# ACCOUNTING RISK MANAGEMENT, INTERNAL CONTROL PROCEDURES, FIRM CHARACTERISTICS AND PERFORMANCE OF STATE ENTERPRISES IN UGANDA

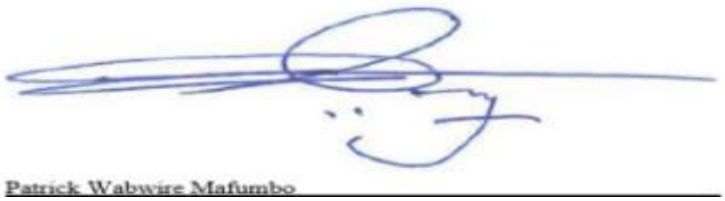
**MAFUMBO PATRICK WABWIRE**

**A THESIS PRESENTED TO THE FACULTY OF BUSINESS AND MANAGEMENT SCIENCES IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF DOCTOR OF PHILOSOPHY IN BUSINESS ADMINISTRATION OF THE UNIVERSITY OF NAIROBI**

**JUNE 2023**

# DECLARATION

This research thesis is my original work and has not been presented for any award of degree in any university.



Patrick Wabwire Mafumbo

Sign Date: 3rd July 2023

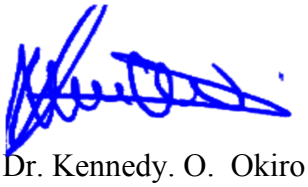
Mafumbo Patrick Wabwire

D80/93987/2014

This research thesis has been submitted with our approval as the university supervisors.

Prof. Iraya Cyrus Mwangi Date 13/07/2023

Department of Finance and Accounting
Faculty of Business and Management Sciences, University of Nairobi



Dr. Kennedy. O. Okiro Date 14/07/2023
Department of Finance and Accounting
Faculty of Business and Management Sciences, University of Nairobi

Prof. Gituro Wainaina Date **July 15, 2023**

Department of Management Science
Faculty of Business and Management Sciences, University of Nairobi

# COPYRIGHT



*By Mafumbo Wabwire Patrick*

.

# ACKNOWLEDGEMENTS

I am very grateful to the Almighty for this PhD He has conferred to me. With a lot of gratitude and honour to my mentors: Prof. Cyrus Iraya, Prof. Gituro Wainaina and Dr. Kennedy O. Okiro for the valuable guidance throughout my PhD programme. I sincerely appreciate the continuous contribution of Dr. Peterson Obara Magutu, Prof. Awino. B. Zachary, Prof. Musa Moya, Mr. Henry Mutebi, , Df. Dennis Nuwagaba, Dr. Cyprus Olumbe, Mr. Eric Wanyera and Mr. William Lutalo to this thesis. My deepest gratitude to Dr. Juliet Wakaisuka for her welcoming and constructive counselling, guidance, and advice during episodes that appeared unbearable.

I equally thank all people from all walks of my life, especially those of my church at Butiru Parish, the clergy and parishioners who interceded for me. In the same spirit, sincere thanks go to directors, Victoria University Prof. Krishna N. Sharma and the Directors: Dr. Sudir Ruparelia, Mr. Rajiv Ruparelia and Mrs. Naiya Ruparelia for funding my research project. My appreciation to Chief Executive Officers (CEOs) and managers of state enterprises for filling the questionnaires and providing vital secondary data. I highly recognize, the late Francis Masuba, and his wife Maris Wanyera, and gratitude to my late parents Mr. Gregory and Mrs. Gertrude Wabwire, my late wife Nalongo Prima Nakayenze Mafumbo and late dear Uncle Augustine Mafumbo who inspired and encouraged me to read hard. I also thank my brother Mr. Julius Mafumbo and his wife Dr. Charlotte Mafumbo and my spouse Pamela Akello.

# DEDICATION

To my ardent children: Catherine, Joan, Herman, Shirley, Sheebah, Gratian and Gregory, Raymond and Getrude.

# TABLE OF CONTENTS

# LIST OF TABLES

# LIST OF FIGURES

# ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| ACFE | Association of Certified Fraud Examiners |
| ARM | Accounting Risk Management |
| BOU | Bank of Uganda |
| BOD | Board of Directors |
| CFA | Confirmatory Factor Analysis |
| CHOGM | Commonwealth Heads of Government meeting |
| CIN | Condition Index Number |
| COSO | Committee for Sponsoring Organizations of the Tread-way Commission |
| CPI | Corruption Perception Index |
| EPS | Earnings Per Share |
| ERM | Enterprise Risk Management |
| GAAPs | Generally Accepted Accounting Principles |
| GDP | Gross Domestic Product |
| IASB | International Accounting Standards Board |
| ICA | Institute of Chartered Accountants |
| IFRS | International Financial Reporting Standards |
| IGG | Inspector General of Government |
| IIA | Institute of Internal Auditors |
| ISA | International Standards on Auditing |

| | |
|---|---|
| IUCN | International Union for Conservation in Nature |
| MIFs | Micro Finance Institutions |
| NMS | National Medical Stores |
| NGOs | Non-Governmental Organizations |
| NSE | National Stock Exchange |
| OAG | Office of the Auditor General |
| OLS | Ordinary Least Squares |
| PAC | Public Accounts Committee |
| PFMA | Public Finance Management Accountability Act |
| SMEs | Small and Mid-Size Enterprises |
| SPSS | Statistical Package for Social Sciences |
| RMP | Risk Management Practices |
| ROA | Return on Assets |
| ROE | Return on Equity |
| ROI | Return on Investment |
| UBC | Uganda Broadcasting Corporation |
| UETCL | Uganda Electricity Transmission Company Ltd |
| UNRA | Uganda National Roads Authority |
| UPL | Uganda Posta Limited |
| VAR | Value at Risk |
| VIF | Variance Inflation Factor |

# OPERATIONAL DEFINITION OF TERMS

Accounting Risk Management – Refers to a multidimensional accounting concerns, formulation of accountancy rules, identification of internal control flaws, remediation of information technology system failures and evaluation of financial account risks (COSO, 2013). In our context, the level of risk management in accounting was evaluated using risk-based financial examinations, conformity to regulations, corporate governance, implementation of accounting procedures, detailed accounting calculations and reports, transformation and company restructuring.

Internal Control Procedures – Refers to a set of actions, policies and procedures designed to ensure that enterprises operate effectively, efficiently and in compliance within the prescribed laws and regulation. In this study, internal control procedures were measured using access controls, documentations, physical audits, approvals of authority and separation of duties.

Firm Characteristics - Refer to the distinctive attributes, qualities, and features that characterise an individual organisation or company (Zhao & Huang, 2016). In this investigation, the qualities of the company were evaluated using criteria such as the size, age and proprietorship of the organization.

Firm Performance - Refers to the measurement and assessment of how an organisation is achieves its predetermined goals, objectives, and targets (Porter, 2022). However, the purposes of this study, financial and non-financial measured

performance of state enterprises. Profit, liquidity, and budget variance were the financial metrics used, while management efficiency and the Corruption Perception Index were the non-financial metrics.

# ABSTRACT

The study examined the effect of accounting risk management, internal control procedures and firm characteristics on performance of state enterprises in Uganda. It evaluated the relationship between accounting risk management and performance of state enterprises; the intervening effect of internal control procedures on the relationship between accounting risk management and performance of state enterprises; the moderating effect of firm characteristics on the relationship between accounting risk management and performances of state enterprises and the joint effect of accounting risk management, internal control procedures and firm characteristics on performance of state enterprises in Uganda. The study adopted positivism research philosophy and used in sampling; census survey informed the selection of the target population. Pearson correlation coefficient, regression analysis, and analysis of variance to analyse data. Three types of regression analyses were performed; simple linear, hierarchical and stepwise regression analyses. The results were interpreted using r, $R^2$, and the F-statistic and p-values. The study targeted a population of 34 state enterprises from where 32 firms responded, realising a response rate of 94%. From the hypotheses testing, the findings showed that there was a positive and significant relationship between accounting risk management and performance of state enterprises in Uganda; there was a partial intervening effect of internal control procedures on the relationship between accounting risk management and performance of state enterprises in Uganda; there was a moderating effect of firm characteristics (firm size and firm ownership) on the relationship between accounting risk management and performance of state enterprises in Uganda. Furthermore, the results showed a joint significant effect between accounting risk management, internal control procedures and firm characteristics on performance of state enterprises in Uganda. The study suggested that to enhance performance of state enterprises, these enterprises should comply with and adhere to accounting risk management. They should also institute stringent effective internal control procedures in all its functional areas. Therefore, basing on the study findings, the researcher recommends that the management of state enterprises should monitor and supervise operations of state enterprises to ensure that accounting regulations and internal control procedures requirements are properly implemented and comply with accounting standards and principles to improve performance.

# CHAPTER ONE: INTRODUCTION

## 1.1 Background of the Study

Committee of Sponsoring Organizations and Tread-way Commission (COSO, 2013) defines accounting risk management (ARM) as a cohesive basis of providing multi-complex analysis of accounts information and reporting that informs managers on processes of financial reporting. As part of the government's mandate to enhance performance of statutory bodies, this attempts to improve accounting evolution. (Matonti's, 2018). Globally, the trend in the past recent years has witnessed state enterprises (SEs) face numerous management challenges. This has been as a result of financial accounting reports being contested by different stakeholders because of poor financial reporting (Zangin, Odel & Saadi, 2020). ARM, internal control methods, and firm characteristics have all been credited with having a significant impact in enhancing the performance (Ademola & Adedoyin (2015). They go on to say that risk disclosure and risk management are of utmost relevance when it comes to the analysis of organisational performance.

The collapse of major corporate companies in 2001 and the 2007/2008 financial crisis led rise to adopting the COSO Framework (2009) as a system of establishing internal controls to be incorporated into business processes (Jankensgard, 2019). Similarly, various logical and theoretical research have shown that the adoption of ARM practices and the application of effective internal control systems are associated with increased national economic development and enhanced performance of state enterprises (Wakaisuka, 2016; Ademola, Adedoyin & Alade, 2020).

Accounting systems are crucial to every firm, particularly in terms of measurement, assessment, knowledge management, liability assumption, asset control, and equity management (Rowchowdhury, Shroff & Verdi, 2019). The accounts system ought to identify risks and perform analytical assessments in conformity with local regulations and generally accepted accounting principles (GAAPs). Thus, successful accounting system adoption requires internal control processes and in critical key areas, to avoid distorted financial reporting (Kobia et al., 2017). This will result in company transformation and realignment, as well as an increase in financial analytical capabilities, while managing systemic risk (Anas & Fauziah, 2014).

The close conversion and firm restructuring strategies advocated by Kasser (2020) are intended to reduce systemic risk by upgrading analytical reporting tools and using more modern technology to give reliable reports. On the other hand, Jallad (2020) perceives firm characteristics using age, size and ownership as characters and drivers that play a significant part in reducing agency conflicts and information gaps so as to achieve and enhance performance. It is also regarded as an evaluation of efficient utilisation and management of resources to create value through profits, liquidity, budget control, and management efficiency (Ntim, et al., 2016; Jallad, 2020). This helps to avoid fraudulent activities through corrupt tendencies and or undertakings by instituting stringent internal control procedures (Wanjohi, Wanjohi, & Ndambiri, 2017).

This research was built on a basis of many ideas, including institutional, stewardship, agency, and risk management theories which served as foundation and guide for this study. A primary reason for institutional theory's quick growth is its broad applicability throughout the

organisation theory literature (Rapoport, & Horvath, 2017; Jankensgard, 2019). As a result, the theory analyses how ARM together with firm characteristics affect performance, as an advantageous mirror to understand and apply processes and structures in organisations (Zhao, Qu, & Huang, 2016; Muvinya & Ng'etich, 2020). Equally, agency theory dominates the study, as firms have limited resources available to fulfil certain needed activities, resulting in contractual structures that incorporate significant parts of agency philosophy (Vargas-Hernández & Teodoro, 2018).

The agency theory conceptualises the link between principals and agents, and thereby visualises the association amongst internal control procedures, proprietorship on performance (Donaldson & Davies, 1991). As a result, it protects the principal's interests. Saurav (2020) asserts that a conflict amongst the agent and principal occurs because of conflicting benefits amid the two parties. Thus, the theory presents the conduct of agents, managers as they are entrenched in organisational features (age, size and ownership).

Subsequently, stewardship theory holds that directors or managers act as stewards hence concerned about first promoting economic organisational interests before theirs leading to organisation optimum utilisation of its resources (Perevoznyk & Lytvynenko, 2020). According to Bogodistov and Wohlgemuth (2017) the stewardship theory predicts and explains the association between ARM, internal control procedures and firm performance as it looks at how organisations are governed. According to Donaldson and Davis (1991), stakeholder's role advances governing structures and procedures, information and authority, so that management may take decisions that will maximise their value as they realise organisational rather than egocentric purposes.

The risk management theory is an integrated management approach that claims direct and indirect financial risks and consequences on an organisation's existence and sustainability (Coleman, 2009). According to Keay (2014), risk management theory is critical since the perspective contends that all risks are viewed together within a coordinated and strategic framework. Consequently, these holds firm's top officials and directors how to manage organisations by averting risks through risk management (Ongore, & Kusa, 2013). Therefore, aggregate risk exposures indicate how to organise the company's willingness as well as capacity to handle such exposures (Bogodistov & Wohlgemuth, 2017; Jankensgard, 2019).

Furthermore, risk management theory is an integrated management system which indicates that accounting risks have effects on an organisational survival (Coleman, 2009). Accounting risk management indicators predict organisation's profitability and measure the management effectiveness and efficiency (Ngugi, 2015) through financial reports. Markowitz (2000), posits that regulatory bodies are more interested in total risks than particular risks associated with portfolio processes, owing to executives' ability to exaggerate the firm's condition. Epstein and Manzoni (2016) affirm that one of the biggest threats to long-term ARM success is managerial risk management that occurs when the enterprise's board members put their own self- interests ahead of the organisation's goals. This is to avoid creative accounting and financial statements manipulation.

According to COSO (2013), the universally adopted unified framework was designed to help businesses plan and implement internal control procedures in light of a volatile business environment. According to Harp and Barnes (2018), the framework is an operational reporting rule that requires state-run firms to generate financial accounting statements in compliance

with GAPPS and IFRS. State enterprises should furthermore comply with reporting, control, and audit frameworks as in other substantial organisations or public interest entities to produce substantive financial reports. Therefore, this increases the effectiveness of disclosing publicly both financial and nonfinancial information accurately (Roychowdhury, Shroff & Verdi, 2019). Ademola, Adedoyin and Alade (2015) emphasise that sound internal control procedures capture and diffuse relevant information timely, reliably and protects the integrity and efficiency of state enterprise's governance and operations. They add that a credible audit structure is also a major contribution to increase the reliability and credibility of state enterprises reporting. The Sarbanes-Oxley (SOX) model is significant in financial modelling.

The SOX Act of 2002, often known as the SOX or Sarbox, created as a regulation in the USA was generally recognized to safeguard investors against firms engaging in fraudulent accounting practices (Dawodu, 2018). The Act established the public enterprises secretarial oversight committee, which is liable for the accounting profession. This was in response to billion-dollar losses suffered by investors as a result of financial frauds at Enron (2001), Global Crossing, WorldCom (2001), Arthur Andersen, and Tyco (2007). The massive losses had a disruptive effect on financial markets and overall investor confidence. As a result, the Act strengthens the independence and financial literacy of company boards of directors (Schreyer, 2019).

Furthermore, it also ensures that auditor independence is maintained and maintains the integrity of corporate governance, internal controls, system evaluation, and heightened disclosure requirements. Organisational fraud is also addressed by the Sarbanes-Oxley Act of 2002. According to the World Bank (2020) study on strengthening financial management in

rising nations' public sectors and economies, governments employ state enterprises (SEs) to accomplish economic, social, and political goals. Additionally, they supply and expand access to services, cover market gaps, develop crucial sectors or regions, and create jobs where private corporations are unable to do so.

Nahar, Azim and Jubb (2020), contend that, it is conventional that SEs in Uganda are constituted and established by Act of Parliamentary with the purpose of providing goods and services that the private sector cannot produce for nationals According to constitution of Uganda of (1995, Chapter, 14, sect. 148), the parliament formally establishes state enterprises that adheres to specific policies, regulations, rules and guidelines that govern them. However, established state enterprises in Uganda have failed to live up to expectations, continuing to incur losses, as per auditor general (AG) report (2018/2019), which revealed that majority of state firms continuously performed poorly. This has caused public outrage at the poor results for several consecutive years (Auditor General's Reports, 2010 - 2019). The reports, further, show, many public sector organisations in Uganda are challenged with; poor accountability and record keeping; financial scandals; financial misstatements that contain fictitious, and improper, omitted, or falsified transactions. Behl et al. (2019) contend that accounting scandals arise from planned manipulation of financial statements through collusion with the revelation of monetary misdeeds by trusted managers of organisations they manage. Lack of ARM strategy, ineffective internal control mechanisms, and corruption were criticised for these institutions' poor performance (Kaplan & Norton, 2015).

### 1.1.1 Accounting Risk Management

Accounting risk management (ARM) is the formulation of accounting rules and identification of internal control flows (Taeyeon & Jangwoo, 2021). Additionally, ARM is the remediation

of information technology system failures and evaluation of financial accounting risks (Abdelbaki & Abdul-Azeez (2020). According to the study by Beuselinck, Dreesen and Vanstraelen (2020), state that multidimensional accounting concerns, formulation of accountancy rules, identification of internal control flaws, remediation of information technology system failures and evaluation of financial account risks are all part of accounting risk management (ARM) (COSO, 2013; Matonti, 2018). Complex accounting analysis and reporting, according to COSO (2013), is an integrated framework for providing management with financial reporting information. As part of the central government's mandate to boost the functioning of statutory bodies, this effort strives to make changes and transitions (Matonti, 2018). Analysing and clarifying multidimensional accounting issues, the ARM helps to provide the framework for accounting principles by measuring the risk associated with a company's business activities. It also redresses identified internal control deficiencies and addresses information technology system breakdowns (Ongore & Kusa, 2013).

Wakaisuka, Aduda, Wainaina, Iraya, and Ntim (2016) argue that compliance and corporate governance is the implementation of enhanced accounting internal control procedures. Subsequently, they add that, it also develops standardisation of sharedresources, implementation of remediation plan to resolve material weakness assessed and documents records. Similarly, the framework also handles the organisation's financial, ethical legal, statutory, ethical responsibilities and standards for its different stakeholders (Bayirima, 2015). Perevoznyk and Lytvynenko (2020) view close transformation as streamlining and standardisation of risk management processes. This, in turn, enhances risk management's IT-based reporting and analysis capabilities (Baqar & Atiqa, 2018). Organisation realignment is to assess the financial and operational systems that appraise current resources. Furthermore, it

also recommends supplementary resource requirements in crucial areas and reorganise current workers and strengthen operational efficiency. This designs a strategic plan that supports management of risks and functional goals in the entire business for efficient utilisation of resources to improve performance (Hong, Ramayah, & Subramaniam, 2018).

Kinyua (2016) observed that the benefit of financial ratios can indicate estimation of corporate failures. Anto, Marko and Lana (2021) on ratios concluded that financial ratios can be good indicators measuring financial strength, but should not be used in isolation to predict organisational failures, but consider other alongside other factors, such as market competition, industry trends, management decisions and economic conditions. Similarly, Kasmiati and Santosa (2019) in their study maintain that cash flow information is vital in forecasting insolvency.

The ARM apprehends the financial misrepresentation so as to produce meaningful financial reports (Valaskova, Kliestik, & Kovacova, 2018). Accordingly, mis-statements may comprise manipulation of records or documents without supporting evidence, falsification or omission of material evidence, or wrong application of principles and procedures with reference to financial accounts. Verdi, (2019) supports the view that ARM averts risks of frauds and financial scandals since many organisational decisions depend on the accuracy of financial reports. The Association of Certified Fraud Examiners (ACFE, 2013) refer to ARM as challenges faced by both public and private organisations.

Ginting and Hidayat (2019) state that creative accounting is the failure to observe the monitoring framework and accounting guidelines when preparing financial reports. The

financial misstatements mislead owners and users as they may not work in their favour by taking wrong financial decisions. Wakaisuka et al. (2017) affirm that inventive accounting does not obviously violate any regulations, but it is inconsistent with planned accounting information as the user of such financial information may be misled. Weichao, Daoguang and Siyi (2018) support the view that financial restatements support occurs when statutory managers need firms to put right dishonest accounting information. In addition, this usually arises if the misstatements in the accounting statements are viewed as being material. Roychowdhury, Shroff and Verdi (2019) postulate that re-statements vary from fraud in that they do not comprise the intention to mislead. However, it is imperative to investigate financial reports which may be misleading as demonstrated by frauds at Tyco, Enron and WorldCom (Oluwatuyi, 2019), where stockholders were misled by window-dressed financial statements.

Yu, Lin, and Tang (2018) contend that inadequate financial accounting disclosures can lead to deceitful financial statements since the understanding of financial statements is essential to interpret them accurately and purposively. Ba (2019) similarly emphasises that fraudulent transactions can arise by, wrongly interpreting the fundamental accountancy regulations, approaches in preparing financial statements and clustering into solitary budget activities but ought to discreetly and sufficiently present and disclose contingencies.

