



**MAKERERE UNIVERSITY BUSINESS SCHOOL**

**FINANCIAL LITERACY, EFFICIENCY OF MARKET INTERMEDIARIES AND  
RETAIL INVESTOR PARTICIPATION IN GOVERNMENT SECURITIES IN  
KAMPALA.**

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**2016/HD10/3001U**

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OF A DEGREE OF MASTER OF SCIENCE IN BANKING AND INVESTMENT  
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**PLAN A**

**NOVEMBER 2023**

## **DECLARATION**

I, Namaganda Susan declare that the work presented in this dissertation is my original and has never been submitted for any award in any institution of higher learning.

Signature:



Date: 05.12.2023

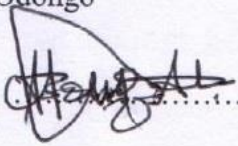
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## APPROVAL

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## **DEDICATION**

To:

*Jesus Christ who is the love of my life.*

*My Parents and siblings who have been constant support system.*

## **ACKNOWLEDGEMENT**

I am grateful to God who has rallied exceptional individuals to shape my MBI as well as the provision to be able to complete the course.

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## LIST OF ABBREVIATIONS

IMF.....	International Monetary Fund
CDS.....	Central Depository System
BOU.....	Bank of Uganda
MoFPED.....	Ministry of Finance, Planning and Economic Development
FLISG .....	Financial Literacy Information Sharing Group
SFLIU .....	Strategy for Financial Literacy in Uganda
AFI .....	Alliance for Financial Inclusion
DFL .....	Digital Financial Literacy
CMA.....	Capital Market Authority
GDP.....	Gross Domestic Product
EMH.....	Efficient Market Hypothesis
SPSS .....	Statistical package for Social Science
DIE.....	Direct investment Enterprise
DI.....	Direct Investor
OECD.....	Organisation for Economic Co-operation and Development
WFE.....	World Federation of Exchanges
DFM.....	Dubai Financial Market
WB.....	World Bank

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## **ABSTRACT**

The study aimed at establishing the relationship between financial literacy, efficiency of market intermediaries and retail investor participation in government securities in Kampala. The study employed a quantitative study research design using simple random sampling and a sample size of 242 out of 650 investors. Data were collected using self-administered questionnaires to collect data from the respondents. The study targeted 242 investors and firms and managed to acquire 174 representing a 71.9% response rate. The results revealed significant positive relationships between, financial literacy and retail investor participation, efficiency of market intermediaries and retail investor participation, financial literacy, efficiency of market intermediaries and retail investor participation in government securities.

In addition, results revealed that financial literacy is a significant predictor of a retail investor participation in government securities in Kampala.

The study recommends that the government should increase on the number of literacy programs through the Central Bank, Ministry of Finance by conducting massive campaigns across all major cities and the rural towns. To execute these educational programs, they will need help from Market Intermediaries who are knowledgeable hence the need to license more players through the Capital Markets Authority to be able to serve the big masses. With this plan the retail that is the ordinary Ugandan will be part of nation building as they will have their money invested with the government for a return and the government will be able to deliver the services they need. So, it's a win- win scenario for both parties.

## **CHAPTER ONE**

### **INTRODUCTION**

This chapter introduces the background to the study, statement of the problem, purpose of the study, objectives of the study, research questions, scope of the study, significance of the study and the conceptual framework.

#### **1.1 Background to the study**

Currently, individuals have become increasingly active in financial markets, and market participation has been accompanied or even promoted by the advent of new financial products and services. However, some of these products are complex and difficult to grasp, especially for the financially unsophisticated investors (Minani, 2019). The willingness of market participants to transact in government securities, in turn, impacts liquidity of these instruments, which benefits all segments of the financial market. Investor participation also contributes to maturity extension of government securities especially when the government securities market is initially centered on short term maturities. A well-functioning and liquid bond market provides the government with a stable source of funding and improve the overall risk profile of the debt portfolio (IMF, 2020).

According to the Sifma Capital Markets Fact Book (2020), Global long-term bond market issuance increased by 19.7% to \$21.0Tn in 2019, Global bond markets outstanding value increased by 5.4% to \$105.9Tn. In 2018 the share of nonresident investors in local currency government bond markets was above 30 percent in Indonesia, Mexico, Peru, and South Africa. China and India, two of the largest issuers of local currency bonds, have limited participation of nonresidents in their government bond market. Several Sub-Saharan African (SSA) governments issued longer dated

bonds in recent months. Ghana, Kenya, and Tanzania issued fixed rate local currency bonds at maturities greater than 15-years, while Nigeria issued its debut 30-year naira bond in April 2019 (which was over four times oversubscribed). This trend towards longer-dated issuance can support long term finance and creates a conducive environment for other non-government bond issuers (IMF, 2020). According to the monthly performance of the economy reports by MoFPED, in April 2021 all tenors were over-subscribed and the average bid to cover ratio was 2.22 an increase from 2.14 registered in March, in May the average bid to cover ratio was 2.33 and in June, the average bid to cover ratio was 2.38, implying increased demand for the treasury instruments in June 2021 compared to May 2021.

The role of financial literacy should not be under-estimated because as more individuals transition to a system where they must decide how much to save and how to invest their wealth, it is important to consider ways to enhance their level of financial knowledge or to guide them in their financial decisions (Minani, 2019). According to Deng (2019), financial literacy increases the probability of participation in the market therefore the more information that is availed and broken down in the simplest language for the investor then we shall have increased local investor participation.

On the other hand, the main function of intermediaries in the government securities market is to educate the potential investors about the available investment opportunities in the issued securities and place securities with investors and provide liquidity to secondary markets (IMF, 2001). According to Uganda's Capital Markets Development Plan (2016/17 – 2026-27), a well-functioning capital market features a range of competitive and competent intermediaries that compete to facilitate transactions or provide advice or services to either borrowers or investors such as investment management, investment banking and broking. Without market intermediaries it would be impossible for the government to raise money. More importantly investors receive an

appreciation for these investments from the intermediaries that is without any information there cannot be a deployment of funds.

However according to the Uganda Capital Markets Development Plan (2016/17 – 2026/27), the key constraints to capital market development in Uganda include the range of investors in Uganda is narrow due to small investor base, the market is supported by a small pool of capital markets professionals (intermediaries) based in Kampala.

Previous studies including Li (2014), Mwangi (2015), Tumwebaze, Orobia & Kamukama (2014), Timilsina (2017), Nadeem et al., (2020), Gumbo and Sandada (2018) have been carried out though on stock market participation. On the other hand, Deng (2019) and Minani (2019) have done study on financial markets and retail participation respectively. These studies have provided empirical evidence however, no study has been done on retail participation in government securities in relation to financial literacy and efficiency of market intermediaries. It is upon this background that the study seeks to examine the role of financial literacy and efficiency of market intermediaries on retail investor participation in government securities.

## **1.2 Statement of the problem**

The government of Uganda (GOU) has accumulated quite a significant amount of debt more especially from foreign lenders. The bulk of these debts are from International Monetary Fund (IMF), World Bank and China. For example, in its March 2022, report, the IMF noted that although Uganda's debts are still moderately manageable, it has started entering danger zones if oil revenues don't start flowing as anticipated in 2025. According to BOU and the MOFPED's Debt Sustainability Analysis Report, Uganda's foreign debt amounts to 62% of the total debt as of December 2022 and its expensive to service. Instead, the government can have more of its people

lend to her at a subsidized rate through the securities market. For instance, by 2021, the total stock of treasury bills and treasury bonds face value amounted to UGX 26.1Tn.

Nevertheless, despite Uganda's rising debt there has been availability of government securities in which Government of Uganda can secure funds to run the country. Secondly a significant number of local investors are not participating in the government securities market. According to an annual report by BOU (2021), the retail investors' treasury bills had a face value of 137.8 billion (2%) in 2020 and 165.3 billion in 2021 while the treasury bonds were 255.8 billion in 2020 (2%) and 608.9 billion (3%) in 2021. This could perhaps be true due to low awareness and lack of understanding of market performance. The availability of competing financial instruments like fixed deposits & saving accounts readily accessible and aggressively marketed by the financial institutions keeps the investors away from pursuing the government securities market.

### **1.3 Purpose of the study**

The purpose of the study was to examine the relationship between financial literacy, efficiency of market intermediaries and retail investor participation in Government Securities in Kampala.

### **1.4 Objectives of the study**

- i. To examine the relationship between financial literacy and retail investor participation in Government Securities
- ii. To examine the relationship between efficiency of market intermediaries and retail investor participation in Government Securities.
- iii. To examine the relationship between both financial literacy and efficiency of market intermediaries on retail investor participation in Government Securities

### **1.5 Research questions**

- i. What is the relationship between financial literacy and retail investor participation in Government Securities?
- ii. What is the relationship between efficiency of market intermediaries and retail investor participation in Government Securities?
- iii. What is the relationship between both financial literacy and efficiency of market intermediaries on retail investor participation in Government Securities?

