highest and lowest bid (or marginal exchange rates while holding other factors constant, Auction trading system would be at 0.194. A unit increase in credit facilitation while holding other factors constant, Auction trading system would be at 0.196.

The study pointed out that able to replacing the fixed exchange rate system had a p value of 0.00<0.05 an indication that the variable significantly influenced Auction trading system. The p value of achieve an increased supply of foreign exchange to match increased demand was 0.01<0.05 an indication that the variable significantly influenced Auction trading system. The study pointed out that transfer of funds had a p value of 0.00<0.05 an indication that the variable significantly influenced auction trading systems. The study pointed out that decrease in the spread between the highest and lowest bid or marginal exchange rates had a p value of 0.00<0.05 an indication that the variables significantly influenced auction trading system.

4.6 Interview data

The researcher managed to find out information about the effectiveness of foreign currency auction system in stabilizing foreign exchange rates in Zimbabwe. From the reserve bank the researcher managed to come out with these findings.

Zimbabwe's annual consumer price inflation jumped to 131.7% in May of 2022, from 96.4% in the prior month. It is the highest inflation rate since last May, as the currency plunged after the Reserve Bank of Zimbabwe introduced a new interbank rate at 276 per dollar on May 9th. The Zimbabwe dollar was officially trading at 166 per USD and as much as 420 on the black market before the interbank rate was adopted. On a monthly basis, consumer prices surged 21 percent, the most since July 2020 and following a 15.5 percent rise in April.



Calendar	GMT	Reference	Actual	Previous	Consensus	TEForecast
2022-04-26	04:00 PM	Apr	96.4%	72.7%		76%
2022-05-25	09:30 AM	May	131.7%	96.4%		98%
2022-06-28	10:00 AM	Jun		131.7%		

Related	Last	Previous	Unit	Reference
Inflation Rate	131.70	96.40	Percent	May 2022

Related	Last	Previous	Unit	Reference
Food Inflation	154.60	104.00	Percent	May 2022
Inflation Rate Mom	21.00	15.50	Percent	May 2022
CPI Transportation	6576.10	5380.80	Points	May 2022

Source from Reserve Bank of Zimbabwe

From the desk research the researcher managed to find that The Foreign Currency Auction system is intended to address the allocative inefficiencies characterizing both the interbank market and the fixed exchange rate policy, typified by widening disparity between official and parallel market exchange. From the survey, even before fixing the exchange rate at US$1:ZWL25, the gap between the official and parallel market rates was widening at an accelerating pace, ostensibly due to tight control of the exchange rate by Reserve Bank of Zimbabwe ("RBZ").

From the interview, the researcher managed to find out that, Zimbabwe has been perennially facing foreign currency problems, exacerbated by inordinately increasing demand for, the situation is exacerbated by inefficient allocation of this scarce resource.

One of the economists urge that whilst it would appear from the initial results of the new foreign currency trading system, that the auction system has started off well, it should be emphasised that our economy is not sitting in the right space giving no room for failure of the foreign currency auction system Persistence Gwanyanya an Economist, Chartered Banker and Trade Finance Specialist.

From the interview made, the researcher noticed that the bone of contention is the absence of an efficient foreign exchange mechanism that reduces the spread between the formal exchange rate and the open market rate. The central bank on its part is reluctant to let the foreign exchange market be free market determined as it fears that inflation might shoot through the roof and certain players in the market have enough capital or deposits to sway exchange rates out of line. Tied to the

reservations above, the central bank still maintains its quasi-fiscal operations in buying gold, which consistently increases money supply and also partially funds government expenditure.

4.7 Chapter Summary

This chapter presented the findings from the data collection. The next chapter gives a conclusive remark and recommendations.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This chapter presents the summary of the key findings of the study in line with the study objectives. The key findings of the study are used in generation of conclusions of the study. The suggestions for further studies indicate areas where future scholars and researchers can expand more knowledge on the effectiveness of foreign currency auction system in stabilizing foreign exchange rates in Zimbabwe.

5.2 Summary of the Study

The purpose of the study was to establish the effectiveness of foreign currency auction system in stabilizing foreign exchange rates in Zimbabwe. The study was guided by the following specific objectives; to assess the extent to which the Auction Trading System are able to replacing the fixed exchange rate system; to establish the extent to which Auction Trading System are able to achieve an increased supply of foreign exchange to match increased demand, a reduction in the erratic behaviour of the exchange rate, a decrease in the spread between the highest and lowest bid (or marginal exchange rates) and to examine the extent to which Auction Trading System are able to narrowing of the degree of divergence between the auction and the parallel rates. The study

adopted descriptive statistics. The target population of the study was management level staff from select commercial banks. The study relied on primary data and secondary data collected by use of structured questionnaires. Collected data was coded into SPSS for analysis. The study found out that the variables were highly correlated with Auction trading systems.

The study pointed out that able to replacing the fixed exchange rate system had a p value of 0.00<0.05 an indication that the variable significantly influenced Auction trading system. The p value of achieve an increased supply of foreign exchange to match increased demand was 0.01<0.05 an indication that the variable significantly influenced Auction trading system. The study pointed out that transfer of funds had a p value of 0.00<0.05 an indication that the variable significantly influenced auction trading systems. The study pointed out that decrease in the spread between the highest and lowest bid or marginal exchange rates had a p value of 0.00<0.05 an indication that the variables significantly influenced auction trading system.