According to Chao (2017), when liabilities and losses from ongoing processes are not listed in the financial accounts, the value cannot be rationally predicated. The notes should form and reveal additional information to the final accounts for better use and interpretation by other stakeholders. Kakanda and Salim (2017) maintain that inadequate disclosures can distort and mislead publicly available information to users of such information. State enterprises ought to clearly outline their responsibilities and authority so as to outline internal control procedures

that are frequently evaluated to ensure efficacy of financial information (Ofosu-Hene & Amoh, 2016).

### 1.1.2 Internal Control Procedures

Othman and Ameer (2021) view internal control procedures as set of actions, guidelines and procedures intended to guarantee the enterprises operate effectively, efficiently and in compliance within the prescribed laws and regulations. They are used in accounting to distinguish, control and avoid scams before they occur and become a problem (Mohammad, Nawza, Arshad & Ranjdar, 2020). Therefore, applied for accuracy and reliability, which are critical for producing error-free accounting records that enable managers to make fully informed financial decisions (Ademola, Adedoyin & Alade, 2015). According to Eniola (2020), some of the difficulties associated with internal control systems include budgetary controls, liquidity constraints, deceptive financial statements, and a lack of accountability for financial resources. He continues by stating that corruption and abuse of administrative capital are expected to result in bad performance as a result of a sequence of poor judgments.

According to Omolaye and Jacob (2020), when they looked at internal control procedures in state enterprises, proclaimed that, majority of businesses have internal audit departments conduct cross-checks on accountability to ensure that internal control mechanisms are adequate for quality service delivery. Harp and Barnes (2018) avow that internal control procedures as management techniques used to accomplish organisational goals. Institute of certified internal auditors (ICIA-2009) describe systems control processes as being critical for preserving organisational resources, ensuring the consistency and validity of accounting records. Adeyemi and Fagbemi (2021), further, state that, when they are adapted, financial reports are reliable and credible, hence free of errors and frauds.

Wakaisuka (2016) in her study on financial institutions, found that internal controls ought to be an integral part of the governance system that is to manage risks in increasing complexities and numerous business failures caused by fraud. Internal control processes are a set of coordinated strategies and measures that businesses use in controlling errors and frauds to record up to date accurate financial information. The financial information should be in conformity with GAAPs, safeguard, and confirm correctness and dependability of financial information.

Bruno, Gallier and Gabillon (2019), post that access controls, restrictions to organisation paperwork, physical audits, approval of power, and the division of roles are all pointers for mediation, so as to control risk. Security measures such as password-protected physical assets and other electronic accoutrements are considered to be access controls by (Bruno, Gallier & Gabillon, 2019). Kobia, Vanessa, Wieble and Ayukut (2017) assert that documentation is the use of enterprise standard documents, storage and retrieval of records used for reference by the organisation. While Mawanda (2016) affirm that physical audits and separation of duties are tools of ARM plans to succeed in management efficiency. Etengu and Nasieku (2015) argue that approval of authority requires particular supervisors to approve specific business contracts. This enhances checks and balances for efficient accountability and precise records. This therefore, creates separation of responsibilities by sharing tasks to prevent fraud and error.

### 1.1.3 Firm Characteristics

Firm characteristics are features linked to stewardship, agency and risk management theories as they are considered accelerators of corporate activities aimed at achieving the firm's objectives (Wakaisuka, 2017). According to the steward and agent idea, overseers protect and

maximise shareholder value through corporate success. Zhao and Huang (2016) argue that company characteristics (age, organisational size, and ownership) are crucial in resolving agency conflicts and information gaps. Felch, Asdecker and Sucky (2019) aver that age demonstrates the organisation's maturity and number of years in operation.

Usman and Zahid (2015) state that age is the duration in which the organisation has been in existence as it enjoys economies of scale and large market share. Subsequently gives leverage to ensure optimum utilisation of its resources given experience in operation. Camara (2021) states that older SEs may have outdated infrastructure and technologies which may make them less efficient and less competitive compared to new enterprises. This can result in lower profits and reduced market share and a decline in overall performance. Furthermore, older SEs may have developed bureaucratic and entrenched cultures that can hinder their ability to adapt to changing market conditions and innovation (Wenhua-Ma, 2022). This can also lead to poor performance and reduced competitiveness. On the other hand, some SEs that have been operating a longer time may have developed strong networks and partnerships, brand recognition and reputation that can give them a competitive advantage over newer enterprises (Modal, 2022).

Raguseo, Vitari and Pigni (2020) provide an overview of the role of firm size and associate it with industry-concentration, vertical integration, sunk costs and overall profitability and performance of the industry. Mandala, Kaijage, Aduda and Iraya (2017) also argue that size is related to performance, given the asset base and capital. Larger organisations could rapidly increase profits due to past performance experience. Size is also linked to the firm value as

larger firms enjoy economies of scale. Lan and Heracleous (2021) opines that concentrated ownership determines better monitoring because of the underlying residual value benefits.

According to Autor and Patterson (2023), they assert that size on firms' performance, is as a result of larger firms reducing costs through operational efficiencies leading to higher profits. However, small enterprises may be more responsive and able to adapt to changing market conditions quickly. Firm size looks at the economies of scale enjoyed by the firm in its operations and its ability to acquire more financial resources given its asset base (Ondigo, 2016). Studies by Zang (2022), suggest that the larger firms operate efficiently and generate more profits than small ones, while others argue the opposite (Lichenberg, 2022). On the other hand, SEs may benefit from scale economies which reduces production costs and attain higher profitability. Furthermore, bigger companies may have additional funds to dedicate to research and progression, creativity and branding, which can enhance their marketability and total yield. Consequently, larger firms may also face challenges related to bureaucratic inefficiencies, lack of innovation and excess reliance on government support (Asif, 2021). Moreover, larger firms may be more difficult to manage and coordinate and may suffer from lack of agility and flexibility in response to changing market conditions (Yanbua & Hongmei-Pei, 2021).

Ownership of SEs may be subject to political influence and may prioritise social goals over profit to inefficiencies and corruption (Lepore, Paolone, Pisano, & Alvino, 2017; Treece, 2021). It describes the interests of stakeholders, which may monitor and control firms using internal control procedures. In response to differing levels of laws that protect minority shareholders in organisations, companies have concentrated their ownership (Bertacchini,

Dalle & Scuderi, 2018). According to Waheed and Malik (2019), the two most essential forces in corporate governance are concentration of ownership and legal protection (ARM).

Agency problems occur due to the consequence of separating authority given to managers from owners (Jensen & Meckling 1976. Concentration ownership has been linked to better business performance in both industrialised and developing countries by several academics throughout the globe (Javeed & Lefen; Kao, Hodgkinson & Jaafar, 2019). Subsequently, numerous research in developed countries and emerging countries (Lepore, Paolone, Pisano, & Alvino, 2017) corroborated a negative relationship amongst ownership concentration and business performance (Nguyen, Evans & Lu, 2017). According to some academics, there is no correlation amongst ownership concentration and company performance in developed nations (Altaf & Shah, 2018) or emerging countries (Ozili & Uadiale, 2017; Altaf & Shah, 2018). These contradictory findings necessitate additional research to re-evaluate the association in future study. As such, this research aimed to advance understanding through constructing and assessing the hypotheses and beliefs put forward by the researcher.

### 1.1.4 Firm Performance

Performance is for organisations to ascertain areas of strength and weakness by identifying areas where they excel and those that need to improve (Brown, 2021). This allows them to focus their resources on areas where they make significant improvements. According to Kaplan and Norton (2021), performance provides a baseline against which an organisation sets goals and objectives. Marr (2021) avers that this enables them to create a roadmap for achieving their desired outcomes and measure and monitor progress along the way. Cokins (2022), adds that monitoring progress, helps to stay on track and ensure that they are making

progress towards their goals. This helps to identify any issues or challenges that may arise, hence allows them to take corrective action as needed. Furthermore, firms can take improved decision making by allocating resources more effectively, make strategic decisions by identifying opportunities and growth.

Porter (2022), asserts that performance measurement is creating a culture of enhancing accountability within the organisation. By making clear targets and regularly monitoring progress, individuals and teams can be held accountable for their performance and rewarded accordingly. Measuring organisational performance is critical for organisations that want to be successful in achieving their goals and objectives (Mauboussin, 2023). It provides valuable insights in sectors or areas they wherever they are excelling or need improvement. This makes organizations make information driven decisions and take actions that will drive their success.

Performance is the degree to which an organisation's stated objectives are met within a specified time period by employing its resources profitably (Kinyua, 2016). Firm performance is related to the benefits received from effective usage and proper utilization of resources to generate positive returns. Nabukeera, Boerhannoedin and Binit (2014) describe performance as financial gains that represent the connection between an organisation's attributes, activities, and its age, size, and ownership. Numerous elements should be considered while evaluating the success of governmental enterprises.

Subsequently, adopting institution theory to increase performance, managers must act with integrity as agents and stewards of the company. Donaldson and Davis (1990), opine that stewardship theory is a human construct that outlines how a steward interacts with his or her

principals. It is argued that most of the time, managers should act as guardians and stewards for their companies in order to increase profits and keep the company stable (Harelimana, 2017). Managers therefore, may apply risk management models founded within the body of firm theories, explicitly, financial theory, stewardship theory, new institutional economics and agency theory to improve performance (Kaplan & Norton, 2021).

Baqar and Atiqa (2017) define performance as an organisation's ability to satisfy its commitments whenever they fall due in order to preserve strong liquidity and solvency, as well as a positive asset value. According to agency theory, agents must apply due diligence in order to satisfy shareholders and maintain operations and business focus (Ural, & Acaravic, 2015; Kakanda, & Salim, 2017). Mauboussin (2023) considers financial performance as earnings earned as a result of favourable events that frequently keep a corporation afloat for the predictable future. Brownell (2015) affirms profits as benefits after offsetting expenditure from revenue for a specified time as this will display budget variances to explain performance.

According to Johnson and Wilson (2022), liquidity is used to maintain operational activities for an organisation to meet its obligations and also add that budgeting is presentation of projections or estimates reflecting the expected revenue and expenditure and usually display variations in performance. These are as a result of inaccuracies and poor accountability, as well as resource misallocation, resulting in management inefficiency as a result of corruption (Noouroozi, & Gholamian, 2020). Accordingly, Riyadi (2020) posits that corruption, being a form of dishonesty such as bribery and embezzlement executed by individuals entrusted with such authority and power, often drives at personal benefits, and consequently affects performance.

### 1.1.5 State Enterprises in Uganda

The establishment of state enterprises (SEs) in Uganda can be traced back from the 1960's. It is worth noting that some of them have undergone changes in ownership and management over years as some of them were privatised because of performance challenges. Subsequently, state enterprises in Uganda are created through a legal process that involves steps and government entities (State Enterprise Act. 1991). The beginning of the process starts off by recognizing certain requirements for products and services that private sector entities may not be able to produce sufficiently. The government will initiate a feasibility study to determine whether the creation of the state enterprise is the best way to meet the need. Subsequently, the draft legislation is drafted which outlines the purpose, structure and the funding. According to the office of the auditor general, the legislation has to be approved by parliament through the Act.

State enterprises in Uganda operate in various sectors in the economy including, agriculture, energy, transport, trade and tourism, education, social security fund, water and security (Munumuza, 2015). These are provision of goods and services that the private sector may not be able to give given the capital and labour intensity. The creation of SEs is driven by several factors that need to promote economic development, increase public sector employment, provide essential goods and services and general services to the population. The purpose is to support the government agenda of providing infrastructure, promoting economic growth and improving the welfare of the population. According to Mukibi, Matovu, Muhairwe and Muhumiza (2015),SEs are created with specific objectives and responsible for providing essential goods and services such as electricity, water, tourism centres that are to the well-being of the population. They also promote economic development by investing in strategic

sectors of the economy and providing employment opportunities. Furthermore, SEs are to operate in a financially sustainable manner and maximise their revenue to support their operations. The SEs are responsible for supporting government policies and priorities, such as poverty reduction, employment creation and industrialization. They are expected to operate efficiently and effectively to achieve their objectives.

State enterprises (SEs) are essential to a country's economy since they are tasked with providing services to the general public's benefit (Gemma & Ibrahim, 2015). Uganda SEs provides discounted products and services to the public population (Van der Ven, 2020). An essential part of every country's economy, SEs are tasked with carrying out government tasks for the benefit of the general population (Gemma & Ibrahim, 2015). Uganda has a system of state-owned firms that provide discounted products and services to the public population. The basis of state enterprises is founded to achieve social, political and financial goals or to address failures of goods and services where private investors may not be able to deliver them efficiently (Kobia, Vanessa, Wieble & Aykut, 2017).

According to Nabukera (2014), several parastatals in Uganda were privatised, leaving a few because of their poor performance which was in line with the public enterprise reform divestiture (PERD) Act (1993). The Board of Directors (BOD) is appointed by the relevant line Minister for policy and oversee the management while the chief executive officer is to manage the daily operational activities. However, the appointments are viewed as a political patronage to boost the morale of those who lost in parliamentary elections (Transparent International, Uganda, 2022). The annual audited reports by the office of the auditor general are by constitution submitted to parliament at the end each financial year. Subsequently, all

audit queries are sent to the public accounts committee (PAC) for scrutiny. The committee is responsible for follow-up on frauds and mismanagement of funds. Its mandate is summon responsible officials to respond any such queries and provide accountability or recovery of misappropriated funds.

According to the auditor general's reports (2018 - 2022) on liquid assets to current liabilities in the short-term, on SEs showed 32 state enterprises analysed, 20 were found to be worst performing while 10 had slightly improved on their profits or reduced on their losses. The Public Finance Management Amendment (PFMA) Act, 2015, requires accounting officers and boards to put in place effective internal control procedures, observe budgets and safeguard assets and resources from mismanagement and fraud. The financial statements of all SEs are audited by OAG and if errors or omissions are discovered, they are handed over to PAC, which authorises the Inspector General of Government (IGG) to investigate and prosecute those whose accountability is found lacking or questionable.

Corruption and financial scandals have been reported in many government entities, subsequently affecting performance. Among the notable scandals in Uganda include; the mismanagement of UGX 500 billion (US$ 135 million) of public resources intended for the 2007 Commonwealth Heads of Government meeting (CHOGM) conference; the UGX 25 billion (US$ 10 million) from the Global Fund for malaria and tuberculosis drugs programmes that went missing in 2008; the UGX 3.8 billion (US$ 1 million) meant for constructing valley dams in cattle keeping districts that went missing in 2008; the NSSF - Temangalo land saga of 2008 in which UGX 11 billion (US$ 3 million) was wasted for procuring 414 acres of property,

with an acre over-valued from UGX 11 million to UGX 24 million; and the local council bicycle scam of 2011. For example, the local council bicycle scheme involved a loss of about UGX 4.7 billion (US$ 1.27 million). Among the financial scandals are; the Microfinance Support Centre (2012), UGX 60 billion (US$16 million), UGX 169 billion (US$ 45.68 million) meant to cover annuity obligations of 1,018 former East African Community workers (2012); the recapitalization of Crane Bank (2017) of UGX 478 billion (US$ 129 million) from Bank of Uganda to the said bank after approval by parliament. There has been no accountability for the above-mentioned funds.

The appointment of BOD and management staff based on political patronage at the expense of one's competence, technical expertise, integrity, professional and work ethics (Raja & Binti, 2014) has fuelled frauds and corruption in SEs (OAG, reports, 2014-2022). Mandala et al. (2017) contend that fraud could have contributed to the failure of major organisations. According to Gault, (2017) this was attributed to qualifications of board members and management, questioning their ability to manage state enterprises effectively and efficiently. Transparency report (2023), ranked Uganda 151st of 180 states. This puts Uganda in a precarious situation. Corruption has eroded the trust in the public sector that acts in our best interests (D'more, Lepore, Landrine, Paolene & Mateeo, 2019). It has also been through wasteful expenditure as funds earmarked for important projects and important sectors have been misappropriated. This has impacted on performance, hence poor-quality services, dismal profits are witnessed by SEs.

## 1.2 Research Problem

The overarching relationship between accounting risk management, firm characteristics, internal control procedures and performance of state enterprises in Uganda is undoubtedly

complex. While prior research has taken into account these variables individually, there still exists a gap in terms of exploring their interrelation together. Previous studies have looked into corporate governance as an ARM factor impacting performance in different ways and have had various results. Similarly, Nyatichi et al. (2020) found that firm size and profitability had an effect on the connection amongst corporate governance and performance. Furthermore, studies by Florence et al. (2019) and Odalo et al. (2016) examined the impact of firm size on financial and non-financial performance, demonstrating a positive association. To better understand this complicated connection, this study will try to fill the research void by taking into account all the variables mentioned in order to provide a wider perspective on their combined effect.

The performance of state enterprises (SEs) in Uganda has been a concern due to a high degree of business failures and issues of malpractices, corruption, and cronyism (Wanyama et al., 2013). The Uganda government implemented, the, PERD Act (1993), following recommendations from the International Monetary Fund (IMF), to address these challenges. The Act aimed to promote good managerial practices, reduce government equity holding in SEs, and facilitate rehabilitation and restructuring of public enterprises (Nabukeera et al., 2014). However, SEs like the Lint Marketing Board, Uganda Commercial Bank, Uganda Co-operative Bank, Uganda Tea Company, and Uganda Hotels were faced significant failures (Wanyama et al., 2013), hence privatized.

Reports from the Auditor General and the Inspector General of Government have highlighted the poor performance of SEs, including financial losses, liquidity challenges, budgetary control deficiencies, and management inefficiencies (Auditor General Reports, 2014-2019). Moreover, there are notable disparities in the performance of SEs, with concerns about their

ability to balance factors such as profits, liquidity, budgetary variances, managerial efficiency, and corruption tendencies (Matovu, 2021; Ruzindana, 2020). Despite their potential contribution to economic growth and poverty reduction, SEs have expanded without proper regulation, and their operations are often hindered by the managerial skills and competence of line government ministries (Nabukeera et al., 2014). Consequently, SEs have struggled to generate profits, maintain liquidity, control budgets, and regain public trust (Wanyama et al., 2013). The contextual gap in this scenario is the lack of comprehensive research that examines the interplay between ARM, internal control procedures, firm characteristics, and the performance of SEs in Uganda. While there are reports highlighting the issues faced by SEs, there is a need for a holistic understanding of how these variables are interconnected and how their management can contribute to improved performance.

The analysis of research conducted on accounting risk management (ARM) and its relationship with internal control procedures, firm characteristics and performance, identified certain gaps and inconsistencies in the existing studies. This can be exhibited in the study by Nor and Abdalla (2017) which indicated a positive correlation between financial risks and performance. In addition, a study by Munther et al. (2021) showed that risk management strategies had a significant effect on business innovation theory and performance, Yang et al. (2018) in their research on the effect of risk management techniques on state-owned firms' efficiency by analysed competitive advantage and financial literacy as mediating factors. Furthermore, Kamau and Simiyu (2019) in their study found positive relationship between financial management and the effective of internal control systems in Kenyan state businesses, whereas Abiodun (2020) explored how internal controls influence performance of oil companies in Nigeria.

In Uganda, Khisa (2019) carried a study on the level of fraud in 50 parastatals in Uganda. The purpose was to establish the activity expenditure, efficient use of public funds, and budget controls using correlation method. The results were positive, an indication that risk measurement, risk assessment, documentation, physical checks and audit deficiencies led to corruption therefore affected performance. Wakaisuka (2017) examined the impact of company governance, firm features, and the external environment on Ugandan financial institutions' performance using CAMEL model. The study explored management efficiency as a component of corporate governance to create consistency in achieving economic, social, and personal objectives. This incentivizes effective resource management, holding individuals accountable, and empowering them to collaborate in order to ensure everyone's interests are aligned with the organization's overall mission and goals, thus boosting productivity. These studies highlighted the importance of control environment, control tasks, monitoring indicators, and other control practices in influencing financial performance.

This study tested the link between ARM and firm performance using simple or multiple linear regression analyses. The study used both simple and multiple linear regression analyses as well as hierarchical analysis to examine the moderating and joint effects. Furthermore, previous studies employed either time series (longitudinal analysis) or meta-analyses to generate hypotheses but failed to test them. This study therefore, helps to address the contextual, conceptual and methodological gaps revealed by the research gaps. Consequently, at the contextual level, research has been carried out in different contextual setups such as sectors or different countries, and those carried out in Uganda have primarily considered banks and private corporations. Conceptually, a significant amount of research has been conducted

regarding the association among accounting risk management and firm performance. Depending on the theoretical perspectives adopted and the metrics used to measure performance, plus the contextual circumstances of individual firms, perspectives clash and outcomes vary.

Methodologically, different measures of research designs, like a census survey and a review of literature, and different analytical techniques, like structural equation modelling, were applied to come up with conclusions. This study used a wholly different approach from the ones previously studied by utilizing both a descriptive cross-sectional survey design and a regression analysis. The study further, in the hypotheses put forward blended an integrative model to look into the combined effects and interactions of the various elements, ARM, internal controls, firm characteristics and performance. Therefore, what is the resultant effect of ARM, internal control procedures and firm characteristics on the effectiveness of state enterprises in Uganda?