### **1.6 Scope of the study**

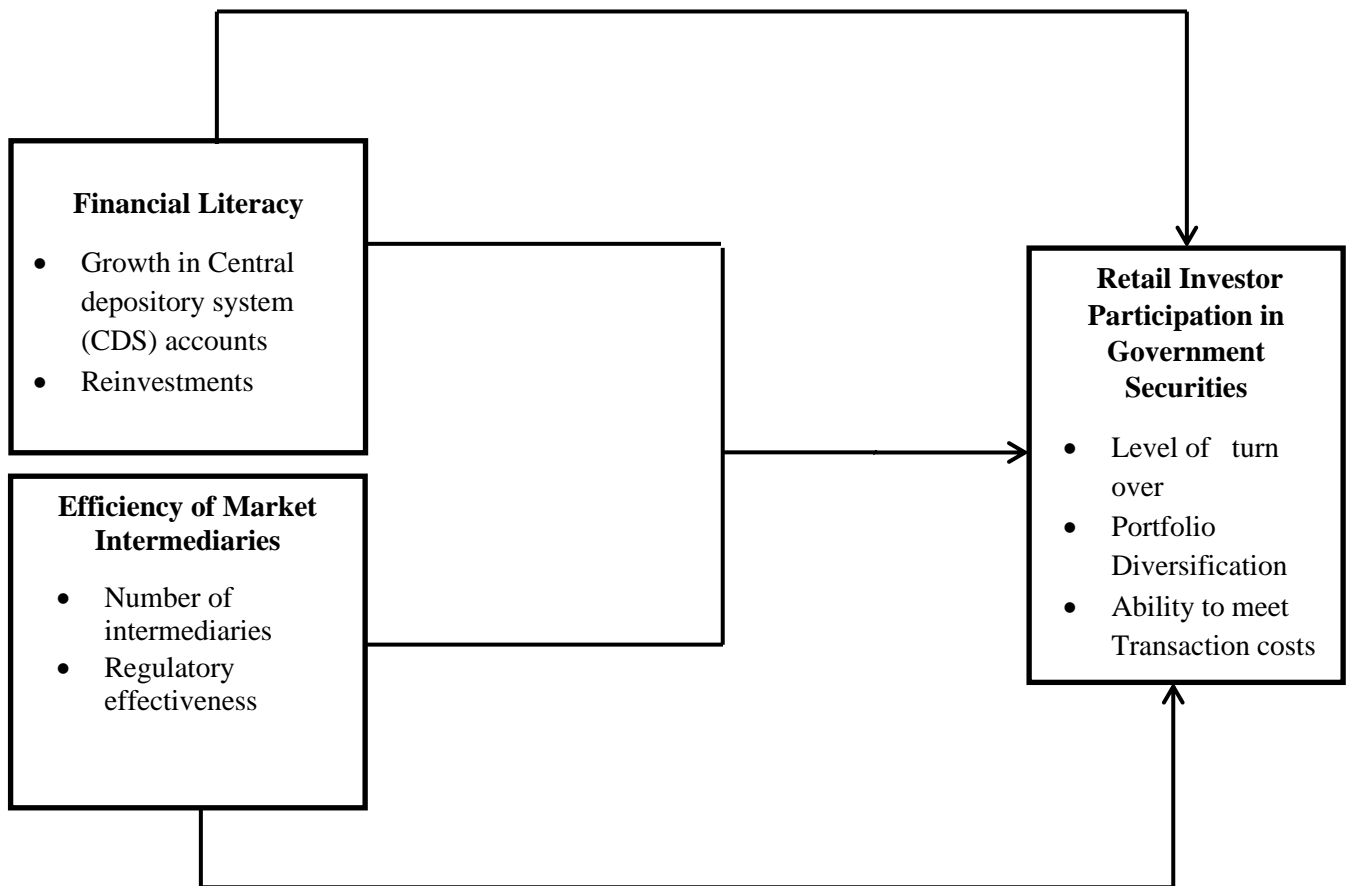
The study was carried out in Kampala on a sample of investors and market practitioners who interact with each other in the financial markets.

### **1.7 Significance of study**

- i. The study can be used by policy makers in assessing appropriate policy to further research in investor participation in government securities.
- ii. The study can be used to launch trading of these government securities on the Uganda Securities Exchange.
- iii. The study can be used by investment houses to come up with better avenues of assisting investors make investment decisions.
- iv. The study will be used by researchers for further studies on use of financial literacy and efficiency of market intermediaries to improve investor participation in government securities.



## 1.8 Conceptual framework



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*Source: Fama (1965), Vickrey (1961), Lusardi and Mitchell (2011), Gumbo and Sandada (2018), Gao, Meng, and Zhao (2019), Minani (2019) and modified by the researcher*

## 1.9 Explanation of the Conceptual framework

Financial literacy is key to have people invest in the securities market. The knowledge and understanding about the securities will ignite or encourage many of them to take up opportunities. This interest will be expressed through opening Central Depository Securities accounts (CDS) where the securities are held for each investor. And they would be reinvestments that is when the funds mature the investors would request to having it reinvested instead of being paid. Aroni

(2014) recommended that both the market regulators and financial advisers should make strategic frameworks to educate investors to improve their financial analysis knowledge, economic, and commercial skills to encourage more participation in the government securities markets.

The efficiency of market intermediaries is equally an important element because without them the investors will not have access to timely information to make investment decisions. There is need to have more market intermediaries licensed to drive the investors to the government securities market.

With increased knowledge about government securities, there will be an increase in turnover, portfolio diversification and ability to meet transaction costs. Reduced transaction costs by intermediaries and investors in less developed markets makes it more likely to participate in government securities trading (IMF, 2021).

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter focused on the literature of the study regarding relationship between variables of the study which are financial literacy, efficiency of market intermediaries and retail investor participation in government securities.

#### **2.2 Theories of the study**

The study adopts efficient market hypothesis (EMH) and auction theory as theories in explaining the investor participation in Uganda. The EMH developed by Eugene Fama in 1965 who argued that securities always trade at their fair value, making it impossible for investors to either purchase undervalued securities or sell them for inflated prices. This theory also states that asset prices fully reflect all available information. Auction theory on the other hand originated in the seminal 1961 article by William Vickrey and he distinguished between common price (or single price) and multiple price (or bid price) auctions. All successful bidders-those bidding at or above the cut-off price-in the former pay the cut-off price. In the latter, successful bidders pay the price they bid.

##### **2.2.1 Efficient Market Hypothesis**

The theory was developed by Eugene Fama in 1965 who argued that securities always trade at their fair value, making it impossible for investors to either purchase undervalued securities or sell them for inflated prices. This theory also states that asset prices fully reflect all available information. The efficient market hypothesis is based on the notion that people behave rationally, maximize expected utility accurately and process all available information (Shiller, 1998). Fama

(1965) defines an efficient market as a market for securities where given the available information; actual prices at every point in time represent very good estimates of intrinsic values. In this market, there are large numbers of rational profit maximizing investors actively competing trying to predict future market values of individual securities and where important current information is freely available to all participants (Fama, 1965). If markets are efficient, then all information is already incorporated into prices, and so there is no way to “beat” the market because there are no undervalued or overvalued securities available.

According to Andrew Lo (2007) the more efficient the market, the more random the sequence of price changes generated by such a market, and the most efficient market of all is one in which price changes are completely random and unpredictable. This is not an accident of nature but is in fact the direct result of many active market participants attempting to profit from their information. Investors who are driven by profitability will jump at any information which they incorporate into market prices to earn a return.

The EMH also states that an investor can't outperform the market, and that market anomalies should not exist because they will immediately be arbitrated away. There are 3 degrees of market efficiency that is the weak form, semi-strong and the strong form. The weak form of market efficiency is that past price movements are not useful for predicting future prices. The semi- strong form assumes that stocks adjust quickly to absorb new public information so that an investor cannot benefit over and above the market trading on that new information. The strong form says that market prices reflect all information both public and private, building on and incorporating the weak form and the semi-strong form.

Overall, developments in information technology and disclosure requirements have influenced market efficiency by making it easier and less costly to retrieve information. Modern investors can quickly locate and analyse a wide array of information using internet, although the value and utility of the information using internet may vary depending on the source. Bond valuation, however, is influenced by a small number of private credit rating agencies that subjectively grade the creditworthiness of bond issuers. (Bertera, 2021).

One of the strengths of the EMH theory is it implies that free markets can optimally allocate and distribute capital without need for central planning, oversight or government authority. The EMH also suggests that prices reflect all available information and represent equilibrium between supply and demand a fundamental shortcoming of EMH is its inability to explain excess volatility; proponents of behavioural finance also believe that there are numerous biases, including irrational and rational behaviour, drive investor's decisions.

### **2.2.2 Auction Theory**

Auction theory originated in the seminal 1961 article by William Vickrey. While Vickrey's insights were initially unrecognized and it would be many years before his work was followed up by other researchers, it eventually led to a formidable body of research by pioneers including Wilson (1979), Clarke (1971), Groves (1973), Milgrom and Weber (1982), Myerson (1981), Maskin and Riley (1989).