It was revealed that the auction market is falling short of market demands, Zimbabwe faces an acute foreign currency shortage in the formal sector due to inadequate foreign exchange liberalization.

5.3 Conclusion

The study concludes that although the Auction systems of Zimbabwe started well, Zimbabwe has been perennially facing foreign currency problems, exacerbated by inordinately increasing demand for, the situation is exacerbated by inefficient allocation of this scarce resource. The study concludes that the auction system has been designed in such a manner that there is effective demand. This means that the companies are the ones which are submitting their requirements in the form of bids through the bank and the Reuters Auction system. However, the study concludes that the auction market is falling short of market demands; Zimbabwe faces an acute foreign currency shortage in the formal sector due to inadequate foreign exchange liberalization; our economy is not sitting in the right space giving room for failure of the foreign currency auction system; the auction market is falling short of market demands

5.4 Recommendations

The study recommends that going forward, the Zimbabwean economy needs an efficient foreign exchange market where rates are market determined (with limited central bank intervention to curb market failure when it is necessary).

The study recommends that Zimbabwe's central bank must commit to money supply discipline, zero interference on determining the exchange rate and end all quasi-fiscal operations.

The study recommends that the central bank should play the foreign currency allocation and management, exchange rate determination and money supply management roles efficiently at the same time.

The study recommends that the central bank to provide regulatory mechanisms for the liberalisation of the foreign exchange market where allocation is independent of its directives or interests.

The study recommends that an efficient and market determined exchange rate will crowd in all economic players and provide a path to free movement of foreign currency to the formal market.

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QUESTIONNAIRE FOR FINANCIAL STATEMENT USERS

Section A: Personal Details

Instructions: Please tick in the appropriate box of your choice and complete in writing where necessary.

1. Please indicate your age bracket?

   20 to 30 ☐ 31 to 40 ☐

   41 to 50 ☐ 51 to 60 years ☐

   60+ years ☐

2. Gender

   Male ☐ Female ☐

3. What is your highest educational qualification.

   1. Certificate ☐ 2. Diploma ☐

3. Degree ☐ 4. Masters ☐

5. Doctorate ☐ 6. Other (specify) ☐

4. Indicate your department

Accounting/Finance ☐ Auditing ☐ Users ☐

Marketing ☐ Management ☐ Other ☐

5. How many years of experience do you have in this organisation?

(i) Below 5 years ☐ (ii) 5 to 10 years ☐ (iii) 11 to 15years ☐

6. What is your position in the organization?

Executive Management ☐ Middle Management ☐ Junior Management ☐

Section B: Objective of Auditing

(Please indicate response by ticking in the box of your choice)

	Strongly Agree	Agree	Slightly Agree	Disagree	Strongly Disagree
Rating	5	4	3	2	1
Brings transparency and efficiency on the trading of foreign currency in the economy					
The introduction of the forex auction system yielded the desired currency stability and curb depreciation of Zimbabwe dollar					

The new auction systems eliminate previous distortion on currency front					
Auction market systems is far more difficulty to manipulate than dealer market					
The auction system has been designed in such a manner that there is effective demand. This means that the companies are the ones which are submitting their requirements in the form of bids through the bank and the Reuters Auction system.					
Brings transparency and efficiency on the trading of foreign currency in the economy					
Brings transparency and efficiency on the trading of foreign currency in the economy					

	Strongly Agree	Agree	Slightly Agree	Disagree	Strongly Disagree
	5	4	3	2	1
Auction systems replaced the fixed exchange rate regime offers an opportunity for the stabilization of the Zimbabwean dollar.					

Auction systems eliminate major macro-economic distortion in the economy.					
Auction systems maintain iron clad fiscal and monetary discipline.					
Auction systems influences the price of foreign exchange the economy must be perceived to be credible.					
Auction systems replaced the fixed exchange rate regime offers an opportunity for the stabilization of the Zimbabwean dollar.					

Auction systems eliminate major

macro-economic distortion in the economy.

Auction systems maintain iron clad fiscal and monetary discipline.					
Auction systems influences the price of foreign exchange the economy must be perceived to be credible.					

	Strongly Agree	Agree	Slightly Agree	Disagree	Strongly Disagree
	5	4	3	2	1
Auditors should seek to improve service delivery of the following areas:					

The auction market is falling short of market demands					
Zimbabwe faces an acute foreign currency shortage in the formal sector due to inadequate foreign exchange liberalisation.					
Our economy is not sitting in the right space giving room for failure of the foreign currency auction system					
The auction market is falling short of market demands					
The central bank faces how to move from the transitory mechanism to a sustainable managed float exchange rate					

Any other recommendations.

APPENDIX III

Interview Guide for Auditors

1. From your experience to what extent is the Auction Trading System able to replacing the fixed exchange rate system?

2. Does the to assess the extent to which the Auction Trading System are able to achieve an increased supply of foreign exchange to match increased demand?

3. What perceptions are held by financial statement users to assess the extent to which the Auction Trading System are able to reduce in the erratic behaviour of the exchange rate.

4. How can Auction Trading System be able to narrowing of the degree of divergence between the auction and the parallel rates be narrowed?

FCAS 1 to 4

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