## 1.3 Research Objectives

### 1.3.1 The general objective

The aim of the study was to investigate the influence of ARM, internal control measures, and firm characteristics on the performance of state enterprises in Uganda.

### 1.3.2 Specific Objectives

The specific objectives were to:

(i) To investigate the effect of accounting risk management on performance of state enterprises in Uganda.

(ii) Examine the mediating effect of internal control procedures on the relationship between accounting risk management and performance of state enterprises in Uganda.

(iii) Investigate the moderating effect of firm characteristics on the relationship between accounting risk management and performances of state enterprises in Uganda.

(iv) Assess the joint effect of accounting risk management, internal control procedures and firm characteristics on performance of state enterprises in Uganda.

### 1.4 Value of the Study

The research assessed the relationship between accounting risk management practices, internal control procedures, firm characteristics and performance of state enterprises in Uganda. This resulted in multiple benefits, like the government as a regulatory body gaining a standard to compare against; the general public being able to make informed decisions about the products or services offered; academia being able to draw conclusions from further research; and the government of Uganda creating and implementing appropriate policies and measures to improve the profitability, liquidity, and budgetary control of the SEs. Additionally, the results of the study provided meaningful insight to the institutional, agency, stewardship, and risk management theories it researched. The study concluded by offering policy recommendations to better the performance of various sectors within the SEs.

# CHAPTER TWO: LITERATURE REVIEW

## 2.1 Introduction

Theories about ARM, internal control processes, company characteristics, and the efficiency of state companies are assessed in this section. It also evaluated arguments and major findings propounded by various scholars on the above variables. The study also discussed institutional, agency, stewardship and risk management theories that act as supporting theories between the studies variables. The study further looked at different literature by different researchers on findings among the association between ARM, internal control procedures, characteristics of the firms and performance of state enterprises as well as looked at the empirical evidence, analysed study gaps and made a conclusion on how the research gaps were addressed.

## 2.2 Theoretical Foundation

Accounting and internal control systems are crucial to every organisation's measurement, evaluation, knowledge management, liability assumption, asset control, and equity management. It is also argued that firm size looks at the economies of scale enjoyed by the firm in its operations and ability to acquire more financial resources given its asset base.

Therefore, the discussions on the hypothetical relationship relating to accounting risk management, internal control procedures, firm characteristics and firm performance was supported by the risk management theory. This was considered in this study as a core theory, together with other theories such as; institutional, stewardship and agency theories as described in detail as below.

### 2.2.1 Institutional Theory

The institutional theory was developed by Meyer and Rowan (1970) as a concept of industrialised organisations. They argued that organisations are not driven by efficiency or economic factors but also influenced by wider societal and institutional forces. According to their perspective, organisations adopt structures, practices and routines that are considered legitimate and appropriate within their environment. Meyer and Rowan's work and contributions by Dimaggio, Powel and Zucker (1990), helped shape the institutional theory and its subsequent developments.

Institutional theory gives a basis for comprehending how organisations operate within the broader economic, political and social contexts in which they are embedded (Scott & Richards, 2004). The theory suggests that organisations are not independent actors but are shaped by values, rules and norms that exist in the environment. The institutional theory posits that the characteristics, internal control procedures, and performance of an organisation are shaped by the institutional environment in which it operates (Fox & Hamilton, 1994). This concept applies to the realm of accounting risk management, where various variables from the firm and its settings are taken into consideration. According to Meyer and Rowan (1991) and Scott (2007), the adoption of internal control procedures and risk management practices may be influenced by industry norms, regulatory requirements and expectations of stakeholders. They add that SEs may also be subjected to political pressures and constraints that may affect their ability to implement effective risk management practices. Similarly, the characteristics and performance of SEs may be influenced by institutional factors, which may include, cultural norms, political environment and legal and regulatory framework (Etiengu & Nesieku, 2015).

This may make SEs face unique challenges related to transparency and accountability that may affect their performance.

According to Ewool and Quartey (2021) asserts that, institutional theory suggests that effectiveness of accounting risk management, firm characteristics, internal control procedures and performance of SEs is influenced by complex interplay of institutional factors that operate at multiple levels. Therefore, understanding these factors, organisations can develop effective strategies for managing risk to improve organisation performance. Additionally, the idea drives the understanding of board structure and organisational performance as being impacted by organisational size, age, and term of ownership (Ural & Acaravic, 2015). As a result, the theory asserts that state businesses adopt a complete institutional framework as a structure for predicting the effects of ARM, firm characteristics, and internal control processes on performance, but does not address the intermediate element addressed by agency theory.

### 2.2.2 Agency Theory

Agency theory as developed by Jensen and Meckling (1976) regarded organisation as a tangled network of agreements that connected various situations. The agent's lack of knowledge, selfishness, lack of trust, and determination to work towards achievement of personal objectives are all contributing factors to the agency issue. Various scholars and researchers have made use of this concept to explore the difference in information possessed by the principals and agents (Donaldsons & Devis, 1991; Selznicck, 1994). Vargas-Hernández and Teodoro Cruz (2018) portray agency theory as a conceptual model that explains the relationship between a principal (SEs) and their appointed agent (e.g., the management team responsible for running the enterprise). This relationship may be influenced by accounting risk

management, internal control processes and firm characteristics (Fadun, 2017; Harelimana, 2017; Donaldsons & Devis, 1991; Selznicck, 1994). These latter components, affect the performance of the tasks assigned to the agent. This is by providing the necessary procedures for them to adopt in order to ensure their activities are efficient, effective, and compliant with relevant laws and regulations. Subsequently, firm characteristics refer to unique attributes of SEs that may impact its performance, such as, industry, age, size and ownership structure.

Consequently, using agency theory, examine factors that may impact performance of SEs as the management team is not incentivized to prioritise accounting risk management, they may not adequately address financial reporting risks, which could lead to inaccurate financial statements ultimately harm SEs performance. Similarly, if internal control procedures are not robust, there is a higher risk of fraud or other forms of misconduct, which could negatively impact performance. Consequently, firm characteristics, as well play a role on how accounting risk management and internal control procedures are implemented. Large SEs may face complex accounting risks than smaller ones, therefore, may require sophisticated risk management and internal control procedures. Additionally, ownership structure of SEs may impact how risk management and internal control procedures may have different priorities and incentives compared to privately owned enterprises. By considering the incentives and behaviours of the management team responsible for running the enterprise, can gain insights into how these factors can ultimately influence performance (Arwinge, 2013). As a consequence, the theory justifies the presence of ARM, corporate characteristics, and internal control mechanisms while neglecting societal profits that the stewardship theory focuses on.

### 2.2.3 Stewardship Theory

According to Donaldson and Davis (1991), founders of stewardship theory explain that stewards maximise their utility functions by protecting and maximising shareholder capital through organisational success. They added that individuality is merely one aspect of stewardship theory, which also focuses on top management's job as stewards, which is to fulfil corporate objectives. The stewardship viewpoint states that stewards are content when the organisation's objectives are reached (Donaldsons & Davis, 1991). For Van Shlyke (2007), the relevance of frameworks and firm characteristics that provide stewards and managers maximum trust-based autonomy is recognized by stewardship theory in ARM practices. According to Gupta et al. (2016), the best way to maximise shareholder value is for CEOs or their employees to act more independently. Furthermore, when directors and executives are seen as competent stewards of their organisations, they attain their career goals.

Stewardship theory suggests that managers and other insiders of an organisation act as stewards who are responsible for safeguarding the assets of the organisation and maximising the future worth of the organisation and its owners. In this context of SEs, stewardship theory emphasises the importance of effective ARM, firm characteristics and internal control procedures in achieving superior performance (Ondego, 2016). Effective accounting risk management involves identifying, assessing and controlling risk that could negatively impact the financial performance of SEs. This may involve, implementing sound financial reporting systems, monitoring cash-flows and ensuring compliance with relevant accounting standards and regulations.

By effectively managing accounting risks, SEs can improve financial stability, reduce likelihood of financial scandals and enhance their reputation among stakeholders. Internal control procedures are critical to the success of SEs as they involve the development and implementation processes and controls for the sake of trustworthiness in accounting records, prevent fraud, mismanagement and safeguard of organisational assets. The effective internal control procedures can help organisations avoid financial losses, improve decision making processes and enhance their competence to entice capital investment. Subsequently, features of a company such as its size, period of existence, and proprietorship, are key in determining the performance of state enterprises. Ultimately, SEs that are large and have a diversified portfolio of assets may have a better position to overcome economic downturns and market fluctuations, than smaller ones narrowly focused (Cohen, Krishnamoorthy & Wright, 2015). Additionally, SEs that are governed by an independent board of directors or overseen by external auditors may be more accountable to stakeholders and better equipped to make strategic decisions that support long-term value creation.

In conclusion, stewardship theory suggests that effective ARM, firm characteristics and internal control procedures are critical to the success of the firm. By emphasising these factors and implementing sound management practices, SEs can improve their financial and non-financial performance, reduce their exposure to risk and enhance their overall value to the society. The comprehensive picture of the organisation is not addressed, however, as in stewardship theory.

### 2.2.4 Risk Management Theory

Mehr and Hedges (1963) created the idea on theory of risk management. The concept further developed by (Ehrlich & Becker, 1972; Miller, 1992) in the 1970s and 1990s. COSO (2004) formalised and incorporated it in its framework. According to the theory, a company's existence may be directly or indirectly influenced by accounting risk exposures (Coleman, 2009). Risk management theory provides a comprehensive framework for understanding and managing risks in organisations (Ngugi, 2015). The theory recognizes that organisations face types of risks which may include; operational, reputational, legal and strategic that have a major effect on outcomes. In the context of ARM, the theory is particularly pertinent as it emphasises the importance of identifying, assessing and mitigating risks that may affect financial reporting and compliance (Anass & Fauziiah, 2014). Therefore, risk management practices can help organisations improve their internal control procedures, enhance reliability and accuracy of financial information and minimise the likelihood of financial fraud and other accounting irregularities.

Additionally, risk management theory recognizes performance is not influenced by internal control procedures and firm characteristics but also external factors which may include, economic conditions, industry trends and regulatory changes. Consequently, the risk management framework takes into account both external and internal factors that may affect firm performances. Generally, by applying risk management theory to the study of ARM, firm characteristics and internal control procedures, investigators and academics can get an increased comprehension of the intricate interaction between these components and their effect on company efficacy. This can guide the creation of more effective risk management

approaches that enable organisations to reach their goals and objectives with a minimised vulnerability to assorted risk types.

Institutional and risk management theory informed the development of internal control procedures and company characteristics that are socially oriented as a doorway to improving performance, whereas stewardship theory supports the presence of ARM, internal control processes, and firm characteristics. As a key theory, risk management addresses all holistic organisational models that regulate organisational activities. As a key theory, risk management addresses all holistic organisational models that regulate organisational activities.

### 2.3. Empirical Literature Review

As described on each study variable, the pragmatic evidence examines how ARM, internal control processes, and firm characteristics influence firm performance. Literature reviews, according to (Snyder ,2019), are intended to provide the researcher with a larger view and reflection on the research issue, as well as to explain how the study fits into a larger research field.

#### 2.3.1 Accounting Risk Management and Performance

Nor and Abdalla (2017) studied the effect of accounting risks on the performance of 80 corporations and the connection among credit risk on financial performances of organisations. Research applied descriptive correlational design for analysis of data. Positive relationships between the variables were discovered. Although they incorporated ROA and ROE, they might have also looked at whether nonfinancial factors like management competency and corruption

had an impact on performance, which is what this study did. Munther, Sinan, Ahmad, and Habib (2021) conducted research on the impact of accounting and the impact of risk management on organisational growth as mediated through new business models in 228 Jordanian firms. The results showed risk management strategies significantly influenced business innovation theory on performance. The business innovation model significantly affects both monetary and non-monetary results.

Yang, Ishtiaq and Anwar (2018) assessed the effect of risk management techniques on performances of state enterprises. As a mediating factor, competitive advantage was brought into play and financial literacy used as a moderator. The research used a descriptive research approach and focused on risk measurement, assessment, response, and monitoring, as well as their impact on performance, using multi-regression analysis. To check the association, the researchers employed Kenny and Baron's three stage modelling of the mediating effect from 1986. The results demonstrated a significant relationship. The study however did not consider business size or ownership to see if a link existed between enterprises' risk management and public entities performances. The study found only 19 percent of the 492 Pakistani manufacturing businesses studied by Lin, Huang, Riley, and Lee (2020) were found to have engaged in fraudulent activities, with 30 of them closing a year after.

The influence of risk-reduction strategies on performance was also examined by (Ewool & Ama, 2021) in research done at 100 Microfinance Institutions in Ghana. Their goal was to examine how different main risk management practices (RMPs) influenced profitability. There were two key metrics for measuring success in the business: ROA (return on assets) and ROE.

The RMPs comprised the steps of identifying, evaluating, controlling, evaluating, and managing risks. It was discovered that the chosen MFIs had ROA and ROE averages of 3% and 35%. To some degree or another, the researchers found, organisations employ all or some of the following to some degree or another. Managers and directors were encouraged to consistently employ risk management practices in order to maximize profits..

Cohen, Krishnamoorthy and Wright (2015) conducted research on 160 Norwegian businesses to assess connection amongst management of risks and firm's performance. Their study discovered that identification, appraisal, response, and management of risk have a direct impact on budgetary outcomes using a composite index to analyse financial statements. Gordon, Loeb, and Tseng (2016) did a similar study on 95 Thai public firms using a regression analysis approach. The survey focused on ARM structures and performance budget controls. The findings demonstrated a strong link between ARM and budget control and performance. The study employed budgetary control as a metric; if profitability, liquidity, and budget variations had been used instead, the findings would have been different.

Ahmad (2021) studied the impact of processes of management of risks on the performances, using the function of business model innovation as a mediating factor. This survey also used a correlational research design. Study on 228 Jordan organisations served as the study's observational unit. Research aimed to evaluate the impact of ERM procedures on business model innovation and company performance. The findings revealed ERM is induced by the business model of innovation. It was also found BMI significantly affecting both financial and nonfinancial performance. It also completely controlled the link between environmental, social, and governance practices and nonfinancial performance.

### 2.3.2 Accounting Risk Management, Internal control Procedures and Performance

An examination by Turyanebwa, Byamukama, and Sunday (2022) looked into how internal controls, corporate management, and financial performance are connected in Micro Financial Institutions in Uganda. It evaluated 76 MFIs with 322 people surveyed and made use of a descriptive, cross-sectional and correlational design. The results displayed a strong positive correlation between internal controls and performance of the MFIs in the country. Subsequently, Kamau and Simiyu (2019) investigated the issues of financial management and the performances of Kenyan state businesses. The investigation mainly assessed the impact of management of finances on efficiency of internal control systems, reporting, and tracking systems. The study was based on two models: contingency and resource-based models. The research used descriptive design and 29 commercial state companies serving as the analysis unit and finance directors serving as the observation unit. The survey was conducted using questionnaires and samples selected using census to determine the unit of observation. The findings show that all of the variables had a statistical influence on government enterprises' financial performance. From the conclusions, managers should develop corporate governance principles that ensure the implementation of regular financial management and internal control feedback.

Abiodun (2020) examined how internal control systems affect a company's performance in Nigeria's south-west region. Stakeholder theory was used to assist the study, and extensive literature research was carried out. The study used a descriptive research design and applied a qualitative method. The study also employed multi-tier linear regression models to see if control practices, Internal auditing controls, control environment controls, risk management controls, and monitoring activities all have an influence on financial performance. The

conclusion showed a positive correlation between internal audit controls, monitoring methods and risk management on an organisation's success. On the contrary, control environment and control practices depicted adverse effects on performance. The conclusion was, internal auditors should examine frameworks and evaluate them in the manner in which different departments conduct their duties. Lastly, firms should establish the levels of expected risks and how to mitigate them.

Etengu and Amony (2015) investigated the roles of internal control procedures and performance of non-government organization, The International Union for Conservation of nature (IUCN) an NGO in Uganda, with specific aspects to evaluate the role of control environment together with stringent control procedures on financial performance. Findings revealed that control environment, control tasks and monitoring indicators influenced the outcome variable. The recommendation was control and monitoring activities should be applied to increase output. Furthermore, the study proposed that performance standards should be put in place and effectively conveyed to employees of IUCN in order to enhance financial performance.

Wanjohi and Ndambiri (2017) studied management of risks and performances of commercial banks in Kenya. The multiple regression analysis was adopted by the study. Findings indicated a positive relationship. Using factor analysis, the study on state enterprises tested the relationship using ARM, firm characteristics, and internal control procedures. Similar investigations by Ademola, Adeidoyin and Aliade (2015) on the efficacy of ERM and system controls procedures on performances of 80 public enterprises in Nigeria found a positive association with performance through budget monitoring. Subsequently, Shad and Bokhari

(2019) studied integrating sustainability to accounting risk management. The research applied a method known as value-added measuring, particularly the economic value added (EVA), which was used to estimate business performance. This combined ARM application with sustainability reporting to assess the effect on economic value generated.

This research study implemented content analysis that was quantitatively inclined in order to study the strategies firms use for their ARM and sustainability reporting. For deducing the economic value addition (EVA) evidence, Thomson Reuters Data Stream was used. An ordinary least squares (OLS) plan of action was used in order to enhance the price earnings ratio and diminish the cost of capital by establishing information symmetry among the organisation, its insuring companies, lenders and shareholders. Findings are that ARM and sustainability reporting affect performance.

In Uganda, Matovu (2019) studied the impact of financial management systems on delivery of quality services at the national planning authority. The research employed a descriptive methodology, combined with correlation and regression analysis. Findings were that the accounting officers connived and contributed to overpayment of salaries and attributed it to lack of documentation track, lack of access controls, and lack of segregation of duties. The present study conducted an assessment of how ARM, firm size and segregation of duties affect performance. Subsequently, Hong, Ramayah and Subramaniam (2018), in their research of 35 statutory organisations in Malaysia, tested the effect of the interior control procedures on performance. Findings established that control activities, control environment and physical audits have an effect on performance. The agency, stewardship, and institutional theories

explained the relationship and linkage between ARM, firm characteristics and internal control factors.

### 2.3.3 Accounting Risk Management, Firm Characteristics, and Performance

Corporate governance and profits management may not have a direct connection, as (Nyatichi, Iraya, Mwangi, & Njihia, 2020) found, because of the various features of companies listed on national stock exchanges (NSE). They wanted to find whether business characteristics had any bearing on association amongst corporate governance on performance. The target population were 56 companies with the period of study being 2008-2017. The study employed panel data methodology with correlational descriptive research design. The sample size was 517 which forms a unit of observation, which formed a unit of observation. From the results, it is evident that firm size and firm profitability moderated the association existing amongst corporate governance and performance and subsequently, leverage depicted a no significant effect of the relationship.

Harelimana (2017) using indicators, credit and liquidity risks, interest rates on profitability carried out a study on the effect of financial risk management on performance of banks in Rwanda. The correlational research design was adopted. The ROE, net profit margin and ROA were used as indicators of performance. Results established positive association amongst accounting risk management and outcome variables. The results could have been different if they used ARM, internal control procedures, and management efficiency on performance.

Similarly, Fadun (2017) examined corporate governance as an ARM factor for improvement of firm performance and safety of stakeholder's interests. According to a study of 30 publicly traded companies in Nigeria in 2017, corporate governance significantly affected performance.

Assessment of size of organisation, board objectivity, and CEO duality and tenure on performance used ROA and ROE. CEO tenure was shown to be adversely connected to performance, although the other factors showed a positive association. The conclusion was corporate governance standards had a positive impact on performance. Shareholders' confidence may also be enhanced and the country's domestic product (GDP). However, while his study used corporate governance, this study used ARM as a healthier assessment of firm performance.

Florence et al. (2019) assessed the effect of age on financial and non-financial performances of SMEs in Kampala. A descriptive comparative together with descriptive correlations as well as cross-sectional survey design were employed in the study. Target population was 409 firms with different age categories. Further, validity and reliability were ascertained using Cronbach alpha reliability and content validity ratios respectively. Using ANOVA and regression analysis, the study failed to reject the results. Additionally, other findings revealed that financial and non-financial like liquidity and profitability constructs be employed to determine performance. In contrast, a survey of 20 registered agricultural firms in Kenya, company size had an impact on the success of these businesses (Odalo, Achoki, & Njuguna, 2016). The goal was to see how advances in business productivity may be calculated based on firm size and management efficiency.

The secondary data was extracted from the audited financial statements for the period, 2003 to 2014. Ordinary least squares (OLS) model assessed the data, for measuring size of a company, total assets (log of assets) were employed, whereas EPS, ROA, and ROE measured performance. Goodness of fit, on the other hand, was utilised to measure the association

between ROE, earnings per share, and log total assets in the regression model as a whole (ROA/ROE/EPS) model was shown to be statistically significant. A favourable relationship existed between company size and firm performances based on ROA, ROE, and EPS for agricultural companies registered on the Nairobi stock market. Similarly, firm size showed a positive connection with all performance metrics, demonstrating that larger firms had a competitive advantage over smaller enterprises. The study only concentrated on the size of agricultural companies but should have made a comparison with public entities. Equally, he could also have used liquidity and management efficiency as performance indicators.