Auction theory typically distinguishes between common price (or single price) and multiple price (or bid price) auctions. All successful bidders-those bidding at or above the cut-off price-in the former pay the cut-off price. In the latter, successful bidders pay the price they bid. Auction theory indicates that for a regular issuer of a homogenous good, revenue may be maximised by using the

common price system, since it minimises ‘winner’s curse’. ‘Winner’s curse’ assumes that the market price immediately after an auction is likely to be the cut-off price, since that is the price at which demand and supply meet; and suggests that ‘successful’ bidders who have paid a higher price, in a multiple price auction, will therefore have paid too much, and so face a mark-to-market loss. The risk (or reality) of loss means that some participants will bid a lower price (higher yield) under a multiple price system, with the effect that over time the demand curve shifts down (and maybe to the left).

A central bank using an auction-whether of credit, deposits, central bank bills or of foreign exchange-as a monetary policy instrument, and with a secondary goal of developing markets, may have different objectives from those of a government issuing securities to finance a budget deficit (or re-finance maturing securities) where revenue maximisation is the prime aim.

When there is a bidder with only public information, and another has private information. The former makes no profit at equilibrium while the latter makes positive profit. However, if the bidder with public information was to access more information that is private then they will stand a better chance at profitability.

At Bank of Uganda (BOU) auction procedures, only registered participants are eligible to submit bids in auctions. There are two categories of investors or bids during auctions that is the competitive investors whose bids exceed UGX 200.1Mn and non-competitive investors whose bids range from UGX 100,000 to UGX 200Mn. All bids, competitive and non-competitive, must be submitted through one of the appointed Primary Dealers. Primary dealers are well-capitalized financial institutions with a current account at the Central Bank. The auction is carried out at the

Bank of Uganda on auction day (usually Wednesday at 10am); there is no need for presence of any investor to witness the auction.

Pre-auction Procedures is where the public is given a 7-days (14 days for bonds) notice of the Bank's intention to auction Treasury bills/bonds through one or two of the leading newspapers and via the BOU website as well as email to the main market participants. All bids must be submitted through Primary Dealers.

On auction day receiving bids into the CSD closes at 10am and auctioning starts immediately. After capture and verification of bids, non-competitive bids are awarded before competitive bids, which compete for the remaining volumes. Competitive bids are awarded ranking from the lowest to the highest yield until the offer volume is exhausted. The awarding process will stop at the point where the offered volume is attained.

Bank of Uganda reserves the right to reject any or all bids if it deems it necessary in the interest of maintaining stable rates in the financial market. Bids may also be rejected if the auction rules stipulated above are breached, a bid is established to be an outlier, a bid is construed to be speculative.

The competitive bidders must properly price their bid if they are to be successful and this means they have to access information with their intermediaries to make the right investment decision that will bring best return.

The BOU issued Government of Uganda treasury bills and bonds during the FY 2020/21 for fiscal policy. During the financial year, a total of UGX 14,493.3BN was issued, UGX 7,099.9BN worth of treasury bills and UGX 7,393.4BN of treasury bonds. Redemptions of Government Securities during the same period were UGX 7,419.6BN of which UGX 5,224.7BN were treasury bills and

UGX 2,194.9BN were treasury bonds. At the end of the financial year, the total stock of treasury bills and treasury bonds at face value amounted to UGX 6,387BN and UGX 19,651.8BN,37.4% higher than at end of June 2020 as shown in the table below. The bulk of these securities were held by commercial banks, pension & provident funds and offshore players, which had 38% ,33.8% and 11.3% respectively.

### **2.3 Financial literacy**

According to PACFL, (2008), financial literacy is defined as the ability to use knowledge and skills to manage financial resources effectively for a lifetime of financial well-being. The need for one to understand financial aspects of personal finance such as budgeting, investments, savings among other financial services will be key to making sound investment decisions. Lusardi & Mitchell (2008) expound on the fact that more financially literate people are more likely to plan for retirement and as a result accumulate more wealth thus participate in the financial markets. On the other hand, less knowledge of financial matters makes one prone to invest in unsuitable investment in terms of time horizon and overall return hence being costly (Timilsina, 2017). According to BOU, financial literacy has been recognised as a critical factor in improving the quality of life and enhancing financial inclusion. BOU is responsible for ensuring that consumers make informed financial and economic decisions that ultimately drive economic growth a reason they spearheaded the development and implementation of a strategy for financial literacy in Uganda. The strategy also developed core messages that covered areas such as personal financial management, savings, loans, investments, insurance, planning for old age, making payments and financial services providers targeting workplaces, clubs & associations.



Policymakers in both developed and developing countries are increasingly recognizing the importance of financial literacy and of investing resources in financial education programs (Gallery, Newton & Palm, 2010). Financial literacy increases the probability of participation in the stock market (Deng, 2019). It significantly benefits the investors in helping them to minimize the entry barriers to participate in derivative markets (Yu-Jen Hsiao, 2018). Investor education is one of the tools to complement financial consumer/investor protection regulation that can support and guide individuals' decision making to balance their budget, make ends meet, identify risk factors and plan for their long-term future appropriately. It is however important to stress that investor education policies should preferably be addressed, irrespective of the levels of development of the economy they are in, to individuals and households that have the financial capacity to invest and to absorb risks, including potential new entrants and the recently financially included. With this caveat, investor education can encourage effective participation in capital markets and provide benefits from a government and an investor/consumer perspective (OECD, 2017).

According to Ms. Charity Mugumya, the Director of BOU communications in 2020, there were more than 12,000 registered investors in the Bank of Uganda Central Securities Depository system from less than 5,000 investors 10 years prior (Daily Monitor November 2020). Even with such leaps, there's more that needs to be done if these numbers are to account for local investors whose investment can ably support the government through participation in government securities.

The culture or behaviour of reinvestment is strengthened when an investor has all the requisite information. Coupons generated by the government securities can be reinvested in the same security or any other that is available to compound earnings.

## **2.4 Efficiency of Market intermediaries**

The main function of intermediaries in the government securities market is to place securities for investors and provide liquidity to secondary markets. According to the BOU auction Procedures, funds are raised through the auction which is designated for a Wednesday every after a fortnight for treasury bills and once a month for bonds as predetermined by the government securities calendar. The bids are submitted by 9:00am on the day of the auction through a primary dealer who are commercial banks in Uganda. A market-making obligation helps ensure a market for investors who wish to sell a security before its maturity, and this is commonly known as the secondary market where investors are given opportunity to freely enter and exit the market. Market making entails interest and liquidity risk as the dealer may not always be able to sell at a reasonable price the securities it has purchased from a customer. A dealer must have sufficient capital to warehouse open positions and withstand losses. The market maker is rewarded by the private information about investor behaviour it derives from trading as well as by the commissions/fees and bid/offer spread it applies to transactions with clients.

Below are the different market intermediaries through whom the government mobilises funds.

Commercial banks are (in many emerging markets) the dominant investors in government securities.

- 1.** BOU appointed 8 commercial banks to act as primary dealers for the country's government bonds as it tries to encourage the development of an active and liquid secondary market. From October 1<sup>st</sup>, 2020 only Absa bank, Bank of Baroda, DFCU Bank, Centenary bank, Housing Finance, Stanbic, United Bank of Africa and Standard Chartered.
- 2.** Brokers: A broker, also a trading participant on the Uganda Securities Exchange can execute transactions (Buy/Sell) on behalf of their clients. Given they hold a securities

central depository account (SCD). This is part of the initiative to have the listed government securities trade on the bourse by all members of the investing community. The licenced brokers include Crested Capital, UAP financial services, Dyer & Blair, SBG Securities and the new entrant Chipper technologies.

3. Licenced Fund managers: A fund manager is responsible for implementing a fund's investment strategy and managing trading activities. The fund managers include Britam Asset Managers, Geafrica Asset Managers, ICEA Asset Management Uganda Limited, Sanlam Investment, UAP financial services, Xeno technologies. The URBRA sector performance report for December 2021 shows that the government securities under management stood at UGX 1.96Tn. Most of the fund managers also carry collective investment schemes licences that allows them to offer various unit trusts such as umbrella fund, money market funds and balanced funds. They go into the government securities market as institutional investors on behalf of their unit holders.

Except for the commercial banks who are primary dealers licenced by the central bank, the brokers and fund managers are licenced by Capital Markets Authority.

## **2.5 Retail Investor participation**

Investor participants include individual (retail) investors, institutional investors, and foreign investors. The institutional investors have an in-built buy and hold strategy which affects liquidity on the secondary market however retail investors do not necessarily hold the same position. This liquidity is key when markets are unstable which is needed to stabilise rates. In 2016, the stock exchange of Thailand the retail investors accounted for more than 50% of the transactions which has given its bourse resilience WFE Report, (2017). From the African perspective, retail trading

accounted for 84% of the trades and 70% of the value traded on the Egyptian Exchange. In 2017 on the same bourse, retail investors had dominated trading in the 10 years preceding the period. For any securities market to be effective it must involve retail investors from the outset. The Dubai Financial Market (DFM) has demonstrated the need for retail investors and have rolled out campaigns that saw increased participation especially during Initial public Offer (IPO's) which was a key segment for them. They at one time registered 300,000 investors in a single IPO (WFE Report, 2017). MTN Uganda had a similar target of about 100,000 shareholders but managed to shore up only 21, 394 by its close in November 2021 from 60,000 SCD accounts that had been opened during the same period. The primary market of government securities in Uganda has also shown that the retail investors have not been actively engaged. The Non-competitive platform aimed at investors with less than UGX 200Mn in Face value has not exhibited tremendous interest looking at the results for the auction of 29<sup>th</sup> September 2022, the Non-competitive offers were at UGX 1.6Bn for the 91Day T-bill compared to UGX 35.3Bn offered by the competitive bidders whose Face Value was more than UGX 200Mn (BOU sept T-bill auction results).