Aluoch et al. (2019) analysed the effect of corporate governance and macroeconomic environments using efficiency as a performance metric of 10 businesses on the Nairobi Stock Exchange. The census approach was used by adopting panel data to assess the relationship among variables. The relationship was assessed using regression analysis. The results indicated that liquidity and interest rate significantly affected ROA, however, investments, corporate governance, leverage growth rate, inflation and domestic product growth rate were significant. Other findings conceded that firms. Investment was strongly related to performances of quoted companies while leverage, organisation governance, liquidity, inflation and domestic product growth rate had no significant effects on the listed firms. The conclusion was that shareholders (owners) were to adopt the findings to revise their corporate policies and practices to enhance their firm performance.

Studying 80 public firms in Japan by Bertacchini, Dalle and Scuderi (2018) found that ownership separates the top performing organisations when it comes to growth. In addition, he found that ERM indications were followed up on, allowing firms with ownership involvement

to continue in operation (risk management, assessment, monitoring and control). If he had utilised company age and size as moderating indications in addition to ARM markers for better performance, the findings could have been different.

Using data from 120 public organisations, (Iswajuni, Manasikana & Soetedjo, 2018), researchers looked at how Indonesian Stock Exchange-listed manufacturing businesses ERM affected performance. Findings are, effective systems controls were linked to better performance in terms of both enterprise risk management indicators and firm size. Consequently, Muhammad, Masron, and Majid (2015) examined the link between the size of a company and sales in Sweden, they found no correlation. To improve on their findings, the researchers would have looked at the importance of firm age, ownership structure, and internal control methods in terms of firm performance. Findings by Ullah (2020) on influence of firm characteristics on performance of 50 microfinance were, firm size and ownership had no impact on performance.

### 2.3.4 Accounting Risk Management, Internal Control Procedures, Firm Characteristics and Performance

Atwongyire (2019) investigated the connections between internal syndicate controls and graft at the highest levels of Ugandan government. Motives for doing this research on corruption in public finance administration were sought. Further investigation revealed that corruption at the syndicate level in public finance management distorted financial controls and weakened the integrity of the financial management systems. Most cases of corruption by organised crime groups were found to have a haphazard structure, with the aspects that helped them succeed

depending on the expertise of the actors involved, the significance of the financial management systems in place, and the quality of their personal relationships with the important players.

A study conducted by Kiconco, Agaba, Turyasingura and Kabagambe (2023) was on internal controls' impact on Saccos's performance in Uganda using 135 respondents. The qualitative and quantitative analyses were used. Pearson correlations matrix was used to establish the relationship. The aim of the research was to establish whether accounting risk management, independent checks and segregation of duties affected Sacco's performance. The results showed accounting risk management and division of responsibilities was helpful for productivity. Equally, Yohanna, Pujiningsih and Juliardi (2021) conducted a study to determine if internal control is as important for churches as to profit-making institutions. The study using survey research design and regression models, examined the effects of hierarchical structure of churches on systems control processes and performance in a church in East Java. Based on the findings, it was determined that the scores of internal control procedures were significantly different depending on church size. This implies that the denominations of institutions and hierarchical structure influence the quality of the internal control system of local churches. Their findings were supported by a study of Kalemeera (2018) who concluded that inadequate internal control procedures impede management responsibilities and give allowance to engage in suspicious activities. They as well practise poor accounting practices that lead to financial misstatements. The study could have used age and ownership structure of different religious sects for better comparison. The study could have adopted management efficiency and budget variances as indicators of performance for better results.

Usman and Zahid (2015) carried out a study in 60 public enterprises in Thailand regarding the internal control on compliance based on end-of-year inventories and physical stock count by auditors. He discovered that state enterprises had no physical stocks as the figures in the financial statements of closing stocks were exaggerated by staff, hence making losses. The study could also have looked at separation and segregation of duties of staff, policy documentation, and inventory management systems but did not. Subsequent research by Ofosu and Amoh (2016) on ERM and performance of Ghanaian quoted banks, used pane data of all quoted Banks using a regression model of; risk index, capital adequacy, bank size, credit and liquidity risks on performance. Findings showed, ROA and ROE had positive relationship. If the study used liquidity position and management efficiency to measure performance, the findings could have been different.

The research by Ondigo (2016) on 43 commercial banks was to examine the relationship between corporate governance, risk management, on performance of Kenya's commercial banks. The financial ratios; capital adequacy, quality of management, asset quality, earnings, and bank liquidity were analysed using the CAMEL model. The purpose of the multiple regression and correlation analysis was to determine the correlation between corporate governance and the bank's success. The positivist research philosophy was used in the study that was founded on agency theory. Population data were analysed using a descriptive cross-sectional survey approach. Diagnostic and descriptive analyses were performed on the data. Regression and correlation analysis tests were utilised to check for validity of hypotheses. Findings showed corporate governance had a beneficial effect on positive performance of banks. The recommendations were: management of commercial banks, board and regulators

should ensure implementation, oversight and monitoring activities are in line with corporate objectives to improve bank's performance.

Mohamed (2016) assessed budgetary control on the delivery services of banks. He carried out the study on Dara-salaam Bank, Somalia. This aimed at examining the impact of responsibility accounting on services delivery to establish whether variance cost analysis influences organisational output. The survey explored budgeting, budgeting control and accounting theories. Review of literature was done as per the objectives. Descriptive and retrospective research designs were used for the research. Primary data was collected through questionnaires, and secondary data was gathered from a review of audited financial statements. The investigator conducted a census of the 70 staff of Dara-salaam Bank in Hargeisa Township Somalia. The study took into account all the relevant ethical considerations. Data fed into excel was presented using frequency tables. Data was analysed using SPSS computer program. Responsibility accounting, zero-based budgeting and variance analysis contributed to improved budget management and increase in productivity. It was further noted that variance cost analysis may not influence decision making which subsequently influences organisational performances. According to the results, training staff on the organization's current budgetary management techniques will help increase business efficiency and decision-making. Therefore, further research is recommended on budgetary planning and budget execution on operational activities.

Using Uganda as a case study, Asiligwa and Rennox (2017) evaluated internal control procedures in public sector projects sponsored by African Development Bank (AfDB). Findings revealed that internal control procedures were lacking in these projects showing a

flaw in compliance of procedures hence poor budget performance. This study assessed the connection amid ARM and performance of state-run enterprises as a result of certain firm characteristics. Mawanda (2016) subsequently conducted a survey concerning the efficacy of internal controls and their effects on the performance of universities in Uganda. The study used cross-sectional study of 270 staff at Uganda's three public and four private universities using correlation analysis; he established strong association amid internal control procedures and performance. This research utilised regression and factor analysis to establish the relationship between ARM and firm characteristics and performance of state firms. Khisa (2019) conducted an investigation to ascertain the degree of corruption in 50 governmental bodies in Uganda. The purpose was to establish the activity expenditure, efficient use of public funds, and budget controls using correlation method. The results were positive, an indication that risk measurement, risk assessment, documentation, physical checks and audit deficiencies led to corruption therefore affected performance.

A study conducted by Ghani, Nayan and Ghazali (2014) focused on internal factors and performance in 80 insurance companies in Yemen, concentrating on ERM and size of organisation with specifics on the collapse relating to financial losses. Findings showed that unauthorised persons had access to records and got electronic passwords thus inflating payments through collusion with insiders. The study should have focused also on firm age and ownership to determine their effect on performance. However, this research focused on internal control processes on performance of state corporations.

## 2.4 Summary of Previous Studies and Knowledge Gaps

Accordingly, a summary of literature reviewed and study gaps are presented below in Table 2.1.

**Table 2. 1 Summary of Empirical Evidence and Research Gaps**

| Author(s) | Focus of the Study | Objective | Methodology | Findings | Research Gaps | Research Gaps Addressed |
|---|---|---|---|---|---|---|
| Yohanna, Pujiningsih and Juliardi (2021) | The relationship between internal control systems on performances of churches. | Determining the effects of hierarchical structure of churches on internal control systems and performance. | A qualitative approach of case study research. | The findings revealed, the scores of internal control procedures were significantly different depending on church size. | The study was carried out on churches and used case study. | This study looked at accounting risk management, internal control procedures on performances of public organisations. The survey also employed management efficiency and corruption perception index on performance. |
| Abiodun (2020) | The influence of internal controls on performance of the public enterprises in Nigeria's southwest region. | Assess the effect of internal controls, monitoring practices, risk management on organisational success. | A qualitative descriptive research design and multi-tier linear regression models were used. | Findings showed a positive relationship existing between internal audit controls, monitoring practices and risk management on organisational success. | The study used internal control procedures but did not adopt accounting risk management and firm characteristics on performance. | The study adopted ARM and firm characteristics on performances of public organisations and also used profits, liquidity, budget variances and management efficiency and their effects on performance. |

| | | | | | | |
|---|---|---|---|---|---|---|
| Kamau and Simiyu (2019) | Impacts of internal controls on financial management in public owned enterprise in Kenya. | Financial management challenges in state enterprises. | The descriptive study design and census were used. | The results indicate that all the variables depicted statistically influence the performances of public enterprises. | An internal control on financial management was employed. | This study looked at ARM, and firm characteristics on financial performances. |
| Aluoch, Kaijage, Iraya and Ogutu (2019). | Relationships between corporate governance, financial features, macroeconomics influences and performances of 10 commercial and service companies traded on Nairobi Securities Exchange. . | Establish the influence of corporate governance, macro-economic factors, financial constructs, on performance of commercial and service firms listed on Nairobi Securities Exchange. | Census approach method was applied and used panel data by employing longitudinal descriptive survey design to determine the relationship among variables. Regression analysis was employed to determine the association. The study used ROA | The results indicated liquidity and interest rate significantly affected ROA, however, investments, corporate governance, leverage growth rate, inflation and domestic product growth rate didn't have a significant effect on ROA. Findings further showed firm's investment was strongly related to firm performance of quoted companies on the NSE while leverage, corporate governance, liquidity, inflation and domestic product growth rate had no effect. | The study only focused on corporate governance as a moderating variable and indicators of liquidity, investments, domestic product, leverage growth rate and price increases and how they affect the performances**.** Study failed to look at age and ownership as firm characteristics; profits, budgetary control measures, management efficiency and CPI. | Study addressed age and size of organisations and ownership status as a moderating effect and their effect on firm performance. Profits, budget variance, management efficiency and corruption had significant outcomes on the firm's performances. |

| | | | | | | |
|---|---|---|---|---|---|---|
| Florence et al. (2019) | The effect of firm age on financial performances of SMEs in Kampala. | The association between the organisational age and performances of SMEs. | The study employed monetary and non-monetary operations for the measurement of performances. A descriptive comparative and descriptive correlations as well as cross-sectional survey design were employed in the study. | Findings revealed financial and non-financial had a positive effect on performance of SMEs. | The study looked at SMEs and used only at the age of the organisation. | The study used organisational size and ownership of the organisation and their effect of performance of state enterprises. |
| Mandal, Kaijage, Aduda and Iraya (2017) | Significance of board design and chief executive manager tenure on performance of Kenyan financial institutions. | Determine the relationship existing amongst the structure of the board, CEO tenure and performances of financial establishments in Kenya. | Used stepwise regression models and correlation analysis. | Established that board structure had an independent significant effect on the performances of state enterprises. | Survey concentrated only on how the structure of the board affects performance. | Focused on firm characteristics as it also used indicators of age, ownership and firm size. Agency theory was employed as the anchoring theory for assessing how accounting risk management affects performance. |

| | | | | | | |
|---|---|---|---|---|---|---|
| Fadul (2017) | Risk management tool for improving performance of SEs and shielding stakeholders' interest of listed companies on Nigerian Stock Exchange. | Corporates governance as a risk management tool for improvement of performance of organisations and also protection of stakeholders' interests, organisation's size and ownership structure. | Used ROA and ROE. | Corporate governance as a risk management tool influences performance of companies. | Used ROA and ROE. | Assessed profitability, liquidity, and budget variance as financial performance indicators and found that they influence performance. |
| Mawanda (2016) | Effects of internal controls procedures on higher institutions performances in Uganda. | Examine the functionality of internal controls structures in institutions of higher learning on financial performances of institutes of high education in Uganda. | Used mixed methods; administered questionnaires and interviews. | A significant relationship existed amid internal controls systems and institutional performance. | Used internal controls procedures concentrating on control realm activities, and evaluation. | Used access control procedures, documentations, physical audit reports, approvals of authorities, and dispersion of duties as internal control procedures. |
| Odalo, Achoki and Njuguna (2016) | Effect of liquidity on the financial performances of agricultural firms listed on the Nairobi Security Exchange. | Assess effect of liquidity on financial performances of agricultural firms that are listed on Nairobi Security Exchange . | Firm size was assessed using log of assets while performances was assessed using EPS, ROA and return on equity. | Findings revealed liquidity on firm had a positive significant effect on performance. | ROA, EPS were used as measurements of performance. | Examined the budget variances and used the CPI which showed that actual expenditures exceeded budgeted figures. CPI exceeded the average. |

| | | | | | | |
|---|---|---|---|---|---|---|
| Epstein and McFarlan (2016) | Measure the effect of efficiency and effectiveness on service delivery as a performance measurement on Non-profit organisations. | Demonstrate how accountability benefit non-profit organizations and the social impact to beneficiaries. | Assessed correlation between variables using Pearson correlation coefficients and descriptive exploratory design and to test the relationship. | Findings established a significant relationship between the efficiency and effectiveness on service delivery of social services to beneficiaries. | Study only looked at the influences efficiency and effectiveness but did not consider of internal control procedures on performances of public enterprise. | Focused on ARM and internal control procedures and found that they influence performance of state enterprises. |
| Ondigo (2016) | Effect of corporate governances, risks management, organisational characteristics and financial performance of Kenyan banks. | Establish the impact of corporate governance, risks management, organisational characteristics and external environment financial performances of banks in Kenya | Used multiple regression and correlation to analyse the relationship using the CAMEL model. | Results showed a statistically significant association existed between corporate governance and performance. | Used corporate governance, risk management, organizational characteristics and external environment in their study, but this research applied accounting risk management, internal control procedures, and budget variance was not included in the study. | Study was on the effect of accounting risk management, internal control procedures, budget variances and profitability on performance. Findings indicated they influenced firm performance. |

| | | | | | | |
|---|---|---|---|---|---|---|
| Etengu and Amony (2016) | Effect of control system tools and performances of NGOs in Uganda. | Examine the role of control systems tools and performance of NGOs in Uganda. | Study used F test to analyse data and test the variances. | Findings revealed context, control actions and evaluation of financial performances were significantly related. | Their study was limited to control environment but this research looked at budget performance, and accountability on performance. | Used accounting risk management and internal control, using profitability, liquidity, budgetary variances, management efficiency and corruption influence to measure firm performance of state enterprises. The results showed that they influenced the performance of state enterprises. |
| Wanyoike (2016) | Impact of managerial quality practices and performance among the manufacturing sector in Kenya. | Establish the incremental improvement by top managerial commitment, client motivation and organisational capability on performance. | Descriptive statistics summarised data whereas inferential statistics used the multiple linear regression was employed for data analysis. | Managers adopting quality management results in continuous improvement practices on performance. | Focused on quality services management to improve performance in manufacturing entities. However, it did not look at operationalization of accounting policies and internal control procedures and effect on performance. | Study used accounting risk management and internal control procedures based on budget variance, profits, liquidity, and management efficiency and corruption perception index. It was established that they affect performance of state enterprises. |

| | | | | | | |
|---|---|---|---|---|---|---|
| Gupta et al. (2016) | Ownership schemes and composition of board members on business performance of companies listed on India Securities Exchange. | Establish cash earnings per share and capital employed, structure of ownership, size of board and composition of board members and impact on performance of public entities. | Adopted descriptive research design using a mixed methods approach for analysis of variance. | Internal control procedures are significant as a performance predictor indicator. Also suggested that internal control systems have an effect on performance. | Examined impact of company governance and control environment on performance of quoted firms. | Study considered accounting risk management and operationalization of accounting policy, financial restatement support, complex accounting analysis and reporting, close transformation and firm realignment. Also used internal control procedures. It was found they had influence performance of state enterprises. |
| Obalalo et al. (2014) | ERM model and organisational performance of Nigerian insurance industry. | Determine the role of ERM, and business environment on organisational performance of the insurance industry. | Chi-square statistics used to test the distribution data of variables. | Results showed positive significant association amid capital and earnings quality but the intellectual capital was negatively related to the earnings quality. | Researchers looked at internal control procedures and fraud prevention in the public sector using capital and earnings quality. | Study focused on accounting risk management and firm characteristics (that is, age, size, and ownership); profits, liquidity ratios, and budget variances. It was established that firm characteristics do not affect performance. |

| | | | | | | |
|---|---|---|---|---|---|---|
| Wanyama, Burton and Heliar (2013) | The model control frameworks supporting corporate governance as demonstrated by Ugandan observations. | Investigate perceptions on governance system procedures, corporate governance standards, political and cultural effects, and corruption perception prevalence on organisational performance. | Adopted survey method using a questionnaire. The study analysed effectiveness of governance using Chi-squared. | Found weaknesses in the existing frameworks led to poor performance of public organisations. Management efficiency should be addressed to boost better governance practices to enhance performance. | Only focused at corporate governance in SEs using corruption perception index. | Study looked at accounting risk management and internal control procedures on performance of state enterprises. |

## 2.5 Conceptual Framework

The conceptual framework shown in Figure 2.1 below depicts the link amongst ARM, internal control methods, organisational characteristics, and firm performance as they relate to one another. Accountability risk management was measured using seven constructs (Figure 2.1). Internal control procedures, on the other hand, employed a mediating variable, while firm characteristics were used as a moderator. The study assessed the link among ARM and firm performance. Internal control procedures were identified as an intervening variable in the model, whereas company characteristics were identified as a moderator.

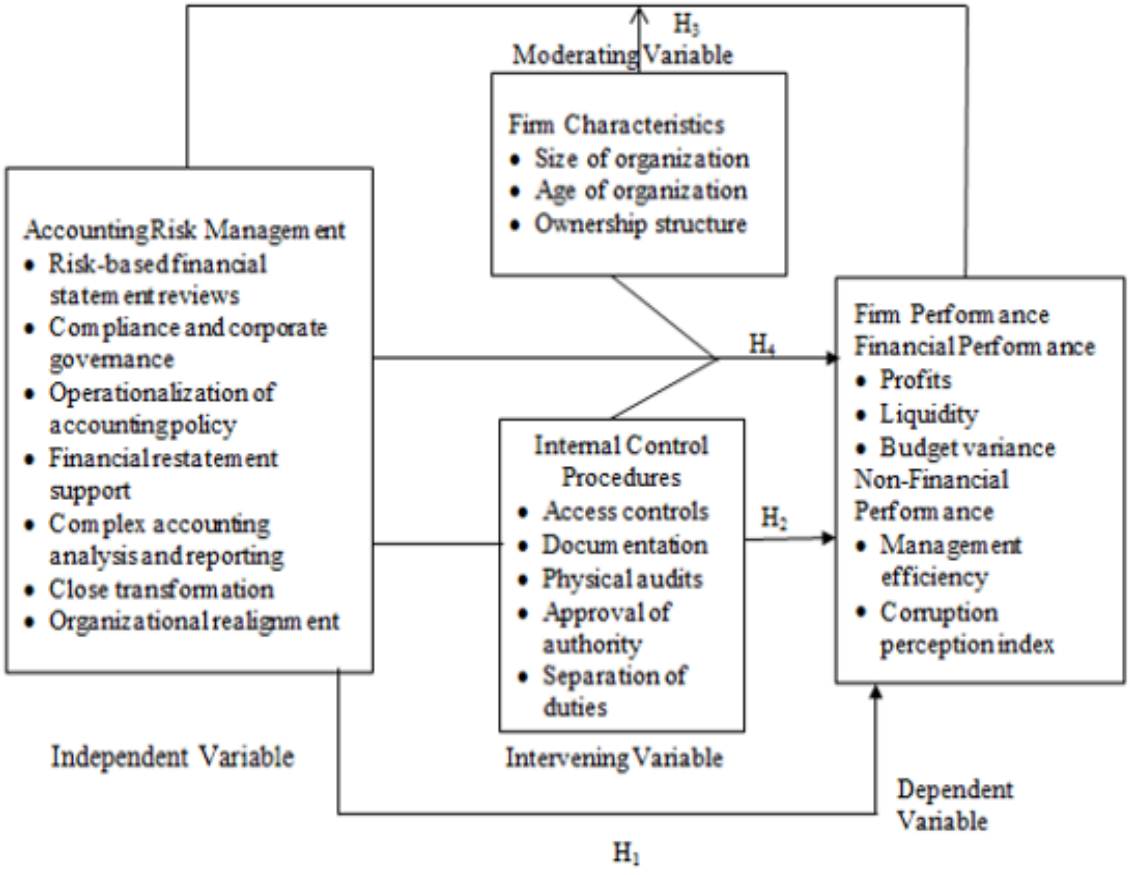
The addition of a moderator variable adheres to the principle of generating practical intervention and theory testing in order to provide more evidence from the results of other scholars' works (Baron & Kenny, 1986). Moderating variables are used in statistical analysis to better understand the relationship between two other variables. A moderating variable is a third variable that affects the strength or direction of the connection amongst the two other variables. By identifying and including a moderating variable in an analysis, researchers gain in-depth knowledge on the association amid two variables is influenced by other factors. This can help to explain why certain patterns or relationships may emerge in the data, and can also help to identify situations in which the relationship between the two variables may be stronger or weaker. By incorporating moderating variables into statistical analyses, researchers can gain a more nuanced understanding of the relationships between variables and make more accurate predictions and recommendations based on the results.