Uganda's fragmented bond market infrastructure, limited secondary trading, and under-developed money market contribute to high interest rates on domestic government securities (World bank report 2020).

Costs that deter entry in the securities market may take several forms. Vissing-Jorgensen (2002) categorizes participation costs as fixed entry costs, fixed and variable transaction costs and per period trading costs. Using panel data on direct securities holding, the study finds that transactional costs associated with securities market participation is a very significant determinant of current participation levels by individuals. Another related study by Guiso *et al.* (2002) presents cross-country evidence on the presence of participation costs. The study concludes that the cross-country

differences in participation rates can be better justified by different institutional and informational barriers to entry across countries than differences in stock returns per say. Faria (2000) argues that the transaction costs are not necessarily costs in monetary value, however it can be thought of as the value of time spent by the potential investor to understand the basic functioning of securities markets, the time costs to learn how to follow price movements, how to trade, how to assess risk and return relationship for an optimal portfolio choice among other activities. According to Alan (2006) such consideration alone has a direct negative relationship with individual's securities market participation patterns. Even though educated and the wealthier are more likely to participate in the securities market but information and transaction costs remain the most important variable quantitatively. (Vissing-Jørgensen, 2002; Haliassons & Michaelides, 2003).

## **2.6 Financial literacy and Retail Investor participation**

According to Deng (2019), financial literacy increases the probability of participation in the market. Financial decision making is influenced by a person's level of financial knowledge since people with a low level of financial literacy are less inclined to invest in securities and consequently are less likely to take part in the market (Rooij et al., 2011). Further, it has been demonstrated that the probability of participating in the securities market increases if a person is financially literate (Kaustia & Torstila, 2008). Financially educated people face lower costs of gathering and handling information and consequently are able to participate in the market (Nadeem et al, 2020).

Financially literate investors will ideally be aware of the (financial) risks they are confronted with and be able to estimate the amount of savings and investments they will need to meet their own needs and those of their family; understand the balance of risk and reward relative to saving and

investment products and their costs; recognise that market fluctuations are normal; and, acknowledging their own limitations, know who to trust to provide unbiased, objective advice. They will be better equipped to recognise and avoid fraud and scams. Investor education therefore is one of the tools to complement financial consumer/investor protection regulation that can support and guide individuals' decision making to balance their budget, make ends meet, identify risk factors and plan for their long-term future appropriately (OECD, 2017).

Campbell (2006) reports that non-participation and under-diversification, seen as investment mistakes, are dependent on the level of wealth and education. Moreover, he suggests that individuals aware of their limited investment skills are less likely to have any funds in the securities market. This reasoning is in accordance with the findings of Guiso and Jappelli (2005) who indicate that a lack of financial awareness contributes to the explanation of the relatively low participation rates in financial markets. The authors conclude that securities market participation rates would increase considerably if all investors were fully aware of risky assets.

Previous studies have identified several factors that shape participation in the stock market, including demographics, education, social capital, income level, IQ level, investment knowledge, optimistic beliefs, financial literacy, peer effects, financial self-efficacy, stock market experiences, herding, heuristics, and cultural factors (Hong et al., 2004; Campbell, 2006; Brown et al., 2008; Georgarakos and Pasini, 2011; Grinblatt et al., 2011; Hurd et al., 2011; Malmendier and Nagel, 2011; Van Rooij et al., 2011; Bonaparte and Kumar, 2013; Calvet and Sodini, 2014; Kengatharan and Kengatharan, 2014; Li, 2014; Arrondel et al., 2015; Balloch et al., 2015; Gao, 2015; Gao et al., 2019; Liivamägi et al., 2019; Zou and Deng, 2019). However, they have all not dwelt on the factors that shape participation in government securities which this study sought to do.

Nadeem et al, (2020) studied how investors attitudes shape stock market participation in the presence of financial self-efficacy and concluded that investor's money attitudes are significant to affect their stock market participation decisions. This however does not align with the current study which focused on financial literacy and retail participation.

Jiang, Liao, Wang and Xiang (2020) studied financial literacy and retail investors' financial welfare: Evidence from mutual fund investment outcomes in China and found out that advanced literacy has a significantly larger impact on investment performance than basic literacy. The study is helpful to the current study, but it does not address the retail participation in government securities.

Gurrola-Perez, Lin, and Speth (2022) studied retail trading: an analysis of global trends and drivers and noted that retail participants tend to react to market conditions: they trade more after observing high market returns and trade less after observing high market volatilities. This study is based on the stock market participation, yet the current study is based on government securities.

## **2.7 Efficiency of Market intermediaries and Investor participation**

Intermediation means the services offered by market professionals to execute the buy and sell orders of investors. Such services are offered by brokers, dealers, and exchanges. Exchanges provide facilities that bring together purchasers and sellers of securities; brokers are agents who engage in the business of effecting transactions in securities for the account of others, generally for an explicit commission. Dealers are principals who engage in business of buying and selling of securities for their own account and are generally compensated implicitly through trading profits.

Market intermediaries also provide investors with information which takes the form of either advisory services to uninformed investors or immediate investing on their behalf (Pacces, 2000). Investors generally seek for assistance and recommendation either directly from brokers and investment advisers or indirectly entrusting money to professional asset managers. In this perspective, market intermediaries act as facilitators of investor's participation in the financial exchange; that is, they supply investors with "participation services" in that they bridge the gap between the investors' lack of knowledge and the expense required to get the most out of increasingly sophisticated financial markets.

The Primary Dealer System in Uganda aims to promote participation in government securities markets, to foster the development of financial markets, to improve the secondary market trading system as well as to ensure efficiency in the operations related to the Government securities market at the central bank. Primary Dealers have contributed to the growth of the Government securities market by ensuring high demand during primary market auctions. In 2016, the ratio of primary dealer successful bids in the auctions relative to the rest of the market was 61% of all auction bids. The auction bid to cover ratio, which is the total size of bids relative to the amount tendered, for treasury bills and bonds in 2016 averaged 1.21, indicating demand for government securities was strong and sufficient to accommodate the needs of Government for domestic finance. Primary Dealers have also enhanced liquidity in the secondary market. Total turnover in the secondary market increased by 12.5 percent to UGX 3.6Tn in 2016 from UGX 3.2Tn in 2015.

Well-functioning, well-regulated financial markets and financial institutions providing a choice of appropriate financial instruments are vital foundation stones in any attempt to increase safe levels of investing activity amongst individuals and households. Products must be properly designed and fairly marketed and efforts should be made to curb fraud and miss-selling practices. Mis-selling



scandals impact not only on those who face direct losses, but also on the wider population by reducing general confidence in markets, possibly causing a reduction in investments and as such in liquidity, as well as instability and further losses. Once the foundation stones are in place, potential investors can be encouraged (when appropriate) to participate in capital markets.

Davis (2014) carried out a study on market efficiency and the problem of retail flight and revealed that as the proportion of trading by individual investors increases, stock price informativeness, as measured by firm-specific return variation and the probability of informed trade, increases and provides evidence that suggests these relationships are causal ones. He also noted that individual investors are often assumed to be noise traders who distort stock prices and harm market functioning. Therefore, some argue that their withdrawal from the market should be of little concern; indeed, it should be celebrated. This study helps to understand the contribution of market efficiency on the retail flight which may not relate completely to the current study.

## **2.8 Financial literacy, efficiency of market intermediaries and retail investor participation**

To promote investor participation, it is essential to promote financial literacy and investor education, ease access to the Government securities market by leveraging technology and incentivizing intermediaries to place securities on behalf of investors (Khan, 2013). Accordingly, financial literacy becomes important to enable investors who use those financial products to make wise decisions and choices (Lusardi, 2015). Financial literacy helps investors by offering them knowledge they need to make sound financial decisions and secure economic futures. Lusardi and Mitchell (2014) observe that more financially savvy people are more likely to plan, save, invests in stocks, bonds and accumulate more wealth. Furthermore, Clark, Lusardi and Mitchell (2016)

also state that being financially literate is associated with higher contribution rates in retirement savings plan which contributions can be used to invest in government securities. However financial literacy is powered by market intermediaries who avail information to investors who need confidence in the decisions they are making. The market intermediaries must act with integrity and conduct due diligence on all investments that they offer and advise their clients, where a market intermediary has more than one client and/or where it has a proprietary interest in the outcome of a transaction, both of which may lead to conflicts of interest, investors and regulators rightly expect the intermediary to identify and address those conflicts appropriately. Positive synergy between investors and their advisors or intermediaries will ultimately lead increased participation in the government securities market.

Mwangi (2015) studied the relationship between financial literacy and stock market participation by retail investors in Kenya and the results indicated that decision to invest in stocks was influenced by various economic factors, such as, expected dividends, capital appreciation, affordability of shares and fluctuations in market indices among other factors. The study also sought to establish effects of financial literacy, gender, age, and income on stock market participation. There exists a literature gap because it only addresses financial literacy not efficiency of market intermediaries. This study therefore sought to close that gap by looking at both financial literacy and efficiency of market intermediaries.

A study by Cucinelli and Soana (2023) about investor preferences, financial literacy and intermediary choice towards sustainability demonstrate that socially responsible financial intermediaries are chosen by individuals characterized by high self-reported orientation towards socially responsible investments and high financial literacy. They also show that the higher the financial knowledge and the more correct financial behavior of retail investors related to savings

and financial control, the higher their preference for socially responsible financial intermediaries. On the other hand, individual financial attitude towards savings and spending displays a negative relationship with this preference. Moreover, retail investors with more specific knowledge about portfolio diversification choose more socially responsible financial intermediaries than other people. This study does not however address the government securities which this study sought to address.

## **2.9 Conclusion**

An examination of the literature revealed a number of research gaps. There is insufficient empirical evidence on the retail investor participation in government securities in developing countries such as Uganda. Second, previous studies that have looked at the relationships fall short in providing details on specific aspects of financial literacy, efficiency of market intermediaries and their effect on retail investor participation. Therefore, this study was an attempt to fill these gaps. Moreover, the retail investor participation in government securities in Uganda is still very small so more studies in this area will help boost the volume of trade in government securities.

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.1 Introduction**

This section covered the tools and techniques which were used to investigate the research issues in the field. It covers the research design, area of study, study population, methods and techniques that were used in choosing the same and sample selection procedures, data sources and collection instrument. It also includes reliability and validity analysis measurement of variables and data analysis and processing.

#### **3.2 Research design**

The study used a cross sectional quantitative study design to determine the relationships between the variables. Stratified random sampling was used to select the sample size of 242 investors. Given that some elements were small and yet had to be represented as part of the sample, the research chose a combination of stratified sampling and simple random sampling. Creswell (2014), emphasises the need to choose the right strategy in selection of the most appropriate method that would collect the data and have it analysed to avoid bias during the inquiry. The quantitative approach was used to indicate how the variables related numerically through correlation and regression studies.

#### **3.3 Study population**

The study focused on a study population of about 650 (BOU, 2021) was considered from of the investing public in Kampala from which a sample of 242 investors was selected to complete the questionnaire. This sample was based on the Krejcie & Morgan table (1970).

### **3.4 Sampling procedure and sample size determination.**

The unit of analysis was the investing public and the market practitioners. Simple random sampling technique was used to select the respondents. It was used to avoid bias and for every individual to have an equal chance to participate in the study. It also helped ensure that the cost per observation was greatly reduced. The simple random sampling was used by choosing a sample at random by drawing from a hat.

The unit of inquiry was individuals from the investing public and market practitioners.

### **3.5 Source of data.**

Data was collected directly from respondents who work in some of the intermediaries and select investors within Kampala. The secondary data sources used were journals, articles, newspapers, internet sources. The variables were measured by a combination of different items measured on the five-point likert scale.

### **3.6 Data collection instruments.**

Data was collected using structured questionnaires which was filled by the respondents. Because simple random sampling was used, a lottery method was used where numbers were written on a piece of paper and put in a hat. Every participant had to pick a number without replacement. Each number had a corresponding questionnaire, so people were given questionnaires according to the number they had picked. The questionnaires were then gathered, coded, entered and cleaned to identify the ones with errors. After that the cleaned data was analysed and results which are presented in chapter 4 were recorded.

### 3.7 Measurement of variables

**Table 1**

**Measurement of variables**

VARIABLE	INDICATORS	SCHOLARS	SCALE
Financial literacy	<ul style="list-style-type: none"> <li>• growth of CDS accounts</li> <li>• re-investments</li> </ul>	Deng, (2019), Yu-Jen Hsiao (2018).	strongly agree =5, Agree = 4, Not sure =3, Disagree =2, and Strongly Disagree =1.
Efficiency of Market intermediaries	<ul style="list-style-type: none"> <li>• number of intermediaries</li> <li>• licensing</li> </ul>	Lusardi and Mitchell (2011), Gumbo and Sandada (2018),	strongly agree =5, Agree = 4, Not sure =3, Disagree =2, and Strongly Disagree =1.
Retail Investor participation	<ul style="list-style-type: none"> <li>• increase in turn over</li> <li>• increase in deals</li> <li>• reduced rates</li> </ul>	Gao, Meng, and Zhao (2019), Minani (2019)	strongly agree =5, Agree = 4, Not sure =3, Disagree =2, and Strongly Disagree =1.

### 3.8 Reliability and validity of the measurement instrument.

Validity refers to the ability to produce findings that agree with theoretical or conceptual values to produce accurate results, to measure what is supposed to be measured (Saunders et al, 2003). A Validity test indicates the level of ability of a scale to measure the intended concept. The questionnaire had to be clear, relevant and adequate for measuring the respective study construct.

According to Saunders et al (2003), Reliability is the ability of an instrument to produce consistent results (consistency). A method is reliable if it produces the same results whenever it is repeated. Reliability tests indicate that the extent to which it is without bias or error free, and hence ensures consistent measurement across time and across the various items in the instrument. It was measured using Cronbach Alpha coefficient test at 0.7 of internal consistency.

**Table 2**

**Reliability and validity**

<b>Variable</b>	<b>No. of items</b>	<b>Anchor</b>	<b>Cronbach Alpha Value</b>	<b>Content Validity Index</b>
Financial Literacy	11	5 Point	.755	.874
Efficiency of Market Intermediaries	11	5 Point	.761	.874
Retail Investor Participation	13	5 Point	.841	.879

*Source: Primary data*

The decision rule of the CVI is to accept an instrument as valid if the computed CVI is greater than 0.7 Amin (2005). As presented in the table above, the CVI for financial literacy was 87.4%, efficiency of market intermediaries was 87.4% and retail investor participation was 87.9%. This shows that the questionnaire was valid since all the items had a CVI above 70% (0.7).

The Cronbach Alpha Reliability test was carried out and the test results revealed that financial literacy had a reliability result of 0.755, efficiency of market intermediaries had a reliability test result of 0.761, and lastly the dependent variable (retail investor participation) had a reliability test result of 0.841. All the variables had results above the standard value of .70 (70%) which showed that all items in the instruments were reliable.

**3.9 Data processing, analysis, and presentation.**

The data collected was edited for completeness and consistence to ensure correctness of the information given by respondents. Statistical package for Social Science (SPSS) version 29 was used for data entry and analysis of the study variables. Analysis of data included descriptive statistics by Pearson's correlation coefficient for establishing the relationship among study variables and a regressions analysis to determine the relationship between financial literacy,

efficiency of market intermediaries and retail investor participation in Government securities in Kampala.

### **3.10 Ethical Consideration**

The study was conducted with permission from the respondents who were at liberty to respond or not. Their voluntary contribution has been acknowledged and their confidentiality and privacy always respected throughout the study.



## CHAPTER FOUR

### PRESENTATION, ANALYSIS, AND INTERPRETATION OF FINDINGS

#### 4.0 Introduction

This chapter presents the findings of the study.

The data analysis aimed at satisfying the following research objectives.

- i. To examine the relationship between financial literacy and investor participation in Government Securities
- ii. To examine the relationship between efficiency of market intermediaries and retail investor participation in Government Securities.
- iii. To examine the relationship between both financial literacy and efficiency of market intermediaries on retail investor participation in Government Securities

#### 4.1 Response rate

**Table 3**

**Response rate**

Targeted	Acquired	Response rate
242	174	71.9%

*Source: Primary Data*

The study targeted a sample of 242 respondents where the sample respondents were drawn from investor and market practitioners in Kampala. 174 questionnaires were effectively filled in for analysis translating to 71.9% response rate as indicated in Table 3 above. The selected respondents were deemed instrumental in providing the required information.

## 4.2 Demographic characteristics

**Table 4**

### Demographics of the Respondents

<b>Gender of the Respondent</b>	<b>Frequency</b>	<b>Percent</b>
Male	104	59.8
Female	70	40.2
<b>Total</b>	<b>174</b>	<b>100.0</b>

<b>Respondents age</b>	<b>Frequency</b>	<b>Percent</b>
Below 25	22	12.6
26 – 30	68	39.1
31 – 35	41	23.6
36 – 40	16	9.2
41 – 45	9	5.2
Above 45	18	10.3
<b>Total</b>	<b>174</b>	<b>100.0</b>

<b>Level of education</b>	<b>Frequency</b>	<b>Percent</b>
Certificate	11	6.3
Diploma	19	10.9
Degree	99	56.9
Masters	41	23.6
PHD	4	2.3
<b>Total</b>	<b>174</b>	<b>100.0</b>

<b>Category of Respondent</b>	<b>Frequency</b>	<b>Percent</b>
Retail Investor	153	87.9
Broker firm	14	8.0
Commercial bank	1	.6
Fund manager	2	1.1
Regulator	2	1.1
Other	2	1.1
<b>Total</b>	<b>174</b>	<b>100.0</b>

<b>Tenure in government securities investment</b>	<b>Frequency</b>	<b>Percent</b>
Never invested	20	11.5
Less than 1 year	26	14.9
2 – 5 years	62	35.6

6 – 10 years	30	7.2
Above 10 years	15	8.6
<b>Total</b>	<b>153</b>	<b>87.9</b>

*Source: Primary data*

The results in table 4 above indicates that male respondents formed majority of the respondents to this study (59.8%) compared to the female respondents who formed (40.2%). This distribution indicates that the variation in gender representation was not very big to cause worry arising from gender bias.