A mediating variable is used to understand the association among the predictor and outcome variables and testing theories under study. It is used to examine the impact of the causal relationship and determine if the theory is supported or not. Generally, it is useful for understanding the relationship between two variables, testing the theories and establishing the causality. A mediating variable is important for fully comprehending the mechanism through which two variables interact. The causal relationship amongst a variable and deviations in the response variable is represented by the mediating effect. The mediating variable examines whether two variables have the same relationship across groups. As intervening constructs, the internal control procedures used access controls, physical audits, documentation, and separation of roles and approval of authority. Internal control processes were employed as an intervening variable to see how they affected the association amongst ARM and performance. Internal control procedures were employed as an intervening variable to analyse its impact on the link amongst ARM and corporate governance procedures. Organisation features were examined using form size, age of organisation, and ownership structure as a moderating variable to evaluate the association among ARM and performance.

Firm performance is a crucial business statistic to measure the cost-benefit analysis (Mcshane, Nair, & Rustambekov, 2011). This study assessed profitability, liquidity, and budget variation, while non-financial performance was measured using managerial efficiency and the corruption perception index. This research examined the moderating influence of organisation characteristics and the intervening role of internal control components on the link amongst ARM and performance.

**Figure 2. 1 Conceptual Framework**

**Figure 2.1: Conceptual Model**




Source: Researcher, 2019

## 2.6 Research Hypotheses

The null and sub null hypotheses tested were;

$H_1$: There is no significant effect of accounting risk management and performance of state enterprises in Uganda.

$H_2$: There is no mediating effect of internal control procedures between accounting risk management and performance of state enterprise in Uganda.

$H_3$: There is no moderating effect between firm characteristics and accounting risk management on performance of state enterprises in Uganda.

$H_{3a}$: There is no moderating significant effect of age on the relationship between accounting risk management and performance of state enterprise in Uganda.

$H_{3b}$: There is no moderating significant effect of size on the relationship between accounting risk management and performance of state enterprise in Uganda

$H_{3c}$: There is no moderating significant effect of ownership structure on the relationship between accounting risk management and performance of state enterprise in Uganda

$H_4$: There is no joint effect on the relationship between accounting risk management, internal control procedures and firm characteristics on the performance of state enterprises in Uganda.

# CHAPTER THREE: RESEARCH METHODOLOGY

## 3.1 Introduction

The section discussed study paradigm, study design, target population, methods of collecting data, validity and reliability of data collected, operationalization of variables, methods of analysing data, ethical considerations and the problems that were encountered. The section discussed the systematic approach used to conduct scientific investigations to answer the research questions and tested the hypotheses. It involved using a set of techniques and procedures for collecting, analysing and interpreting data, in a rigorous and objective manner. The chapter also looked at philosophy of developing new knowledge, the type of research design for collecting data from the respondents. It also looked at the tools for collection of data, testing their reliability and validity. The study as well analysed and presented findings from which the researcher derived interpretations, conclusions and recommendations for further use of the study.

## 3.2 Research Philosophy

Research philosophy in viewed by Creswell (2003) as a guide to progression of new knowledge and how to effectively conduct the study. Philosophy is regarded as a theory directing how data about an occurrence gathered is scrutinised and applied (Cooper & Schindler, 2006). Research philosophy is a set of opinions, assumptions and values that underlie a researchers' approach to the study (Myers, 1984). It involves understanding the nature of knowledge and how it is acquired as well as the role of the researcher in the process (Johnson & Christensen, 2013). Several research philosophies have been adopted by different studies, which are positivism, interpretivism, critical theory and postmodernism. However, this study adopted the positivism philosophy as it uses scientific methods to gather and analyse data (Manicas, 2008).

It presupposes that information is neutral, quantifiable, and unbiased toward the researcher. The positivists argue that a phenomenon has to be observable and measurable to be considered as knowledge (Letangule & Letting, 2012). Saunders et al. (2003) observe that research philosophy plays the objective analysis role to examine the composed statistics and produce suitable results so as to realise the objectives of the study. Positivist philosophy normally adopts a deductive design and necessitates that the investigator is not biased. It is imperative that the study tests the hypotheses and deduces inferences.

This study was therefore, directed by the positivist perception because it contains reporting of conclusions as observed to eliminate bias and thus accepting the generalisation of the results. This study adopted a logical reasoning design starting with the linear perspective of hypotheses formulation and operational definitions of qualities about the phenomenon to be examined. Using statistical methods, the researcher consequently analysed the data collected, with the end result of either confirming or failing to reject the hypothesis. Due to the positivist paradigm's emphasis on logic and objectivity, this study used it as its foundation (Mugenda & Mugenda, 2003). Hypotheses are formulated and tested using procedures including surveys, laboratory trials, and formal numerical methodologies in positivist research paradigms. Critics of the positivist paradigm, on the other hand, argue that it is unsuitable and ineffective when it comes to studying social issues.

## 3.3 Research Design

A research design identifies the methods and procedures of collecting and statistically analysing data (Zikmund, 2006). According to Tashakkori, Johnson and Teddlie (2020),

research design includes the manner the research is organised, directed, and the techniques and procedure used to respond to the research enquiries.

The study's design was descriptive cross-sectional. This approach was chosen because it makes it possible to gather and compare data from numerous people at the same time. Additionally, it enabled the researcher to capture demographic data and evaluate hypotheses both subjectively and quantitatively. The study used, frequency distribution, mean, and standard deviation. Data were derived using structured questionnaires (Saunders et al., 2003; Field, 2009). Other researchers (Bantis, 2005; Kariuki & Kiambati, 2017) used a similar design technique.

### 3.4 Study Population

A study population is a specific cluster of individuals or subjects that researchers select and include in a study to investigate a particular research question or objective (Asiamah, Mensah & Oteng-Abayie, 2017). The study population is defined based on certain characteristics, such as age, gender, geographic location, or specific criteria related to the research topic. By studying a specific population, researchers aim to gather data and draw conclusions that can be generalised to a larger target population or used to understand specific characteristics, trends, or outcomes within that defined group.

The respondents were from 34 state enterprises in Uganda and the analytical unit was the respective enterprises made up of eleven sectors (Appendix IV). The research conducted census survey targeting five teams from 34 state enterprises who included CEOs, finance managers, human resource managers, procurement managers, and chief internal auditors. The

choice of five observations from each institution was to have an increase on the level of accuracy of the research variables as well as reduce biases. To avoid variation in responses, the responses from the same institution were then collated and average responses computed for the respective firms.

### 3.5 Data Collection

The primary data was obtained using a semi-structured questionnaire (Appendix II). This included general information, organisations' profile, ARM, firm characteristics, internal control procedures, and management efficiency. The questionnaire for collecting data using a 5-point Likert-type scale (1- strongly disagree, 2- disagree, 3- neutral, 4- agree, and 5- strongly agree) as asserted by Bantis, 2005, Kariuki and Kiambati, 2017. The drop-and-pick approach was used to administer the surveys, which were administered by a highly trained research assistant. The questionnaire was accompanied by an introduction letter from the University of Nairobi outlining the aim. The secondary data on profits, liquidity, and budget variances were obtained from the audited financial reports of SEs (OAG-2014-2019, Appendix III) while data on corruption perception index (CPI) was obtained from a Transparency International table from 2014 to 2019.

### 3.6 Data Reliability and Validity

Reliability is a measurement concerned with data collected and calculated from the same phenomenon with similar specification considered accurate by giving similar results after several trial tests (Field, 2009). According to Sekaran (1992), reliability involves the consistency and stability of research results when the study is conducted several times. The purpose of reliability is to confirm the results are reliable, dependable and accurate and free from random error or variation.

Data collection reliability can be estimated by utilizing the Cronbach alpha coefficient, which assesses the relatedness between the items of a research instrument (Field, 2009; Cooper & Schindler, 2011). This coefficient is assessed on a scale from 0 to 1, with a higher number suggesting the items in the study are strongly correlated. The aim of reliability is to guarantee the exactness of the results and to restrict errors to increase trust in the data collected so that the study's results are reliable, precise, and can be utilized to make informed decisions. Nunnaly (1978) proposed that any construct with an alpha of 0.7 or above should only be considered for further analysis. Additionally, according to Cronbach and Shevelson (2004), the cut-off point for alpha values is 0.7, with values ranging from zero (which indicates there is no internal consistency) to one (which indicates there is complete internal consistency).

Validity is about ensuring the researcher is correctly measuring what they are attempting to measure and argue that the success of such measurement can be divided into three categories (Cabirita & Bontis, 2008). Content validity is whether the assessment tool is covering all aspects of the concept; construct validity is assessing the tool's accuracy in measuring the theory in question; and face validity is based on an intuitive judgement of how well the tool appears to measure the construct. To judge the establishment of factor analysis, the Kaiser-Meyer Olkin (KMO) and Bartlett's test model are both used to appraise the sample's suitability.

## 3.7 Operationalization of Study Variables

According to Crewell, (2003) and Sekaran, (2010) posit that operationalizing variables is the process of connecting the conceptual-theoretical plane with the empirical observation plane.

This is the process when the researcher assigns numbers or numerals and symbols to the study variables (Yasuda (2005) and Mang'unyi, 2011. The study had four study variables ARM, firm characteristics, internal control procedures and their sub-b constructs. Accounting risk management, model included risk-based financial evaluations, compliance and corporate governance, operationalization of accounting policy, financial statement support, reporting on sophisticated accounting analyses, and a realignment of internal structures. Firm characteristics used, size, age and ownership structure.

Measures of financial and non-financial performance include things like profitability, liquidity, budget variation, and management efficiency, whereas measures of internal control include things like access restrictions, paperwork, physical audits, approval of authority, and separation of roles. Actions were performed to evaluate the mediation impact using the Baron and Kenny (1986) technique. Profits, liquidity, budget variations, management effectiveness, and the CPI were used to assess performances. Summary of variables, their operational definition, indicators, measurement, data type, level of measurement, and source are shown in Table 3.1 below.

**Table 3. 1 Operationalisation of the Variables**

| Variable | Item in Questionnaire | Indicators | Measure | Level of Measurement | Supporting Literature |
|---|---|---|---|---|---|
| Accounting risk management<br><br>Independent variable | Section 3 | ▪ Financial statement analyses based on risk<br>▪ Corporate governance and conformity<br>▪ Accounting strategy operationalization<br>▪ Support for the renewal of finances<br>▪ Reporting and analysis in accounting that is complex<br>▪ Restricted reformation<br>▪ Change inside the organisation | Likert scale<br>(5-point) | Ordinal | Waweru and Kisaka (2011); Ondigo (2016); Fadul (2017) |
| Internal control procedures<br><br>Intervening variable | Section 5 | ▪ Access constraints<br>▪ Documentation<br>▪ Physical inspections<br>▪ Approval of power<br>▪ Separation of duties | Likert scale<br>(5-point) | Ordinal | Muraleetheran (2013); Mawanda (2016);<br><br>Etengu and Amony (2016) |

| | | | | | |
|---|---|---|---|---|---|
| Firm characteristics<br><br>Moderating variable | Section 4 | ▪ Size of organisation<br>▪ Age of organisation<br>Ownership structure | Likert scale<br>(5-point) | Ordinal | Ondigo (2016); Wakaisuka (2016); Mandala et al. (2017) |
| Firm performance<br><br>Dependent variable | Section 6 | ▪ Profits<br>▪ Liquidity<br>▪ Budget variance<br>▪ Management efficiency<br>▪ Corruption perception index | Likert scale<br>(5-point) | Ordinal | Odalo et al. (2016); Epstein and McFarlan (2016) |

## 3.8 Diagnostic Tests

Diagnostic tests are valuable tools for conducting research to identify underlying issues or problems within a specific business process, strategy or system. As such, the researcher runs diagnostic tests (Field, 2009). This enables them to analyse data and identify areas where improvements can be made or where further research is needed. The types of diagnostic tests include, linearity, multicollinearity, and homoscedasticity. Pearson correlation coefficient measures the statistical relationship and ranges from -1 to +1. The value +1 demonstrates a significant positive connection, indicating that rising levels of one variable cause rising levels of the other, while -1 demonstrates a negative connection, meaning that rising one variable causes the other to fall.

To test multicollinearity, the tolerance statistic, variance inflation factor (VIF) and Condition Index Number (CIN) are used (Field, 2009). Tolerance measures how the predictor variables in a regression model are correlated with each other. It ranges from 0.1 to 1. A low tolerance, indicates high multicollinearity is high, implying the predictor variables are highly correlated. Generally, a tolerance of $< 0.1$ indicates high multicollinearity and values $> 0.1$ are acceptable. Variance inflation factor (VIF) measures the multicollinearity and assesses the degree to which variance of the estimated regression coefficient is increased due to the presence of correlated predictors in the model. The range is 1 – 10. Generally, a VIF of value of 5 – 10 implies high multicollinearity. Conditional index number (CIN) measure of multicollinearity and ranges from 1-30. The measure is calculated based on eigen values of the correlation matrix of the predictor variables. It indicates how a particular predictor variable is linearly related to the

linear combination of other variables. Generally, a CIN of 1 indicates no multicollinearity and greater than 30 implies high multicollinearity.

### 3.9 Data Analysis and Presentation

Field (2009) contends that data analysis involves methods, algorithms and data visualisation techniques to identify trends, patterns and relationships in data. He adds that, it is methodically applying statistical techniques to define and explain, summarise and evaluate data, which involves, sorting, cleaning, editing and modelling of data to form inferences and support in decision making (Field, 2009). This study used descriptive statistics, correlation analysis and multiple linear regression analysis to measure the relationship amid ARM and performances of state enterprises.

To analyse the data for the research variables, descriptive statistics were utilised, and inferential statistics were used to determine how the variables related to one another. Composite indices were computed as the derivatives to the study constructs. The study used coefficient of determination analysis to determine goodness of fit and f-test to measure the significance, where t-test assessed individual significance. Similarly, Baron and Kenny (1986) model tested the mediation effect of firm characteristics between the predictor and outcome variables. AR, internal control procedures and firm characteristics were examined using multi-regression.

The financial performance of longitudinal data of profits, liquidity and budget performance were standardised before running the correlation and regression (see table, 3.2, below). The

averages of profits, liquidity and budget variances were calculated for the six years, were standardised and turned into the Likert scale from which the correlation and regression were analysed using SPSS for inferential statistics. The average ratios for corruption perception index were standardised and converted into a Likert scale, thereafter, the correlation and regression were analysed using SPSS for inferential analysis (Odalo et al. 2016; Epstein & McFarlan, 2016).

**Table 3. 2 Analytical Model, Analysis Techniques and Interpretation**

| Objectives | Hypotheses | Analytical Model | Analysis Techniques | Interpretation |
|---|---|---|---|---|
| Examine the effect of ARM and performance of state enterprises in Uganda | $H_1$: ARM does not influence the performance of state enterprises in Uganda. | $FP = \beta_0 + \beta_1 ARM + \varepsilon$<br>where FP is firm performance, a composite variable of budget variance and CPI. ARM is accounting risk management, $\varepsilon$ is error term | Simple linear regression analysis | • $R^2$ for goodness-of-fit<br>• F-test -overall significance<br>• T-test - individual significance<br>• Marginal changes |
| Determine the effect of internal control procedures on the association between ARM and performance of state enterprises in Uganda | $H_2$: Internal control procedures do not have an intervening effect on the association between ARM and performance of state enterprises in Uganda. | Step (i) $FP = \beta_0 + \beta_1 ARM + \varepsilon$<br>Step (ii) $IC = \beta_0 + \beta_1 ARM + \varepsilon$<br>Step (iii) $FP = \beta_0 + \beta_1 ICPs + \varepsilon$<br>Step (iv) $FP = \beta_0 + \beta_1 ARM + \beta_2 ICPs + \varepsilon$<br>where ICP is internal control procedures | Multiple linear regression, Baron and Kenny test (Baron and Kenny, 1986) approach | • $R^2$ for goodness-of-fit<br>• F-test -overall significance<br>• T-test - individual significance<br>• Marginal changes |
| Determine the effect of firm characteristics on the association between accounting risk management and performance of state enterprises in Uganda. | $H_3$: Firm characteristics do not have a moderating effect on the relationship between ARM and performance of state enterprises in Uganda.<br>Sub-Hypotheses:<br>$H_{3a}$: Firm Age does not significantly moderate the effect of ARM on performance of state enterprises in Uganda. | $FP = \beta_0 + \beta_1 ARM + \varepsilon$<br>$FP = \beta_0 + \beta_1 ARM + \beta_2 FC + \varepsilon$<br>$FP = \beta_0 + \beta_1 ARM + \beta_2 FC + \beta_3 ARM * FC + \varepsilon$<br>where FC is firm characteristics | Simple and multiple linear regression (Baron and Kenny, 1986) approach | • $R^2$ for goodness-of-fit<br>• F-test -overall significance<br>• T-test - individual significance<br>• Marginal changes |

| | | | | |
|---|---|---|---|---|
| | $H_{3b}$: Firm size does not significantly moderate the effect of ARM on state enterprises performance in Uganda.<br>$H_{3c}$: Firm Ownership does not significantly moderate the influence of ARM on state enterprises performance in Uganda. | | | |

### 3.10 Chapter Summary

In this chapter, the underlying philosophical foundation and research methodology were introduced that incorporated the research design. Furthermore, it included the description of the target survey population, data collection techniques, operationalization of study variables, and the measures employed to ensure the reliability and validity of the study instrument. Lastly, the chapter explored data analysis techniques and diagnostic tests, concluding with a summary of the study's objectives, hypotheses, and analytical models. Moving forward, the subsequent chapter delved into the response rate, preliminary data analysis, analyses of validity and reliability, and diagnostic tests.

# CHAPTER FOUR: DESCRIPTIVE DATA ANALYSIS AND PRESENTATION OF FINDINGS

## 4.1 Introduction

Results on the analysis of data, are presented together with its interpretation and discussions in this chapter. First, it captures characteristics of state enterprises; reliability and validity tests that were done; and diagnostic tests. In addition, it assesses the associations amongst the study variables, factor analysis and regression statistical methods were applied.

## 4.2 Characteristics of the State Enterprises

The study issued questionnaires to 34 state enterprises but received 32, implying a response rate of 94 percent and were from 11 sectors. This was adequate given sensitivity of financial information for the respondents who worked with government entities. According to Kothari (2004), if the response rate is above 60 percent, then it is sufficient and can be used in the analysis. The assurance that data was being collected for academic purposes only helped to boost participation. Those who thought it was for private and confidential use against them were convinced and participated. It is against this background that permission was granted by CEOs to have the questionnaires filled in by staff. Data for the financial statements and other financial information was availed by auditor general's office (OAG), the only office that has the mandate of audit government institutions. Additional data was from 32 state enterprises using questionnaires filled by five members of the top management team from each state enterprise.

The questionnaires from 32 state enterprises were received and coded. The variables were defined and data entry was done in the SPSS system. Data validation was carried out and summaries were done for descriptive statistics. Subsequently, data was then aggregated to the unit of analysis by running inferential statistics. The research used descriptive analysis, which, according to Field (2009), is the primary purpose of which is to acquire a detailed and accurate description in regard to phenomena's features and to identify the number of times with which specific occurrences occur in a given population being investigated.

Table 4.1 below presents results on ownership status of state enterprises in Uganda. The results indicate that the majority of these enterprises studied are partially owned by the state and by registered members; followed by those that are fully owned by the state. This implied that there should be harmony between the objectives of the state in terms of service delivery with those of registered members whose interest is on returns on their investment at close of the financial year.

**Table 4. 1 Ownership Status of State Enterprises**

| Ownership | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| Fully owned by the state | 15 | 48.1 | 48.1 |
| Partially owned by the state and by registered members | 17 | 51.9 | 100.0 |
| Total | 32 | 100.0 | |

Table 4.2 presents findings on objectives of the existence of state enterprises in Uganda. The results indicated that the majority of these enterprises studied were for service delivery comprising 53.8 percent, followed by profit oriented with 42.4 percent, and savings for

members with 3.8 percent. This signified the majority of respondents of the state enterprises understood their objectives as service delivery and profit oriented, they gave correct responses on the phenomenon of firm performance under study.