The results in Table 4 above indicates that all the respondents were above 18 years, the majority of the respondents being between the age of 26 – 30 years formed 39.1% followed by respondents between 31 – 35 years formed a percentage of 23.6%, respondents between 41-45 years and those above 45 years formed a percentage of 5.2% and 10.3% respectively which were the least. This therefore shows that majority of the respondents were mature enough to give valid responses.

The results in table 4 above indicates that 56.9% of the respondents were degree holders followed by 23.6% at a post graduate level and those respondents at diploma level formed 10.9%. The least respondents were at a certificate level 6.3% and PHD holders at 4% respectively. This implied that the respondents had the capacity and qualifications to react to the questions in the questionnaire.

The results in table 4 above showed that majority of the respondents were retail investors who had a percentage of 87.9%, followed by the broker firm at 8%, Fund managers, regulators and other had a percentage of 1.1% each and the least was the commercial bank that was represented by a percentage of 0.6%. This showed that the views of both the investors and the market practitioners were obtained.

The results in table 4 above indicates that majority of the respondents who have participated in government securities have done so for 2-5 years forming a percentage of 40.5%, followed by those of 6 – 10 years at a percentage of 19.6, followed by those of less than a year at a percentage of 17.0, 13.1% have not invested and the least being those above 10 years. This implies that majority of the investors have invested in the government securities market for a short period of time.

#### 4.2 Relationships between the Study Variables

The table below highlights the Pearson (r) correlations results.

**Table 5**

#### **Pearson Correlation Results**

	<b>Mean</b>	<b>SD</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
Financial literacy -1	3.98	.497	1.000			
Efficiency of Market intermediaries -2	3.89	.459	.486**	1.000		
Financial literacy and efficiency of market intermediaries -3	.3.95	.412	.874**	.850**	1.000	
Retail Investor Particiaption-4	3.65	.630	.546**	.439**	.566**	1.000

\*\* . Correlation is significant at the .01 level (2-tailed).

*Source: Primary data*

#### **4.5.1 The relationship between financial literacy and retail investor participation**

The results in the table above indicated that there exists a significant and positive relationship between financial literacy and retail investor participation ( $r = .546^{**}$ ,  $p < .05$ ). The results show that when the investors are taught through the various financial literacy programs, then they stand a better chance of participating in investing in government securities. Individuals may learn about investment opportunities from peers who are already informed about government securities therefore financial literacy encourages participation because the probability of becoming informed is an increasing function of the probability of buying securities. In addition, when the investment environment is favourable, they are encouraged to invest, and this will increase on the number of participants in the government securities markets.

The presence of financial literacy programmes should enhance both the breadth and depth of retail participation. All things being equal, we surmise that increasing financial awareness, for example through marketing materials, should have a positive influence on retail participation, in particular on breadth of participation.

#### **4.5.2 The relationship between efficiency of market intermediaries and retail investor participation**

Table 5 shows that efficiency of market intermediaries has a positive effect on the retail investor participation ( $r = .439^{**}$ ,  $p < .05$ ). This shows that when the market intermediaries are efficient and are working with the customers interests in mind, the number of investors who are participating in government securities will also increase. In addition, when the investors are aware of the obligations market intermediaries to them, they will be encouraged to engage in the trading.

Absence of skilled intermediaries to teach investors how the government securities work and the benefit accruing to them. Secondly offering them investment advice on which is the best security to buy amidst all that has been listed and offered by the central bank. And lastly those will offer access to trading platforms will hinder growth of this sector and deter savings culture.

#### **4.5.3 The relationship between both financial literacy and efficiency of market intermediaries on retail investor participation**

Table 5 above shows that financial literacy and efficiency of the market intermediaries has a significant positive relationship ( $r = .566^{**}$ ,  $p < .05$ ). The results show that once the investors are aware of the availability of intermediaries who can help them make the right decisions about their investments, they will be encouraged to participate in government securities. Intermediaries create an ecosystem within which capital flows more effectively. Market intermediaries also provide the necessary expertise to guide bond offerings to market and credit rating agencies can lend credibility by assigning ratings for debt offerings. The more people are knowledgeable, the more people will invest and increase overall activity for the intermediaries and in turn government will eventually borrow at low rates.

#### **4.3 Regression Model Analysis**

The results in the table below show the prediction model which was presented so as to examine the level to which financial literacy and efficiency market intermediaries can account for variances in the retail investor participation.

**Table 6****Regression model**

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.304	.404		.754	.452
Financial literacy	.558	.096	.444	5.792	<.001
Efficiency of Market intermediaries	.286	.104	.210	2.743	.007
<b>Dependent Variable: Retail investor participation</b>					
R	.576 <sup>a</sup>				
R Square	.332				
Adjusted R Square	.323				
Std. Error of the Estimate	.514				
R Square Change	.332				
F Change	37.013				
Sig.	<.001				

*Source: Primary Data*

Adjusted R squared is coefficient of determination which tells us the variation in the dependent variable due to changes in the independent variables. From the findings in the above table the value of adjusted R squared was 0.323; an indication that there was variation of 32.3% on retail investor participation due to changes in financial literacy and efficiency of market intermediaries. This shows that 32.3% changes in retail investor participation could be accounted to financial literacy and efficiency of market intermediaries which implies that other factors contribute 67.7%. The best predictor of retail investor participation was financial literacy (Beta = .444, Sig. <.01) followed by efficiency of market intermediaries at (Beta = .210, Sig. <.01). The regression model was statistically significant F Statistic = 37.013, sig. <.01). R is the correlation coefficient which shows the relationship between the study variables. From the findings shown in the table above, it

is notable that there exists strong positive relationship between the study variables (financial literacy, efficiency of market intermediaries and retail investor participation) as shown by 0.576.

#### 4.7 Analysis of Variance

**Table 7**

**Analysis of variance**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19.522	2	9.761	37.013	.000 <sup>a</sup>
	Residual	39.294	149	.264		
	Total	58.816	151			

a. Predictors: (Constant), Efficiency of Market intermediaries, Financial Literacy

b. Dependent Variable: Retail Investor Participation

*Source: Primary data*

The results in Table 7 above indicate that the regression model was significant in predicting how financial literacy and efficiency of market intermediaries affect retail investor participation because the p-value was  $P=0.000$  which is less than 0.05 ( $P<0.05$ ) which is an indication that the data was ideal for making a conclusion on the population parameters as the value of significance (p-value) was less than 5%.



## CHAPTER FIVE

### DISCUSSION OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

#### 5.0 Introduction

This chapter contains the discussion, conclusion and recommendations from analysis and interpretation of the results. The discussion details explanations of the results in comparison with other scholars while the conclusion deals with the final remarks as regards to the study objectives. The chapter concludes by raising the areas for further research and the research limitations.

#### 5.1 Discussion of findings

##### 5.1.1 Financial literacy and retail investor participation

The findings of the study of the study indicated that there is a significant and positive relationship between financial literacy and retail investor participation ( $r = .546^{**}$ ,  $p < .05$ ) implying that as the level of financial literacy increases, retail investor participation also increases. Investors who are educated have a probability of participating in the securities market. Non-participation and under-diversification are dependent on the level of wealth and education therefore individuals aware of their limited investment skills are less likely to invest funds in the securities market (Campbell, 2006). This is supported by the works of Deng (2019) and (Rooij et al., 2011), who noted that financial literacy increases the probability of participation in the market. They also noted that financial decision making is influenced by a person's level of financial knowledge since people with a low level of financial literacy are less inclined to invest in securities and consequently are less likely to take part in the market.

These results are also supported by the efficient market hypothesis theory which states that when investors have information, they can make investing decisions as compared to when they are not literate about the securities market.

### **5.1.2 Efficiency of Market intermediaries and retail investor participation**

The findings of the study indicated that there is a significant and positive relationship between efficiency of market intermediaries and retail investor participation ( $r = .439^{**}$ ,  $p < .05$ ). This implies that the efficiency of market intermediaries attracts investors to invest therefore the more the market intermediaries are efficient, the more investors will invest. Market intermediaries act as facilitators of investor's participation in the securities exchange; that is, they supply investors with "participation services" in that they bridge the gap between the investors' lack of knowledge and the expense required to get the most out of increasingly sophisticated financial markets. In 2020, the Uganda Securities Exchange received a "No Objection" from Bank of Uganda to partake in auctions in through a licensed primary dealer and secondary market trading on its platform.

If the market intermediaries can provide the necessary information to the investors especially before the auction, it attracts the investors to participate in the securities market which is in relation to the auction theory.

### **5.1.3 Financial literacy, efficiency of market intermediaries and retail investor participation**

The results of the study showed that financial literacy and efficiency of market intermediaries have a significant positive relationship with retail investor participation ( $r = .566^{**}$ ,  $p < .05$ ). When the investors are financially literate and the market intermediaries are providing the services, they ought to, the retail investor participation will increase. The willingness of market participants to

transact in government securities, in turn, impacts liquidity to these instruments, which benefits all segments of the financial market. Once the investor has had an appreciation of the securities, they will not hesitate to place their funds through the intermediary hence encouraging retail investor participation. Therefore, financially literate investors with accurate and clear information can access the market intermediaries that help them with participation services in government securities. This is supported by the works of Clark, Lusardi and Mitchell (2016) who stated that being financially literate is associated with higher contribution rates in retirement savings plan which contributions can be used to invest in government securities. However, it is essential that investors have confidence that market intermediaries act with integrity and with appropriate regard to their interests, whether they are clients of the market intermediary or invest in a security offering that is underwritten or facilitated by the market intermediary.

## **5.2 Conclusion of the study**

Based on the study findings, financial literacy promotes participation of retail investor participation in government securities. This implies that as investors are aware of the securities and how they work, they will be encouraged to participate in government securities trading so Investors who know about the securities on the market are likely to participate as compared to those who have no knowledge of them.

The study also concludes that when market intermediaries are efficient, more retail investors will participate in government securities because they have confidence in market intermediaries and in the services, they provide that link the buyers and sellers of government securities. However, if they do not trust the intermediaries, they will not be able to transact hence reducing the number of

retail investors in government securities. Market intermediaries like banks, stockbrokers among others have tried their best to extend quality services especially in the secondary market.

The study also concludes that financial literacy and efficiency of market intermediaries increases retail investor participation. Financial literacy helps investors by offering them knowledge they need to make sound financial decisions and secure economic futures. However, it is essential that investors have confidence that market intermediaries act with integrity and with appropriate regard to their interests, whether they are clients of the market intermediary or invest in a security offering that is underwritten or facilitated by the market intermediary.

### **5.3 Recommendations of the study**

Based on the findings and conclusions of the study, the following recommendations were construed.

Regarding financial literacy, the government can increase on the number of literacy programs through the ministry of finance should arrange for investor education symposiums to demystify wrong perceptions about the securities market and to educate people on how investing in government securities can be beneficial to the households and to the nation at large. Promotion of advertisement tools, including financial literacy at some levels in the education curriculum like secondary school, promotion of financial literacy-related social media technology, managing relationships with investors as well as trainings on legal and technical process in securities markets operations can help improve on financial literacy.

As far as efficiency of market intermediaries is concerned, massive campaigns by the market intermediaries about the product offerings of the securities market can be done, in the long run

individuals would be better positioned to understand security market basics and possibly participate in the securities market.

With the new age of technology, online trading platforms and mobile apps should be created by the market intermediaries to make it easier for potential investors to access. The population has access to phones and with all the 4G and 5G internet as well as the adoption of mobile money, it should be easy for investors to invest.

In addition, through the system linkages, investors will be able to track the performance of the securities and when maturities are expected to be able to trigger reinvestments.

Retail investor participation is not only important for the common Ugandan but important for the Government of Uganda which desires to reduce reliance on foreign debt which is expensive and comes at unrealistic terms which affect the masses. The central bank only requires a minimum of UGX 100,000 for one to invest in treasury bills and bonds so with more engagement and development of technology it should not be hard to mobilize the masses.

Also, in Uganda specifically the Government securities primary and secondary market is currently under the commercial banks who are equally biased to selling the securities since it's also one of their main sources of revenue. The securities are marketed to the high-net-worth client hence limiting mass participation. The Central Bank together with Ministry of Finance need to incentivize the banks or move the trading to the other two securities exchanges (Uganda Securities Exchange and ALTX) like how it has in the other markets like Tanzania, Kenya, UK, US etc. and

#### **5.4 Limitations of the study**

- i. There was limited time to collect data and yet the target respondents were relatively many.

- ii. Since the target respondents were busy people, there were cases of non-response as some respondents were hesitant in answering questions asked especially those with technical terms that they did not understand.
- iii. It was hard to find and identify willing participants.
- iv. Since COVID 19 pandemic it's been hard to have people complete physical forms as the majority require links which I did through google forms. However even when you send a link people simply don't respond even after several follow ups.

### **5.5 Ethical considerations.**

- i. The researcher obtained consent of the respondents by giving them the necessary information regarding the objectives, purpose and related benefits of the study before proceeding with the study.
- ii. The information provided was treated as highly confidential. The researcher guaranteed the respondents the destruction of the acquired information by shredding or burning once the data had been analyzed and inferences drawn.
- iii. Respect of culture of the study population was highly maintained in order to get meaningful data such as the type of language used had to be specific be minded about.

### **5.6 Areas for further research**

Based on the gaps realized in the industry of securities industry in Uganda, the researcher encourages the study on role of financial literacy on Retirement Plan Partakers in Uganda.

Another area is if savers with retirement benefits schemes have on mortgages since UBRA gave clearance to use 50% as collateral.

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## APPENDINCIES

### APPENDIX 1: TREASURY SECURITIES OUTSTANDING STOCK BY HOLDER CATEGORY AS AT DECEMBER 2021

Holder Category	June 2020 Face Value (BN)	% Face Value	June 2021 Face Value (BN)	% Face Value
Banks	4,035.1	81%	4,804.2	75%
Pension & Provident Funds	227.8	5%	77	1%
Offshore	0	0%	478.9	8%
Bank of Uganda	2.5	0%	1.3	0%
Insurance Companies	149	3%	133.5	2%
Other financial institutions	187.2	4%	450	7%
<b>Retail</b>	<b>137.8</b>	<b>3%</b>	<b>165.3</b>	<b>3%</b>
Others	238.1	5%	276.8	4%
<b>Total Treasury Bills</b>	<b>4,997.5</b>	<b>100%</b>	<b>6,387</b>	<b>100%</b>
Banks	3,796.9	27%	5,092.1	26%
Pension & Provident Funds	7,261.4	52%	8734.0	44%
Offshore	1,140.8	8%	2,474.3	13%
Bank of Uganda	6.2	0%	457.8	2%
Insurance Companies	267.6	2%	398.6	2%
Other financial institutions	1,153.9	8%	1,585.6	8%
<b>Retail</b>	<b>255.8</b>	<b>2%</b>	<b>608.9</b>	<b>3%</b>
Others	97.2	1%	300.5	2%
<b>Total Treasury Bonds</b>	<b>13,979.8</b>	<b>100%</b>	<b>19,651.8</b>	<b>100%</b>
<b>Total Stock</b>	<b>18,957.3</b>		<b>26,038.8</b>	

*Source: Bank of Uganda annual Report 2021*



## APPENDIX 2: QUESTIONNAIRE FOR INVESTING PUBLIC

### MAKERERE UNIVERSITY BUSINESS SCHOOL

#### Questionnaire on Financial Literacy, Efficiency of Market Intermediaries and Retail

#### Investor Participation in Government Securities in Kampala

My name is Namaganda Susan, a Master of Science in Banking and Investment Management student of Makerere University Business School. As a requirement for the fulfillment of my Master's degree, I am carrying out research on Financial Literacy, Efficiency of Market Intermediaries and retail investor Participation in Government Securities in Kampala.

The purpose of this research is to examine the relationship between financial literacy, market intermediaries and retail investor participation in Government Securities. Your time taken to help complete this questionnaire is highly appreciated and the information provided will be handled with utmost confidence and discretion.

#### Section 1: General Information (Please tick the appropriate box)

##### 1. Gender of Respondent

Male  Female

##### 2. Respondents Age

Below 25  26–30  31–35  36–40  41–45

Above 45

##### 3. Respondents Level of Education

Certificate  Diploma  Degree  Master  PHD

4. How long have you been investing in government securities?

Never invested	Less than 1 year	2-5 years	6-10 years	Above 10 years

**Section 2: Financial Literacy, Efficiency of Market intermediaries and retail investor participation in Government Securities**

Please indicate by ticking the appropriate box to what extent you agree or disagree with the following statements (where SD is Strongly Disagree, D - Disagree, N – Not Sure, A- Agree and SA – Strongly Agree)

CODE	FINANCIAL LITERACY	SD	D	N	A	SA
	<b>Growth in CSD accounts</b>					
<b>FLG1</b>	Financial literacy programs attract me to invest	(1)	(2)	(3)	(4)	(5)
<b>FLG 2</b>	I have a CSD or SCD account	(1)	(2)	(3)	(4)	(5)
<b>FLG3</b>	I am aware of the use Central Depository System	(1)	(2)	(3)	(4)	(5)
<b>FLG4</b>	According to me, the Central Depository System is very effective	(1)	(2)	(3)	(4)	(5)
<b>FLG5</b>	The CDS/SCD accounts are crucial for the safety of the investments.	(1)	(2)	(3)	(4)	(5)
	<b>Reinvestments</b>					
<b>FLR1</b>	I get timely notification of my maturities	(1)	(2)	(3)	(4)	(5)
<b>FLR2</b>	There's an option for the maturities to be reinvested	(1)	(2)	(3)	(4)	(5)
<b>FLR3</b>	Reinvestments help to grow my government securities portfolio	(1)	(2)	(3)	(4)	(5)
<b>FLR4</b>	Reinvestment may have some risk	(1)	(2)	(3)	(4)	(5)
<b>FLR5</b>	Financial literacy helps me make better reinvestment decisions	(1)	(2)	(3)	(4)	(5)
<b>FLR6</b>	I am aware of potential risks when making an investment	(1)	(2)	(3)	(4)	(5)