**Table 4. 2 Objectives of Existence of State Enterprises**

| Objectives of existence | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| Profit oriented | 14 | 42.4 | 42.4 |
| State service delivery | 17 | 53.8 | 96.2 |
| Savings for members | 1 | 3.8 | 100.0 |
| Total | 32 | 100.0 | |

## 4.3 Descriptive Analysis of Study Variables

To understand the performance of state enterprises in terms of the variables under study, standard deviations and means descriptive statistics were run and presented in Table 4.3. Based on results, many respondents were indifferent about performance of state enterprises, with 3.25 as the mean and 0.50 as the standard deviation; it means that the state-owned firms were unsure about their own respective success or performance. Additionally, firm characteristics with a mean of 4.03 and 0.65 as the standard deviation, indicates, most of respondents agreed with the corresponding statements. Procedures of internal control had 3.89 as the mean and 0.69 as the standard deviation, and accounting risk management had a 3.79 as the mean and 0.59 as the standard deviation, a sign indicating the majority of the respondents concurred with the associated assertions.

**Table 4. 3 Study Variables' Descriptive Statistics**

| Variables | Mean | Standard Deviation |
|---|---|---|
| Characteristics of the firm | 4.026 | .647 |
| Internal control procedures | 3.876 | .676 |
| Accounting risk management | 3.782 | .588 |
| Firm performance | | |
| Profits | 2.791 | 1.765 |
| Budgets | 1.302 | .764 |
| Liquidity | 3.025 | 1.596 |
| Management efficiency. | 3.926 | .404 |
| Corruption perception index | 0.432 (3.0) | .398 |

As shown in the preceding Table 4.3, the composite variables (ARM, FCs, ICPs and performance) were computed. Table 4.3 also includes descriptive information about company performance. The data indicate that managerial efficiency (3.92) is the most important factor and liquidity (3.03) becomes the second. This indicated that these state companies performed well in both sectors, with above 3.0 as the mean. Profits with 2.78 as the mean, and 1.30 mean for budgets, were both below the mean of 3.0, showing that state companies performed poorly in both areas. Corruption perception index of 0.4319, indicates that corruption was moderately practised (43.19%) which may have affected firm performance.

As shown in Table 4.4, most of the respondents thought the investigation was good, as their means exceeded 3.5 on the Likert scale. The exceptions were annual restructuring of staff and annual operation changes or department activities, which had 2.45 and 2.32 means respectively. This suggested that departmental reorganisation did not occur annually and that

no changes were evident in the activities or operations of the variable accounting risk management departments under examination.

**Table 4. 4 Descriptive Statistics for Accounting Risk Management**

| Accounting Risk Management | Mean | Standard Deviation |
|---|---|---|
| Budgets are prepared each year | 4.385 | .890 |
| Management understands the activities and operations being undertaken in the organisation | 4.374 | .461 |
| Organization has an audit committee | 4.359 | .543 |
| All comments given on financial statements' reviews are scrutinised by management and ensures are adopted and in case of any adjustment it is done in the same financial statements | 4.185 | .450 |
| There is prompt monitoring and implementation of the budgets | 4.158 | .651 |
| The staff understands the activities and operations carried out by the organisation | 4.145 | .386 |
| Audit committee members analyse queried information in firm's final accounts | 4.124 | .498 |
| The chart of accounts is easily accessible, clear to follow and understand | 4.082 | .660 |
| Performance of management is checked by the board of directors purposely on activities carried out, alternative views are presented on findings and any wrongdoing is acted upon | 4.073 | .471 |
| There is regularly meetings of the Board of Directors purposely to observer business conduct in accordance to laid down procedures and rules | 4.068 | .565 |
| In case of discovery of errors in final accounts by external auditors, the same is communicated and corrected before being passed by company directors | 4.056 | .686 |
| There is full adherence to all procedures on financial transactions | 4.047 | .464 |
| Audit committee keenly scrutinise all financial transactions together with revision in relation to reports evaluation by external auditors | 3.958 | .638 |
| All management staff understand the financial reports | 3.787 | .714 |
| Financial performance of the company is communicated to all stakeholders as well as employees instantly after auditing financial statements | 3.717 | .539 |

| | | |
|---|---|---|
| In the organisation, there is improvement in supervision of management | 3.716 | .524 |
| Financial reports are analysed by the accounting system in detail | 3.526 | .846 |
| The staff is regularly trained by the firm to enhance their ARM skills | 3.481 | .744 |
| Accounting operating guidelines and procedures are displayed on firm's official website and are accessible | 2.939 | .786 |
| Personnel restructuring in departments is undertaken annually in the company | 2.453 | .772 |
| There are annual operational and activities changes | 2.323 | .738 |

If you look at Table 4.5, you can see that most of the responses were above 3. Most of the people who took the survey said that their businesses did well because of their unique characteristics.

**Table 4. 5 Descriptive Statistics for Firm Characteristics**

| Characteristics of the Firm | Mean. | Standard Deviation. |
|---|---|---|
| Supervisor is available any time you need him | 4.227 | .542 |
| Organisation chart is not complex | 4.216 | .557 |
| The organisational structure of the enterprise is well elaborated | 4.203 | .603 |
| The entire staff working in the enterprise are all qualified | 3.831 | .543 |
| Problems related to work done are instantly solved instantly as they occur | 3.811 | .602 |
| The enterprise has adequate number of employees with regard to requirements of the enterprise | 3.605 | .627 |

Given the mean distributions in table 4.6, most of the findings indicated that the respondents agreed, given that their responses were 3.5 and above on the Likert scale from 4.35 to 3.54.

The highest being, inventory and asset register for the enterprise, with 4.35; followed by the auditors often checking physical assets as compared with the register, and the least was the enterprise used glass cameras for surveillance to visually monitor computer rooms access at 3.54. This implied that internal control procedures were well in place.

**Table 4. 6 Descriptive Statistics for the Internal Control Procedures**

| Internal control procedures | Mean. | Standard Deviation . |
|---|---|---|
| There is an inventory and assets register for the enterprise | 4.347 | .624 |
| Auditors often check physical assets to compare with the register | 4.219 | .477 |
| Corporation has standard documents used in all transactions when ordering for requisitions | 4.168 | .509 |
| All receipts and payment vouchers are serially numbered | 4.144 | .936 |
| Managers have passwords for passing payments | 4.054 | .970 |
| Auditors are present for physical count of inventories on the day of closure of the financial year | 3.941 | .641 |
| All contracts for jobs are duly verified authorised by the Public Procurement and Disposal of Assets Authority | 3.846 | .963 |
| There is a policy regarding documents' receipts and issuance | 3.824 | .904 |
| Enterprise uses glass, cameras for surveillance to visually monitor computer room access | 3.542 | .897 |

## 4.4 Reliability and Validity Tests

### 4.4.1 Validity

The prior version of the research instrument was initially discussed with the project supervisors before being pre-tested. The questionnaires were given to a selection of 15 experts in research; chief executive officers, financial experts, procurement officers, human resource experts and head of audit department from various government institutions in Uganda for purposes of improving and removing the unnecessary statements from the research instrument. The pilot study findings indicated that the research instrument to be used was appropriate for collecting the required data. The intention was to improve validity and reliability of data used in the survey.

### 4.4.2 Reliability

The data reliability was similarly assessed using Cronbach alpha model in the Likert scale for items in the questionnaire. Accordingly, Nunnally (1978) recommends constructs with threshold $\geq 0.7$ are subjected to further analysis. Furthermore, Cronbach and Shavelson (2004) uphold that $\alpha$ can assume a range of values 0 -1, implying, 0 (zero) signifies no internal consistency while 1 signifies that internal consistency is complete. However, 0.7 is considered as the cut-off that cannot be rejected.

In contrast to Cronbach alpha, which is an average measure of internal uniformity and item reliability, composite reliability assesses scale reliability overall and is favoured in confirmatory factor analysis (CFA) while Cronbach alpha is preferred in exploratory factor

analysis (EFA) (Brunner 2005). Internal consistency of scale items is measured by composite reliability (also known as construct reliability) in a manner similar to Cronbach's alpha (Netemeyer, Beardedn & Sharma, 2003).

Table 4.7 shows values of Cronbach for accounting risk management, 0.964; characteristic of the firm, 0.850; the internal control procedures, 0.918; and 0.738 for firm performance. Given that all variables had scores more than 0.7, suggesting moderate internal consistency, the researchers came to the following conclusion: additional investigation was appropriate for all variables.

**Table 4. 7 Reliability**

| Variables | Items | Cronbach's Alpha. |
|---|---|---|
| Accountancy risk management | 70 | .963 |
| Characteristics of the Firm | 8 | .851 |
| Internal control procedures | 22 | .918 |
| Firm performance (management efficiency) | 8 | .738 |

Validity specifies how accurately a procedure achieves the goal of measurement. Validity therefore determines how much a given perception, inference or dimension is well-founded and likely agrees accurately to the phenomenon under study (Howe & Moses, 1999; Zikmund & Saunders, 2006). Consequently, to establish the factors of accounting risk management, exploratory factor analysis was conducted. The researcher had to first ensure that there was sampling adequacy by generating Bartlett and KMO (Kaiser-Meyer-Olkin) measures and data

deemed fit for undertaking exploratory factor analysis. KMO and Bartlett's measure of adequacy of sampling is a measurement showing the variance proportion in variables because of other underlying factors. Subsequently, for the case of high values close to one, it is an indication that that factor analysis is significant with any given data. The test measures the degree of variance among variables which exhibit a common variance.

Table 4.8 indicates that simulation output carried out by KMO and Bartlett's model, resulted to findings as reported. Therefore, when evaluating factor analysis appropriateness, the KMO and Bartlett's measure were employed. According to the findings, the chi-square value was 2265.03 with degrees of freedom being 231 and significant at 0.05 significance level, indicating that, data was eligible for exploratory factor analysis (EFA), hence, additional investigation were carried out. Therefore, items with 0.5 and above were determined to have adequate variance with the given component of accounting risk management as stated in communalities, as a result of this.

**Table 4. 8 Test for Bartlett and Kaiser-Meyer-Olkin on Management of Accounting Risk**

| Bartlett and KMO Test | | |
|---|---|---|
| KMO Measure of Sampling Adequacy | | .837 |
| Bartlett Test of Sphericity | Chi-Square Approximate | 2256.033 |
| | Degrees of Freedom | 231 |
| | Sig. | .0000 |

Table 4.9 below shows the results of a study by KMO and Bartlett to see whether factor analysis was appropriate. Chi-square was 336.906 at 0.05 significant level with 15 degrees of freedom, indicating that the data was eligible for EFA and further investigation. All items that had an item load of 0.5 or more were regarded sufficiently different from the accounting risk management component to warrant further investigated.

**Table 4. 9 KMO and Bartlett's Test on Firm Characteristics**

| Bartlett and KMO Test | | |
|---|---|---|
| KMO Measure of Sampling Adequacy | | .815 |
| Sphericity's Bartlett's Test | Chi-Square Approximate | 336.906 |
| | Degrees of Freedom | 15 |
| | Sig. | .0000 |

The KMO and Barlett's statistical measures, in Table 4.10 tested the sample acceptability for factor analysis. The results reveal that the chi-square having 45 degrees of freedom was 659.254 at 0.05 significance level, suggesting that data was eligible for further analysis. Items having 0.5 and more were then judged to have enough variance with aspect of internal control processes as seen in given communalities.

**Table 4. 10 Keiser-Meyer Olkin and Bartlett's Test on Internal Control Procedures**

| KMO and Bartlett's Test | | |
|---|---|---|
| KMO Measure of Sampling Adequacy | | .706 |
| Sphericity's Bartlett's Test | Chi-Square Approximate | 659.254 |

| | | |
|---|---|---|
| | Degrees of Freedom | 45 |
| | Sig. | .0000 |

### 4.5 Diagnostic Tests

Several tests were undertaken in this study including tests for linearity as well as normality, homogeneity and multi-collinearity. Statistical analysis using regression, and correlation, T-tests also analysis of variance among others tend to assume that a given set of data is linear and normally distributed; absence of multicollinearity and homoscedastic distribution. Normality tests enable for deductions about the population, results are considered as more stable when there is absence of multicollinearity, while homogeneity ensures standard errors are not under or over-estimated. For linearity use scatter plots and correlation matrix; for normality use histograms, P-P plots, skewness, kurtosis and Shapiro-Wilk test (p-value should be > 0.05 for normality); for multicollinearity use scatter plots (there should be no linear connection between the explanatory variables), whereas there should be a moderate to strong linear relationship between response variable and the explanatory variables; correlation matrix, tolerance (tolerance of >1 indicates lack of multicollinearity, variance inflation factor (VIF) less than10 implies absence of multicollinearity and condition index number (CIN) over 30 indicates multicollinearity exists and homoscedasticity use both graphical method and Levene' test of homogeneity of variance (which is the most common test). The assumption is that, if the groups have the same variance, then homoscedasticity is satisfied, and the residuals will be a random scatter of points (i.e., the Levene statistic will be significant at the 0.05 level), and the null hypothesis will be rejected.

Linearity is the property of a measured relationship or function graphically represented in a straight line, closely related to proportionality. It is a principle which holds that two or more solutions to a linear equation or set of linear equations are added together so that their total is a solution. It is also a relation among dependent phenomena that can be described through a linear function. Linearity assumes that for every change in the variable observing; you will get the same change in the output of the measurement tool. Therefore, a requirement for performing linear regression is on four assumptions; linearity of residuals, normal distribution of residuals, independence of residuals and equal variance of residuals.

The normality test determines if the data sampled was from a normal distribution population within some tolerance (Field, 2009). Skewness measures symmetry, specifically, the absence of symmetry. The distribution of a data set is described as symmetric if it appears similar from the right and left from the centre-point. Skewness is the lack of uniformity in statistical distribution where the curve appears one-sided or slanted to the left- or right-hand side of the distribution (Field, 2009). If the data points of a distribution cluster move more towards one side of the scale compared to the other, then it is said to be skewed if the majority of the data or points lie on the left side of the distribution and the right tail is longer or flatter, the distribution is said to be positively skewed. This indicates that there is perfect symmetry between the left and right sides of a given distribution or set of data. The kurtosis statistic tells us if the data are more or less skewed from a normal distribution. Kurtosis is a statistical computation that describes the distribution. Kurtosis is a measure of the spread between the two tails, while skewness is a measure of the spread between the two categories of tails. (Field, 2009).

Figure 4.1 displays the superfluous curve with most of the data lying beneath the curve. This indicates normal distribution of firm performance. Furthermore, the figure shows the highest frequency scores in the centre without frequencies on the extreme, further demonstrating normal distribution of firm performance using management efficiency as measured via Likert scale.

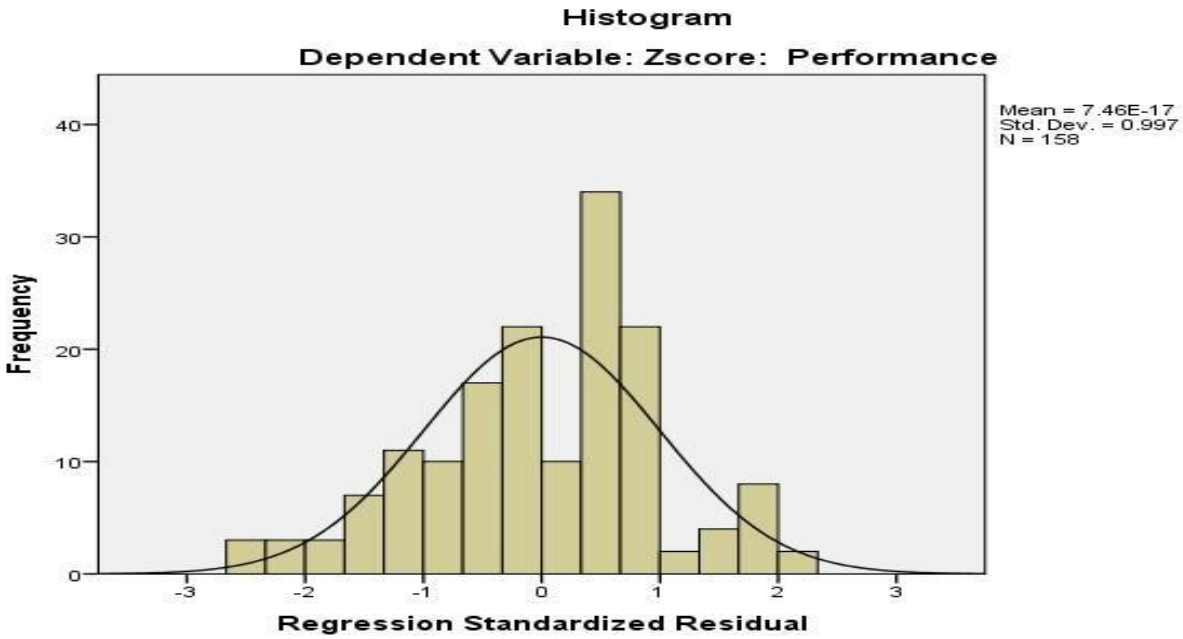



Figure 4. 1 Histogram on Firm Performance

Figures 4.2 show the P-P Plot assessing the compatibility of the two data sets. It compares the cumulative distributions of the two functions, given two probability distributions. The larger the deviation the more the residuals exhibit non-normal distribution. In figure 4.2, the straight line, signifies a normal distribution, while the marks represent the residuals of firm characteristics. Ideally, all points will fall along the line of best fit in a perfectly normally distributed data set.

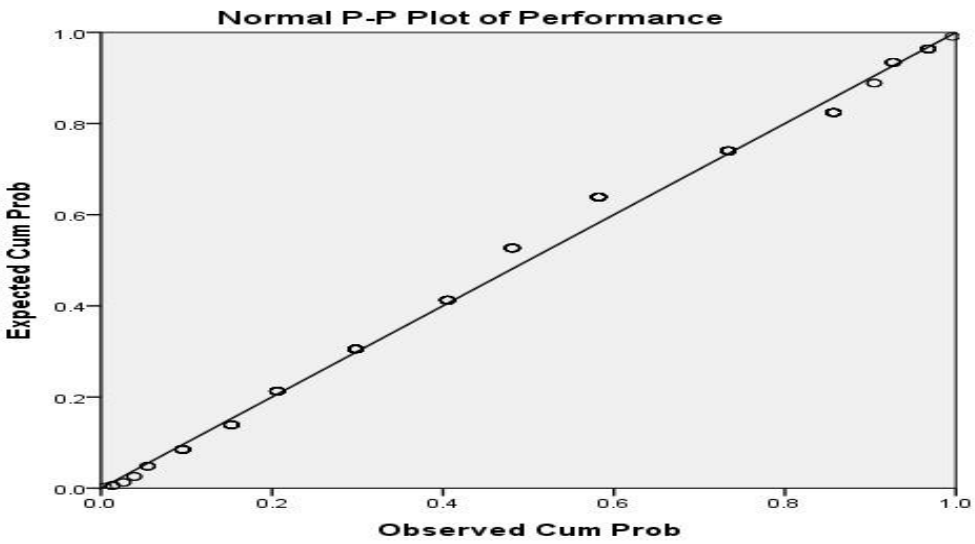



Figure 4. 2 Normal P-P Plot Performance

Table 4.11 gives the Shapiro-Wilk tests for normality. In order to find out whether a population variable is normally distributed, the Shapiro-Wilk test uses the p-value as a criterion. Data are considered normal if the p-value is ≤ 0.05, however data that deviates significantly from the normal distribution have a p-value greater ≥ 0.05. Tests for normality were employed to determine whether or not the collected data was derived from an otherwise random population (Field, 2009).

Hence, the outcomes in Table 4.11 below demonstrates Shapiro-Wilk value and p-value of performance indicators (profits=0.062, budget variance=0.094, liquidity=0.274, management efficiency=0.042, and corruption perception index=0.521); accounting risk management = 0.07; internal control procedures =0.460 and firm characteristics 0.350. Since all p-values were > 0.05, except for management efficiency, it shows survey variables were normally distributed.

**Table 4. 11 Tests of Normality of the Study Variables Using Shapiro-Wilk Test**

| Study Variables | Statistic | Degrees of Freedom | P-Value |
|---|---|---|---|
| Firm performance | | | |
| Profits | .977 | 32 | .062 |
| Budgets | .823 | 32 | .094 |
| Liquidity | .794 | 32 | .274 |
| Management efficiency | .998 | 32 | .042 |
| Corruption perception index | .734 | 32 | .521 |
| Accounting risk management | .949 | 32 | .070 |
| Internal control procedures | .883 | 32 | .460 |
| Firm characteristics | .889 | 32 | .350 |

Multicollinearity occurs when the presence of a greater number of variables. in a multi-regression model are largely linearly correlated. It arises with a reflection of a strong relationship among two or more predictor variables in the regression model. Multicollinearity becomes an issue, particularly in conditions where multiple linear regressions exist. Lower collinearity levels indicate less threat in the regression model. The VIF and tolerance values were used to assess multicollinearity using a linear model. The index hence measures the

degree of variance (that is, square of the deviation of the estimate) of an estimated regression coefficient increases due to collinearity (Field, 2009).