<b>CODE</b>	<b>EFFICIENCY OF MARKET INTERMEDIARIES</b>	<b>SD</b>	<b>D</b>	<b>N</b>	<b>A</b>	<b>SA</b>
	<b>Number of intermediaries</b>					
<b>EMIN 1</b>	I am aware of all the market intermediaries	(1)	(2)	(3)	(4)	(5)
<b>EMIN 2</b>	Market intermediaries are a major source of secondary market liquidity for me	(1)	(2)	(3)	(4)	(5)
<b>EMIN 3</b>	Market intermediaries provide an avenue that bring together buyers and sellers of securities	(1)	(2)	(3)	(4)	(5)
<b>EMIN 4</b>	Market intermediaries provide timely information to make the right investment decisions	(1)	(2)	(3)	(4)	(5)
<b>EMIN 5</b>	I have confidence that market intermediaries act with integrity and with appropriate regard to my interests	(1)	(2)	(3)	(4)	(5)
<b>EMIN 6</b>	Market Intermediaries provide proof of every investment made	(1)	(2)	(3)	(4)	(5)
	<b>Regulatory Effectiveness</b>					
<b>RE1</b>	There is proper disclosure about all licensees dealing in government securities.	(1)	(2)	(3)	(4)	(5)
<b>RE2</b>	Licensing bodies carry out supervision and enforcement.	(1)	(2)	(3)	(4)	(5)
<b>RE3</b>	Licensing bodies rationalize regulatory approval processes	(1)	(2)	(3)	(4)	(5)
<b>RE4</b>	There is a sound legal, regulatory, and institutional framework which provides an enabling environment for the development of liquid instruments and for a diversified investor base.	(1)	(2)	(3)	(4)	(5)
<b>RE5</b>	The Central bank (bank of Uganda) provides government securities specific market information and intermediaries performance.	(1)	(2)	(3)	(4)	(5)
<b>CODE</b>	<b>RETAIL INVESTOR PARTICIPATION IN GOVERNMENT SECURITIES</b>	<b>SD</b>	<b>D</b>	<b>N</b>	<b>A</b>	<b>SA</b>
	<b>LEVEL OF TURN OVER</b>					
<b>LT1</b>	I participate in every auction on the auction calendar	(1)	(2)	(3)	(4)	(5)
<b>LT2</b>	I gradually increase the size of my investment	(1)	(2)	(3)	(4)	(5)
<b>LT3</b>	Increased financial awareness through notification of the invitation to tender from my dealer influences my participation in a particular auction.	(1)	(2)	(3)	(4)	(5)
<b>LT4</b>	Variances in the return of different periods of government securities keep me interested in investing in the market.	(1)	(2)	(3)	(4)	(5)
	<b>PORTFOLIO DIVERSIFICATION</b>					
<b>PD1</b>	There are various investment periods to choose from while choosing an investment.	(1)	(2)	(3)	(4)	(5)

<b>PD2</b>	I am aware of the deals available on the market	(1)	(2)	(3)	(4)	(5)
<b>PD3</b>	Information about the auction calendar and secondary market positions is available and very accessible	(1)	(2)	(3)	(4)	(5)
<b>PD4</b>	My financial goals influence my decision to either invest in bills or bonds.	(1)	(2)	(3)	(4)	(5)
<b>PD5</b>	Incentives like reduction in withholding tax influence my investment choice between bonds and bills.	(1)	(2)	(3)	(4)	(5)
	<b>ABILITY TO MEET THE TRANSACTION COST</b>					
<b>ATC1</b>	I am aware of all the charges involved in investing in government securities.	(1)	(2)	(3)	(4)	(5)
<b>ATC2</b>	The charges on government securities are lower than other investments	(1)	(2)	(3)	(4)	(5)
<b>ATC3</b>	My investment capacity influences my decision to invest	(1)	(2)	(3)	(4)	(5)
<b>ATC4</b>	Reducing existing taxes and favorable tax policies encourages investor participation	(1)	(2)	(3)	(4)	(5)

**Thank you very much for your time**

### APPENDIX 3: DESCRIPTIVE STATISTICS

#### Descriptive Analysis on Growth in CSD accounts (n=174)

	<b>SD</b>	<b>D</b>	<b>N</b>	<b>A</b>	<b>SA</b>	<b>Mean</b>	<b>Std. Deviation</b>
Number of CDS accounts	9	4	18	87	56	4.02	.994
The Central Depository System is effective	09	8	7	83	67	4.10	1.035
Financial literacy programs attract investors to invest	09	04	18	87	56	3.79	1.071
The use of the Central Depository system is known	03	26	25	70	50	3.74	.893
The CDS accounts are crucial for the safety of the investments	01	12	56	68	37	4.19	.773

SD=Strongly disagree, D=Disagree, N= Neutral, A=Agree, SA=Strongly agree

**Descriptive statistics for Reinvestments n (174)**

	<b>SD</b>	<b>D</b>	<b>N</b>	<b>A</b>	<b>SA</b>	<b>Mean</b>	<b>Std. Deviation</b>
I get timely notification of my maturities	01	03	23	81	66	3.62	1.164
There is an option for maturities to be reinvested	10	22	17	71	33	4.01	.863
Investments help grow government securities portfolio	00	10	34	75	55	4.02	.811
Reinvestments may have some risk	01	07	28	89	49	3.83	.988
Financial literacy helps make better reinvestment decisions	02	19	33	73	47	4.23	.724
I am aware of potential risks when making an investment	01	03	15	91	64	3.97	.931

SD=Strongly disagree, D=Disagree, N= Neutral, A=Agree, SA=Strongly agree

**Descriptive analysis for the number of intermediaries (n=174)**

	SD	D	N	A	SA	Mean	Std. Deviation
I am aware of all the market intermediaries	01	17	21	83	52	3.56	1.114
Market intermediaries are a major source of secondary market liquidity	06	32	30	70	36	3.85	.887
Market intermediaries provide an avenue that bring together buyers and sellers of securities	02	12	35	86	39	4.18	.697
Market intermediaries provide timely information to make the right investment decisions	00	03	20	93	58	3.77	.988
I have confidence that market intermediaries act with integrity and with appropriate regard to investors interests	04	16	37	76	41	3.69	.977
Market intermediaries provide proof of every investment made	05	14	46	74	35	4.06	.735

SD=Strongly disagree, D=Disagree, N= Neutral, A=Agree, SA=Strongly agree

### Descriptive analysis for Regulatory Effectiveness (n=174)

	SD	D	N	A	SA	Mean	Std. Deviation
There is proper disclosure about all licensees dealing in government securities.	02	09	42	87	34	3.82	.847
Licensing bodies carry out supervision and enforcement.	01	03	26	94	50	4.09	.744
Licensing bodies rationalize regulatory approval processes	01	05	37	97	34	3.91	.755
There is a sound legal, regulatory, and institutional framework which provides an enabling environment for the development of liquid instruments and for a diversified investor base.	01	05	39	99	30	3.87	.742
The Central bank (bank of Uganda) provides government securities specific market information and intermediaries performance.	01	05	19	112	37	4.03	.700

SD=Strongly disagree, D=Disagree, N= Neutral, A=Agree, SA=Strongly agree



**Descriptive analysis for the level of turn over (n=174)**

	SD	D	N	A	SA	Mean	Std. Deviation
I participate in every auction on the auction calendar	63	46	07	38	20	2.46	1.453
I gradually increase the size of my investment	20	31	24	69	30	3.33	1.274
Increased financial awareness through notification of the invitation to tender from my dealer influences my participation in a particular auction.	09	09	30	95	31	3.75	.982
Variances in the return of different periods of government securities keep me interested in investing in the market.	12	27	27	81	27	3.48	1.136

SD=Strongly disagree, D=Disagree, N= Neutral, A=Agree, SA=Strongly agree

**Descriptive analysis for Portfolio Diversification (n=174)**

	SD	D	N	A	SA	Mean	Std. Deviation
There are various investment periods to choose from while choosing an investment.	03	08	24	93	46	3.98	.863
I am aware of the deals available on the market	10	34	24	72	34	3.49	1.177
Information about the auction calendar and secondary market positions is available and very accessible	04	23	30	70	47	3.76	1.063
My financial goals influence my decision to either invest in bills or bonds.	07	09	13	76	48	3.97	1.026
Incentives like reduction in withholding tax influence my investment choice between bonds and bills.	08	20	21	75	50	3.80	1.117

SD=Strongly disagree, D=Disagree, N= Neutral, A=Agree, SA=Strongly agree

**Descriptive analysis for ability to meet transaction costs (n=174)**

	SD	D	N	A	SA	Mean	Std. Deviation
I am aware of all the charges involved in investing in government securities.	18	29	20	77	30	3.41	1.245
The charges on government securities are lower than other investments	09	19	62	55	29	3.44	1.056
My investment capacity influences my decision to invest	00	04	16	105	49	4.14	.669
Reducing existing taxes and favorable tax policies encourages investor participation	03	02	10	72	88	4.39	.772

SD=Strongly disagree, D=Disagree, N= Neutral, A=Agree, SA=Strongly agree