Table 4.12, below, demonstrates multi-collinearity among the research variables. In a multi-regression assumption, this refers to a circumstance in which there is a strong linear connection between more than two predictors. As an indicator of the degree of multicollinearity in a regression design matrix, the variance inflation factor (VIF) measures the amount of multicollinearity in the regression variables. The multicollinearity of a multi-regression model may be assessed using them. There is a tolerance of between 0 and 1, VIF is less than 10 and results are shown in Table 4.12 below. From the findings, tolerance values were all less than 1, also the VIF values were less than 10 and for all variables, implying multicollinearity was not violated for all indicators of the firm performance.

**Table 4. 12 Collinearity among Study Variables**

| Study variables | Profits | Budget variance | Liquidity | Management efficiency | CPI |
|---|---|---|---|---|---|
| | VIF (Tolerance) | VIF (Tolerance) | VIF (Tolerance) | VIF (Tolerance) | VIF (Tolerance) |
| ARM | 1.638 (.611) | 3.542 (.282) | 1.090 (.917) | 1.694 (.590) | 2.297 (.435) |
| Internal controls | 1.487 (.672) | 3.333 (.300) | 3.875 (.258) | 2.178 (.459) | 1.999 (.500) |
| Firm characteristics | 1.813 (.552) | 3.390 (.295) | 2.672 (.374) | 1.975 (.506) | 2.384 (.419) |

Plot of residuals was used to test for Homoscedasticity for assessing parity of variances. Supposition of similarity of variance shows, there is equal variance within every element of the population. This is a postulation of Analysis of Variance (ANOVA). The ANOVA functions well even amid violation of the assumption, except in the event that the number of subjects in different groups vary. Table 4.13 displays homogeneity tests, and the findings reveal that the p-value of the Levene test statistics is 0.05, inferring that the assumption of homogeneity was violated. The study employed the robust standard errors as a remedy.

**Table 4. 14 Test of Homogeneity**

| Variables | Levene Statistics. | Degrees of freedom 1 | Degree of freedom 2 | Sig. |
|---|---|---|---|---|
| Accounting risk management. | 04.615 | 07.0 | 25 | .00 |
| Firm characteristics. | 07.775 | 07.0 | 25 | .00 |
| Internal control procedures | 06.661 | 07.0 | 25 | .00 |
| Firm performance | | | | |
| Profits | 06.955 | 07.0 | 25 | .00 |
| Budgets | 05.219 | 07.0 | 25 | .00 |
| Liquidity | 05.348 | 07.0 | 25 | .000 |
| Management efficiency | 06.629 | 7 | 25 | .000 |
| Corruption perception index | 04.975 | 7 | 25 | .000 |

Table 4.14 shows the coefficient of Pearson correlation results indicating that there exists the link between variables. Results show that ARM has a modestly favourable correlation with the qualities of a corporation. The link between internal control methods and ARM is also shown to be rather significant in the table. A substantially favourable association was also found

between ARM and key performance measures for the company in the study. However, there existed an inverse correlation between the features of the firm and its performance (profits). There is a linear relationship between the studied relations, as provided by the outcome.

**Table 4. 15 Correlation Analysis**

| | Accounting risk management | Firm characteristics | Internal control procedures | Profits | Budgets | Liquidity | Man. Efficiency | CPI |
|---|---|---|---|---|---|---|---|---|
| Accounting risk management | 1.000 | | | | | | | |
| Characteristics of the Firm | 0.423** | 1.00 | | | | | | |
| Internal control procedures | 0.567** | 0.311** | 1.00 | | | | | |
| Profits | 0.328** | -0.157* | 0.287** | 1.000 | | | | |
| Budgets | 0.439** | 0.424** | 0.324** | 0.425** | 1.000 | | | |
| Liquidity | 0.674** | 0.267** | 0.666** | 0.567** | 0.658** | 1.000 | | |
| Management efficiency | 0.712** | 0.712** | 0.119** | 0.611** | 0.584** | 0.426** | 1.000 | |
| CPI | 0.393** | 0.128** | 0.377** | 0.398** | 0.293** | 0.517** | 0.357** | 1.000 |

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

## 4.6 Chapter Summary

This chapter presents the initial data analysis, which establishes the foundation for the subsequent chapter. The analysis included the response rate of the study and the characteristics

of state enterprises, as well as the assessment of validity and reliability of the research instruments. Additionally, the chapter presented the descriptive analysis of research variables. It also presents comprehensive statistics for the main constructs (ARM, ICP, FC and FP) and their corresponding sub-constructs. Furthermore, the results of the diagnostic tests were conducted to meet model assumptions outlined in the study. The succeeding chapter focuses on hypothesis testing and discusses the findings derived from the analysis.

# CHAPTER FIVE: TESTING OF HYPOTHESES, INTERPRETATIONS AND DISCUSSION OF FINDINGS

## 5.1 Introduction

The following chapter provides findings associated with testing the hypotheses in line with the objectives. Regressions of panel data were used to determine the direct relationship as indicated in the first hypotheses, multi-model analyses involving indirect regression in the second as well as the third hypotheses. Further, simple analyses of multiple panel regression were applied to carry out a test of the fourth hypothesis. The goals of the investigation, the scales of measurement, and the kind of data were taken into consideration while selecting the analytical instruments to be used. Using a 5% threshold of significance (or a p-value of 0.05), the specific null hypotheses were all tested. The findings of this research were provided in keeping with the aims of the investigation, along with the related hypotheses. When calculating the outcome variable, which is firm performance, a composite variable was generated from both financial and non-financial performance (Budget variance and corruption perception index).

## 5.2 Management of Accounting Risk and State Enterprises Performance in Uganda

Accounting risk management has no substantial influence on state enterprises performance, according to a theory presented in the paper using a basic analysis of linear regression, ANOVA, which is the model summary, and regression coefficients which were generated to assess Hypothesis. It was based on evidence from statistical analyses of the coefficients resulting from regression and the findings were interpreted.

**Table 5. 1 The Relationship Between Accounting Risk Management and Firm Performance**

| Model Summary | | | | | |
|---|---|---|---|---|---|
| Model | R | R-Square | Adjusted R- Square | Standard Error of Estimate | Durbin-Watson. |
| | | | | | |
| 1 | .689[a] | .684 | .653 | .551 | 2.496 |
| Predictor: (Constant), Accounting risk management Dependent Variables: Performance | | | | | |

| ANOVA[a] | | | | | | |
|---|---|---|---|---|---|---|
| Model. | | Sum of Squares. | df | Mean Square. | F | Sig. |
| 1 | Regression. | 1.114 | 1 | 1.114 | 3.678 | .014[b] |
| | Residual | 9.09 | 30 | .303 | | |
| | Total | 10.204 | 31 | | | |
| a. Dependent Variable: Performance | | | | | | |
| Predictors: (Constant), Accounting risk management. | | | | | | |

| Coefficients | | | | | | |
|---|---|---|---|---|---|---|
| | | Unstandardized Coefficients. | | Standardised Coefficients. | | |
| Model. | | B | Standard Error | Beta. | t | Sig. |
| 1 | (Constant) | .814 | .4886 | | 1.666 | .511 |
| | Accounting Risk Management | .536 | .233 | .260 | 2.303 | .014 |
| Dependent Variables: Performance | | | | | | |

Source: Survey Data (2021)

In Table 5.1, results showed a correlation value (R) of 0.689, which implies there is a strong and linear relationship amongst variables accounting risk management and firm performance. Subsequently, an $R^2$ value of 0.684, indicates accounting risk management explains 68.4% of the variations in performance, while the remaining 31.6% is not accounted for in the regression model.

The ANOVA test results at 95 percent level of confidence demonstrate goodness of fit model was fulfilled. In relation to the total sum of squares (10.204), the regression sum of squares is 1.114, indicating that the regression model accounts for approximately 59.5% of the variability in the dataset. Conversely, the residual sum of squares is 9.09, indicating that 40.5% of the variability in the dataset remains unexplained. The findings provide additional evidence supporting the significance of the model in predicting the association between ARM and the performance of a specific firm ($F = 3.678$, p-value $< 0.05$). Findings also reveal, accounting risk management had a non-negative and substantial impact on the success of the company given $\beta = 0.260$, $t = 2.303$, $p < 0.05$. Therefore, it implies that repercussions of accounting risk management on firm performance is significant, rejecting the null hypothesis stating that accounting risk management have no significant influence on firm performance of state enterprises in Uganda.

### 5.3 Accounting Risk Management, Internal Control Procedures and Performance of State Enterprises in Uganda

According to the second hypothesis, internal control methods have no impact on the link between performance in Ugandan state enterprises and risk management. Step by step regression analysis, as projected by Baron and Kenny (1986), was employed to verify this hypothesis. Both ARM and internal control techniques were examined in the first stage of the

investigation. As the study progressed to step 4, researchers observed the internal controls joint effect and risk management on business performance.

**Table 5. 2 Relationship between ARM and Performance**

| **Model Summary.** | | | | | |
|---|---|---|---|---|---|
| Model | R | R- Square | Adjusted R- Square | Std. Err of Estimate | Durbin-Watson. |
| | | | | | |
| 1 | .689[a] | .684 | .653 | .551 | 2.496 |
| Predictors: (Constant), Accounting risk management<br>Dependent Variable: Performance | | | | | |

| **ANOVA** | | | | | | |
|---|---|---|---|---|---|---|
| Model | | Sum of Squares. | df | Mean-Square | F | Sig. |
| 1 | Regression. | 1.114 | 1 | 1.114 | 3.678 | .014[b] |
| | Residual | 9.09 | 30 | .303 | | |
| | Total | 10.204 | 31 | | | |
| a. Dependent Variable: Performance | | | | | | |
| Predictors: (Constant), Accounting risk management. | | | | | | |

| **Coefficients[a]** | | | | | | |
|---|---|---|---|---|---|---|
| | | Unstandardized-Coefficients | | Standardised-Coefficients | | |
| Model. | | B | Std. Err | Beta. | t. | Sig. |
| 1 | (Constant) | .814 | .4886 | | 1.666 | .511 |
| | Accounting Risk Management | .536 | .233 | .260 | 2.303 | .013 |
| Dependent Variable: Performance | | | | | | |

Source: Survey Data (2021)

In Table 5.2 findings show a correlation value (R) of 0.689[a] which implies, a linear relationship exists among variables ARM and performance. Further, results showed $R^2$ value of 0.684 indicating accounting risk management describes 68.4% of the variations in performance, while the 31.6% of other underlying factors are not explained in the current model.

The test findings of ANOVA were done at 95 percent level of confidence as evidence of the model's accuracy. The result also demonstrates how important the model was for the relationship between accounting risk management and performance (p-value < 0.05, F=3.678). The regression coefficient results further indicate that accounting risk management had significant and positive influence on performance (Std. Beta = 0.260, t =2.303, p-value < 0.05).

In the second step as indicated in Table 5.3, a link between ARM and internal control procedures is shown.

**Table 5. 3 Relationship Between ARM and Internal Control Procedures**

| **Model Summary.** | | | | | |
|---|---|---|---|---|---|
| Model. | R. | R-Square | Adjusted R- Square | Standard Error of Estimate | Durbin-Watson. |
| 1 | .714[a] | .509 | .493 | .2918 | 1.432 |
| a. Predictors: (Constant), Accounting risk management.<br>b. Dependent Variable: Internal control procedures | | | | | |

| **ANOVA[a]** | | | | | | |
|---|---|---|---|---|---|---|
| Model. | | Sum of Squares. | Df | Mean-Square | F | Sig. |
| 1 | Regression. | 2.649 | 1 | 2.649 | 31.118 | .000[b] |
| | Residual | 2.554 | 30 | .085 | | |
| | Total | 5.203 | 31 | | | |
| a. Dependent Variable: Internal control procedures<br>b. Predictors: (Constant), Accounting risk management | | | | | | |

| Coefficients[a,] | | | | | | |
|---|---|---|---|---|---|---|
| Model. | | Unstandardized Coefficients. | | Standardised Coefficients. | T. | Sig. |
| | | B. | Std. Err | Beta. | | |
| 1 | (Constant) | .499 | .648 | | .771 | 0.447 |
| | Accounting risk management | .957 | .172 | .382 | 5.578 | .000 |
| a. Dependent Variable: Internal control procedures | | | | | | |

(Source: Survey Data, 2021)

In Table 5.3 findings show a correlation value (R) of 0.714[a] implying there is a linear relationship, among, ARM and internal control procedures. Further, an $R^2$ value of 0.509 imply that ARM explains 50.9% of the variations in internal control procedures, whereas 49.1% is accounted for by other factors not accounted in the regression model. In this case the test findings of ANOVA were done at 95% confidence level to indicate the model fitness was fulfilled. The findings indicate that the fitting model which fits the link between ARM and internal control procedures was significant ($F=31.118$, p-value $< 0.05$). The regression coefficient findings further indicate that ARM has significant and positive influence on internal control procedures (Std. Beta = .382, $t=5.578$, p-value $< 0.05$). The third step indicates the connection among internal control procedures and performance. The results are as revealed in Table 5.4.

**Table 5. 4 Relationship Between Internal Control Procedures and Performance**

| Model Summary | | | | | |
|---|---|---|---|---|---|
| Model. | R. | R-Square | Adjusted R- Square | Standard Error of Estimate | Durbin-Watson. |
| 1 | .701[a] | .618 | .580 | 9.12447 | 2.242 |

a. Predictors: (Constant), Internal control procedures
b. Dependent Variable: Performance

| ANOVA[a] | | | | | | |
|---|---|---|---|---|---|---|
| Model. | | Sum of Squares. | df. | Mean Square. | F. | Sig. |
| 1 | Regression. | 12.515 | 1 | 12.515 | 5.378 | .044[b] |
| | Residual | 69.810 | 30 | 2.327 | | |
| | Total | 82.325 | 31 | | | |

a. Dependent Variable: Performance
b. Predictors: (Constant), Internal control procedures

| Coefficients[a] | | | | | | |
|---|---|---|---|---|---|---|
| | | Unstandardised Coefficients. | | Standardised Coefficients. | | |
| Model. | | B | Standard Error | Beta. | t | Sig. |
| 1 | (Constant) | .571 | 1.033 | | .553 | .584 |
| | Internal control procedures | 1.158 | .251 | .111 | 4.614 | .040 |

a. Dependent Variable: Performance

Source: Survey Data (2021)

The outcomes in Table 5.4 display an R-value of (R) = 0, implying a linear association exists between variables being studied, internal control procedures and performance. The $R^2$ value of 0.618 indicate, internal control procedures explain 61.8% of the variations in performance of the firm, whereas, 38.2% is accounted for by other factors not involved in the regression model.

The ANOVA test findings performed show the model of fitness was fulfilled as the relationship between internal control procedures and performance of the firm was significant given that F=5.378, p-value is less than 0.05. The regression coefficient results are further indicating that internal control procedures have significant and positive impact on performance of firms (Std. Beta =.111, p-value<0.05).

Since the relationships tested in all the three steps above were found to be statistically significant, the research proceeded to determine whether it is partial or complete intervention. Table 5.5 shows the fourth step where the relationship between ARM, internal control and performance of the firm was tested.

**Table 5. 5 Relationship between ARM, Internal Control and Performance**

| **Model Summary.** | | | | | |
|---|---|---|---|---|---|
| Model. | R. | R-Square | Adjusted R- Square | Standard Error of Estimate | Durbin-Watson. |
| 1 | .719[a] | .710 | .704 | .554 | 2.325 |
| a. Predictors: (Constant), Accounting risk management, Internal control procedures b. Dependent Variable: Performance | | | | | |
| **ANOVA[a]** | | | | | |
| Model. | Sum of Squares. | df. | Mean Square. | F | Sig. |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | Regression. | 2.854 | 2 | 1.427 | 4.648 | .021[b] |
| | Residual | 8.903 | 29 | .307 | | |
| | Total | 11.757 | 31 | | | |

a. Dependent Variable: Performance

b. Predictors: (Constant), Accounting risk management, Internal control procedures

**Coefficients[a]**

| Model. | | Unstandardised Coefficients. | | Standardised Coefficients. | | |
|---|---|---|---|---|---|---|
| | | B. | Standard Error | Beta. | T. | Sig. |
| 1 | (Constant) | 1.924 | 1.243 | .588 | 1.548 | .588 |
| | Accounting risk management | 1.256 | .465 | .010 | 2.701 | .010 |
| | Internal control procedures | 1.308 | .347 | .048 | 3.770 | .048 |

a. Dependent Variable: Performance

Source: Survey Data (2021)

Table 5.5 shows a correlation value (R) of 0.719, indicating a linear reliance between the variables, that is; ARM, internal control procedures and performance of firms. The value, $R^2$ of 0.710, indicate, that ARM and Internal control procedures explain 71% of the variations in performance of firms, whereas, 29% are explained by additional factors not presented in the regression model.

The model's goodness of fit was evaluated using the ANOVA test. The findings indicate that model fitting the association between ARM, internal control procedures and firm performance was significant (F=4.648, p-value<0.05). The regression coefficient results indicate that ARM has significant and positive influence on performance of firms (Std. Beta = .382, p-value < .05). Also, internal control procedures have significant and positive influence on performance of firms (Std. Beta = 0.072, p-value < .05). Despite controlling for internal control measures, the coefficient of ARM maintained being significant. Based on the results of four steps of determining intervening effect as explained by Baron and Kenny (1986) that the null hypothesis stated that internal control procedures have no mediating impact on the link amongst ARM and state enterprises performance in Uganda was rejected.

## 5.4 Accounting Risk Management, Firm Characteristics and State Enterprises Performances in Uganda

The research stated the third hypothesis as firm characteristics does not significantly moderate the effect of ARM on performance of a firm of SEs located in Uganda ($H_3$). The three steps as suggested by Baron and Kenny (1986), for testing moderation were applied. The testing of the significance of the collaboration term existing between the predictor variable (ARM) and the given moderator (FC) was done and how it affects the dependent factor in the model. A hierarchical model was assessed for the three sub indicators of firm characteristics and was performed to this end.

### 5.4.1 Age of the Firm, Accounting Risk Management and State Enterprises Performance in Uganda

**Table 5. 6 Model Summary Testing the Moderating effect of Age on the Relationship Amongst ARM and Performance**

| Model. | R | R-Square | Adjusted R-Square | Standard Error of Estimate | Change Statistics | | | | | Durbin-Watson. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | R-Square | F-Change | Df1 | Df2 | Sig. F-Change | |
| 1 | .689[a] | .684 | .653 | .551 | .606 | 3.678 | 1 | 30 | .000 | |
| 2 | .738[b] | .637 | .525 | .428 | .530 | 12.572 | 2 | 29 | .033 | |
| 3 | .621[c] | .657 | .619 | 1.235 | .520 | 15.842 | 3 | 28 | .019 | 3.148 |

a. Predictors: (Constant), Accounting risk management
b. Predictors: (constant), Accounting risk management, Age
c. Predictors:(constant), Accounting risk management, Age, Interaction
d. Dependent Variable: Performance

**ANOVA[a]**

| Model. | | Sum of Squares. | df | Mean Square. | F. | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression. | 1.114 | 1 | 1.114 | 3.678 | .014[b] |
| | Residual | 9.09 | 30 | .303 | | |
| | Total | 10.204 | 31 | | | |
| 2 | Regression | 24.062 | 2 | 12.031 | 12.572 | .033[c] |
| | Residual | 27.753 | 29 | .957 | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Total | 51.815 | 31 | | | |
| 3 | Regression | 40.017 | 3 | 13.339 | 15.842 | .019[d] |
| | Residual | 23.576 | 28 | .842 | | |
| | Total | 63.593 | 31 | | | |

a. Dependent Variable: Performance

**Coefficients[a]**

| Model. | | Unstandardised Coefficients. | | Standardised Coefficients. | | |
|---|---|---|---|---|---|---|
| | | B | Standard Error | Beta. | t. | Sig. |
| 1 | (Constant) | .814 | .4886 | | 1.666 | .511 |
| | Accounting risk management | .536 | .233 | .260 | 2.303 | .013 |
| 2 | (Constant) | .617 | .963 | | 0.641 | .524 |
| | Accounting risk management | .657 | .192 | .507 | 3.423 | .001 |
| | Age | .461 | .211 | .324 | 2.187 | .033 |
| 3 | (Constant) | 12.629 | 11.206 | | 1.127 | .265 |
| | Accounting risk management | .575 | .194 | .443 | 2.964 | .000 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Age | .518 | .209 | .364 | 2.477 | .019 |
| | Interaction | -1.969 | 1.097 | -.145 | -1.786 | .079 |
| a. Dependent Variable: Performance | | | | | | |

Source: Survey Data (2021)

In Table 5.6, findings show, ARM explained 68.4% ($R^2$ = 0.684) of the variation in performance of firms (Model 1). Model 2 suggests that ARM and age of the firm jointly explained 63.7% ($R^2$ = 0.637) of the variation in performance of firms. In Model 3, results show that age of the firm, ARM and collaboration term had a significant contribution in explaining variation in performance of firms (change in $R^2$ = 0.657). A change in F statistic (15.842) was also observed in model 3 when the interaction term was presented. A comparison of results in model 3 and 2 further confirms the effect of age on the association amid ARM and performance based on the R2 change (0.52) and the P-values < .05.

The ANOVA test findings are as presented showing that Model 1 depicting the relationship between ARM and firm performance was significant (F = 3.678, p-value < 0.05). Model 2 depicting the combined impact of ARM and firm age on performance was also significant, positive and robust (F = 12.572, p-value < 0.05). Model 3 that controls for the interaction term was also significant (F = 15.842, p-value < 0.05).

Additionally, the regression coefficient results that serve as the foundation for the hypothesis' clarification are offered. The findings demonstrate that ARM has a significant relationship on performance (β=0.260, p-value < 0.05). From the findings, model 2 reveals that ARM has a significant effect on firm performance (β=0.507, p-value < 0.05). In Model 3, ARM has a

further increasing influence on performance of (β=0.443, p-value < 0.05), while firm age has a stronger influence which is also significant (β=0.364, p-value < 0.05).

However, the model also shows that the interaction term had no discernible impact on model performance (β=-0.145, p-value > 0.05), implying that interaction term had no significant effect on the performance of organisations. The results therefore fail to reject $H_{3a}$, stating that organisation age does not significantly moderate the link between ARM on performance of Uganda state enterprises ($H_{3a}$). Table 5.7 gives a summary of the test results for sub null hypothesis 3a.

**Table 5. 7 Summary Test Results for Null Hypothesis 3a**

| Hypothesis | Beta | F Change | $R_2$ Change | Sig. | Conclusion |
|---|---|---|---|---|---|
| $H_{3a}$: Firm Age does not significantly moderate the effect of ARM on performance of state enterprises in Uganda ($H_{03a}$). | -.145 | 2.801 | .050 | P = .079>.05 | Fail to reject $H_{3a}$ |

(Source: Survey Data, 2021)

As shown by a non-statistically significant standard beta coefficient of the interaction term at -.145 (P>0.05), the summary results in Table 5.7 demonstrate that ARM does not significantly moderate the effect of ARM on the performance of state companies in Uganda. Thus, the following can be used to rewrite the regression analysis:

Performance= 0.814 + 0.26ARM

Performance = 0.617 + 0.507ARM + 0.324FA

Performance = 12.629 + 0.443ARM + 0.364FA - 0.145ARM*FA

### 5.4.2 Firm Size, Accounting Risk Management and Performance of State Enterprises in Uganda

**Table 5. 8 Model Summary for Test of Moderating effect of Firm Size on the Relationship Between ARM and Performance**

| Model. | R. | R-Square | Adjusted R-Square | Standard Error of Estimate | Statistics | | | | | Durbin-Watson. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | R-Square Change | F-Change. | df1. | df2. | Sig. F Change. | |
| 1 | .689[a] | .684 | .653 | .551 | .606 | 3.678 | 1 | 30 | .000 | |
| 2 | .758[b] | .733 | .701 | .998 | .245 | 17.853 | 2 | 29 | .003 | |
| 3 | .731[c] | .778 | .743 | .508 | .129 | 21.543 | 3 | 28 | .001 | 2.632 |

a. Predictors:(constant), Accounting risk management
b. Predictors:(constant), Accounting risk management, Firm Size
c. Predictors:(constant), Accounting risk management, Firm Size, Interaction
d. Dependent Variable: Performance of Firms

**ANOVA[a.]**

| Model. | | Sum of Squares. | Df. | Mean Square. | F. | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression. | 1.114 | 1 | 1.114 | 3.678 | .014[b] |
| | Residual | 9.09 | 30 | .303 | | |
| | Total | 10.204 | 31 | | | |
| 2 | Regression | 22.958 | 2 | 11.479 | 17.853 | .003[c] |
| | Residual | 18.647 | 29 | .643 | | |
| | Total | 41.605 | 31 | | | |
| 3 | Regression | 37.098 | 3 | 12.366 | 21.543 | .001[d] |
| | Residual | 16.072 | 28 | .574 | | |
| | Total | 53.17 | 31 | | | |

a. Dependent Variable: Performance

**Coefficients[a.]**

| Model. | | Unstandardised Coefficients. | | Standardised Coefficients. | t. | Sig. |
|---|---|---|---|---|---|---|
| | | B. | Standard Error | Beta. | | |
| 1 | (Constant). | .814 | 0.4886 | | 1.666 | .511 |
| | Accounting risk management | .536 | 0.233 | .260 | 2.303 | .013 |
| 2 | (Constant) | 5.167 | 6.853 | | .754 | .524 |
| | Accounting risk management | 1.517 | .574 | .893 | 2.643 | .001 |
| | Firm Size | .342 | .174 | .301 | 1.965 | .003 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 3 | (Constant) | 10.177 | 4.267 | | 2.385 | .265 |
| | Accounting risk management | 1.162 | .294 | .043 | 3.954 | .004 |
| | Firm Size | .994 | .361 | .682 | 2.753 | .016 |
| | Interaction | 6.976 | 2.753 | .184 | 2.534 | .009 |
| a. Dependent Variable: Performance | | | | | | |

Source: Survey Data (2021)

Findings in Table 5.8 exhibit, ARM explained 68.4% ($R^2$ = .684) of the variation in performance of firms (Model 1). Model 2 suggests that ARM and firm size jointly described 73.3% ($R^2$ =.733) of the change in performance. In Model 2, results show that firm size had a significant contribution in explaining variation in performance of firms (change R2 = .245, F change = 17.853). A change in F statistic (21.543) was also observed in model 3 when the interaction term was included. A comparison of results in model 2 and 3 further confirms a moderating effect of firm size on the relationship between ARM and performance based on the $R^2$ change (0.129) and the F change 21.543 (<.05).

From the results, in Table 5.8, Model 1 shows the relationship between ARM and performance of firms was significant (F = 3.678, p-value < 0.05). Model 2 depicting the combined effect of ARM and size on performance of firms was also significant, positive and strong (F = 17.853, p-value < 0.05). Model 3 that controls for the interaction term was also significant (F = 21.543, p-value < 0.05). Results for the regression coefficients which form the basis for understanding the hypothesis are also presented.

Findings in Table 5.8, confirm, ARM significantly affect performance of firms (β=0.260, p-value < 0.05). Model 2 reveals that ARM has an increased influence on performance of firms which is significant (β=0.893, p-value < 0.05) with the introduction of firm size, that is as well significant (β=0.301, p-value < 0.05). In Model 3, ARM has a further reduced impact on

performance of firms albeit still significant (β=0.043, p-value < 0.05), while firm size has a stronger and increased influence which was significant (β=0.682, p-value < 0.05). The model, further reveals that the interaction term had a significant effect in the model (β=0.184, p-value<0.05), implying that firm size has a significant influence on the relationship among ARM and firm performance.

The results therefore fail to support $H_{3b}$, stating that firm size insignificantly moderate the influence of ARM on performance of Uganda state enterprises ($H_{3b}$). Table 5.9 presents a summary of test results for null hypothesis 3b.

**Table 5. 9 Summary Test Results for Null Hypothesis 3b**

| Hypothesis | Beta | F Change | $R_2$ Change | Sig. | Conclusion |
|---|---|---|---|---|---|
| $H_{3b}$: Firm size does not significantly moderate the effect of ARM on state enterprises performance in Uganda ($H_{03}$) | 2.184 | 21.543 | .029 | P = .009<.05 | Reject $H_{3b}$ |

(Source: Survey Data, 2021)

The summary results reveal that ARM does significantly moderate the impact of ARM on performance of state enterprises in Uganda as shown by a statistically significant standard beta coefficient of the interaction term at .184 (P<0.05). The regression analyses can thus be rewritten as follows:

Performance of firms = .814 + .26ARM

Performance of firms = 5.167 + .893ARM + 0.301FS

Performance of firms = 10.177 + .043ARM + .682FS + 2.184ARM*FS

### 5.4.3 Firm Ownership, Accounting Risk Management and Performance of State Enterprises in Uganda

**Table 5. 10 Model Summary for Test of Moderating Influence of Firm Ownership on the association between ARM and Performance**

| Model. | R. | R-Square | Adjusted R-Square | Standard Error of Estimate | Change Statistics | | | | | Durbin-Watson |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change | |
| 1 | .689[a] | .684 | .653 | .551 | .606 | 3.678 | 1 | 30 | .014 | |
| 2 | .685[b] | .691 | .625 | .573 | .034 | 13.726 | 2 | 29 | .031 | |
| 3 | .719[c] | .731 | .689 | .382 | .008 | 16.382 | 3 | 28 | .012 | 2.481 |

a. Predictors: (constant), Accounting risk management
b. Predictors:(constant), Accounting risk management, Firm Ownership
c. Predictors:(constant), Accounting risk management, Firm Ownership, Interaction d. Dependent Variable: Performance

**ANOVA[a.]**

| Model. | | Sum of Squares. | df. | Mean Square. | F. | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression. | 1.114 | 1 | 1.114 | 3.678 | .014[b] |
| | Residual | 9.09 | 30 | .303 | | |
| | Total | 10.204 | 31 | | | |
| 2 | Regression | 23.444 | 2 | 11.722 | 13.726 | .031[c] |
| | Residual | 24.766 | 29 | .854 | | |
| | Total | 48.21 | 31 | | | |
| 3 | Regression | 28.161 | 3 | 9.387 | 16.382 | .012[d] |
| | Residual | 16.044 | 28 | .573 | | |
| | Total | 44.205 | 31 | | | |

a. Dependent Variable: Performance

**Coefficients[a.]**

| Model. | | Unstandardised Coefficients. | | Standardised Coefficients. | T. | Sig. |
|---|---|---|---|---|---|---|
| | | B. | Standard Error | Beta. | | |
| 1 | (Constant) | .814 | .489 | | 1.666 | .511 |
| | Accounting risk management | .536 | .233 | .260 | 2.303 | .013 |
| 2 | (Constant) | 5.942 | 7.839 | | .758 | .583 |
| | Accounting risk management | 2.593 | .548 | .507 | 4.732 | .009 |
| | Firm Ownership | 2.521 | .784 | .324 | 3.215 | .031 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 3 | (Constant) | 11.498 | 6.832 | | 1.683 | .623 |
| | Accounting risk management | 4.401 | .782 | .443 | 5.628 | .004 |
| | Firm Ownership | 3.172 | .854 | .364 | 3.714 | .017 |
| | Interaction | - 6.519 | 1.381 | - .426 | - 4.721 | .011 |
| a. Dependent Variable: Performance | | | | | | |

Source: Survey Data (2021)

Results in Table 5.10, shows, ARM explained 68.4% ($R^2$ = .684) of the variation in performance (Model 1). Model 2 suggests that ARM and ownership of the firm jointly explained 69.1% ($R^2$ = 0.691) of the variation in CPI. In Model 2, results show that ownership of the firm had a significant contribution in describing variation in performance of firms (change in $R^2$ = 0.034, F change = 13.726). A change in F statistic (16.382) was also observed in the model 3 when the interaction term was introduced in the model. A comparison of outcomes in model 3 and 2 further confirm a moderating influence of firm ownership on the link amongst ARM and organizations' performance based on the $R^2$ change (0.008) and the F change 16.382 (<.05).

The ANOVA test results show that Model 1 depicts the relationship between ARM and performance of firms as significant (F = 3.678, p-value < 0.05). Model 2 depicting the combined influence of ARM and firm ownership on firm's performance was also significant and robust (F = 13.726, p-value < 0.05). Model 3 that controls for the interaction term was also significant (F = 16.382, p-value < 0.05). Similarly offered are the outcomes for the regression coefficients, which serve as the foundation for the interpretation of the hypothesis.

The results indicate that ARM significantly influence on performance of firms (β=0.260, p-value < 0.05). Model 2 reveals that ARM has a higher effect on performance of firms albeit significant (β=0.507, p-value < 0.05) with the introduction of ownership, that is also significant (β=0.324, p-value < 0.05). In Model 3, ARM has a reduced influence on performance of firms

albeit still significant (β=0.443, p-value < 0.05) compared to model 2, while firm ownership has a stronger influence which was also significant (β=0.364, p-value < 0.05). The model however further reveals that the interaction term did have a non-positive and significant effect on performance (β= -.426, p-value < 0.05), implying that firm ownership does have a significant influence on the relationship among ARM and performance. The findings therefore reject $H_{3c}$, stating that firm ownership has no significant moderating effect of firm characteristics on performance of Uganda state enterprises. Table 5.11 presents a summary of test results for null hypothesis 3c.

**Table 5. 11 Summary Test Results for Null Hypothesis 3c**

| Hypothesis | Beta | F Change | $R_2$ Change | Sig. | Conclusion |
|---|---|---|---|---|---|
| $H_{3c}$: Firm Ownership does not significantly moderate the influence of ARM on state enterprises performance in Uganda ($H_{3c}$). | - .426 | 16.382 | .008 | P=.011<.05 | Reject $H_{3c}$ |

Source: Survey Data (2021)

The summary results reveal that ARM does significantly moderate the effect of ARM on performance of state enterprises in Uganda as shown by a statistically significant standard beta coefficient of the interaction term at 6.519 (P<0.05). The regression analysis can thus be rewritten as follows:

Performance of firms = .814 + .26ARM

Performance of firms = 5.942 + .507ARM + .324FO

Performance of firms = 11.498 + .443ARM + .364FO - .426ARM*FO.

### 5.5 Joint effect of Accounting Risk Management, Internal Control Procedures and Firm Characteristics on State Enterprises Performance in Uganda

The fourth hypothesis was stated as: accounting risk management, internal control procedures and company characteristics do not jointly have a significant effect on firm performance of state corporations in Uganda ($H_4$). To test the hypothesis, a multiple regression analysis was performed on firm performance. The first model involved a direct regression between ARM and firm performance, while model 2 involved a direct regression between internal control procedures and firm performance. In Model 3, a direct regression between FC and firm performance was performed while in Model 4, the study regressed all variables of ARM, internal control procedures, and firm characteristics against firm performance.

**Table 5. 12 Effect of ARM, Internal Control Procedures, and Firm Characteristics on performance**

| Model. | R | R-Square | Adjusted R-Square | Standard Error of Estimate | Change Statistics | | | | | Durbin-Watson. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | R Square Change | F Change | df1. | df2. | Sig.. F Change | |
| 1 | .689[a] | .684 | .653 | .551 | .606 | 3.678 | 1 | 30 | .01 4 | 2.819 |
| 2 | .585[b] | .563 | .545 | .352 | 1.234 | 5.378 | 1 | 30 | .04 4 | |
| 3 | .719[c] | .731 | .689 | .224 | 1.431 | 11.285 | 3 | 28 | .00 0 | |
| 4 | .792[d] | .784 | .715 | .615 | 1.875 | 10.106 | 5 | 26 | .00 0 | |

a. Predictors: (constant), Accounting risk management
b. Predictors: (constant), Internal control procedures
c. Predictors: (constant), Firm age, Firm size, Firm ownership
d. Predictors: (constant), Accounting risk management, Internal control procedures, Firm characteristics
e. Dependent Variable: Performance

**ANOVA[a]**

| Model | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | Regression | 1.114 | 1 | 1.114 | 3.678 | .014[b] |
| | Residual | 9.09 | 30 | .303 | | |
| | Total | 10.204 | 31 | | | |
| 2 | Regression | 12.515 | 1 | 12.515 | 5.378 | .044[c] |
| | Residual | 69.810 | 30 | 2.327 | | |
| | Total | 82.325 | 31 | | | |
| 3 | Regression | 32.612 | 3 | 10.871 | 11.285 | .000[d] |
| | Residual | 26.964 | 28 | .963 | | |
| | Total | 59.576 | 31 | | | |
| 4 | Regression | 29.161 | 5 | 5.832 | 10.106 | .000[d] |
| | Residual | 15.002 | 26 | .577 | | |
| | Total | 44.163 | 31 | | | |

a. Dependent Variable: Performance

**Coefficients[a,]**

| Model. | | Unstandardised Coefficients. | | Standardised Coefficients. | | |
|---|---|---|---|---|---|---|
| | | B. | Standard Error | Beta. | T. | Sig.. |
| 1 | (Constant) | .814 | .489 | | 1.666 | .511 |
| | Accounting risk management | .536 | .233 | .260 | 2.303 | .013 |
| 2 | (Constant) | .571 | 1.033 | | .553 | .584 |
| | Internal control procedures | 1.158 | .251 | .111 | 4.614 | .040 |
| 3 | (Constant) | 2.542 | 4.733 | | .537 | .473 |
| | Firm age | 1.493 | .346 | .406 | 4.315 | .006 |
| | Firm Size | 1.351 | 0.364 | .292 | 3.712 | .031 |
| | Firm Ownership | 2.897 | .537 | .817 | 5.395 | .001 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 4 | (Constant) | 6.762 | 4.328 | | 1.562 | .523 |
| | Accounting risk management | 2.104 | .462 | .644 | 4.554 | .004 |
| | Internal control procedures | 1.371 | .345 | .414 | 3.974 | .017 |
| | Firm age | 2.851 | .542 | .871 | 5.260 | .000 |
| | Firm size | 3.643 | .615 | .794 | 5.924 | .000 |
| | Firm ownership | 1.978 | .469 | .541 | 4.217 | .007 |
| a. Dependent Variable: Performance | | | | | | |

Source: Survey Data (2021)

Results in Table 5.12 confirm a joint effect of ARM, internal control procedures and firm characteristics exhibiting a greater explanatory power, as compared to the individual effects of variables. In Model 1, ARM explained 68.4% ($R^2 = 0.684$) of the variation in performance of firms, while in Model 2, internal control procedures explained 56.3% ($R^2 = .563$) of the variation in firm performance. In Model 3, firm characteristics explained 73.1% ($R^2 = 0.731$) of the variation in firm performance, while in Model 4, the joint effect of ARM, internal control and firm characteristics explained 78.4% ($R^2 = 0.784$) of the variation in firm performance. The ANOVA test statistics are presented.

The results of the three models show they were all significant. Model 1 was statistically significant at an F statistic of 3.678 ($P<.05$) as was Model 2 with an F statistic of 5.378 ($P<.05$). Similarly, Model 3 was statistically significant with an F statistic of 11.285 ($P<.05$), while Model 4 depicting the joint effect of ARM, internal control procedures and FC on firm performance was significant ($F =10.106$, $p< 0.05$). This parameter was the one that formed the basis upon which the hypothesis was tested.

Subsequently, findings revealed that ARM had a significant effect on firm performance with a standard beta coefficient (β) of 0.260 (p p< 0.05).This implies, a single percentage variation in ARM would result in 0.26 unit increase in performance among the state enterprises in Uganda. The results show, internal control procedures significantly influenced firm performance (p <.05). This implies that a single percentage variation in internal control procedures would result in 0.111 unit increase in performance among the state enterprises in Uganda.

Firm characteristics further has a significant influence on firm performance whereby, age of firm had a standard beta coefficient (β) of 0.406 (p<0.05), implying that a percentage variation in firm age would result in 0.406 unit increase in performance among the state enterprises in Uganda. Firm size had a standard beta coefficient (β) of 0.292 (p<0.05), implying that a percentage variation in firm size would result in 0.292 unit increase in performance among the state enterprises in Uganda. On the other hand, firm ownership had a standard beta coefficient (β) of 0.817 (p<0.05), implying that a percentage variation in firm ownership would result in 0.817 unit increase in performance among the state enterprises in Uganda.

Further, the joint and individual effect of ARM, internal control procedures and firm characteristics on performance were also significant. This was shown in the fourth model. Arm had a standard beta coefficient (β) of 0.644 (p<0.05), implying that a single percentage variation in ARM would result in 0.644 unit increase in performance among the state enterprises in Uganda. Internal control procedures had a standard beta Coefficient (β) 0.414 (p<0.05), implying that a single percentage variation in internal control procedures would result in 0.414 unit increase in performance among the state enterprises in Uganda. On firm

characteristics, firm age had a standard beta coefficient (β) of 0.817 ($p<0.05$), implying that a percentage variation in firm age would result in 0.871 unit increase in performance among the state enterprises in Uganda. Firm size had a beta coefficient of (β) of 0.794 ($p<0.05$), implying that a percentage variation in firm size would result in 0.794 unit increase in performance among the state enterprises in Uganda. On the other hand, firm ownership had a standard beta coefficient (β) of 0.514 ($p<0.05$), implying that a percentage variation in firm ownership would result in 0.541 unit increase in performance among the state enterprises in Uganda.

Based on the study findings, the fourth hypothesis that states that ARM, internal control procedures and firm characteristics do not jointly have a significant effect on performance of the state enterprises in Uganda ($H_4$) was therefore rejected. The summary test result for null hypothesis 4 is presented in Table 5.13.

**Table 5. 13 Summary Test Results for Null Hypothesis 4 (H4)**

| **Hypothesis** | **F change** | **$R_2$ change** | **Sig.** | **Conclusion** |
|---|---|---|---|---|
| $H_4$: ARM, internal control procedures and firm characteristics do not jointly have a significant effect on performance of the state enterprises in Uganda | 10.106 | 1.875 | P = .000<.05 | Reject $H_4$ |

(Source: Survey Data, 2021)

## 5.6 Discussion of the Results

The research tested the hypotheses on the relationships among ARM, internal control procedures, firm characteristics and firm performance of SEs in Uganda.

The relevant literature was reviewed so as to reflect more widely the research topic and to show how the study fits into the wider research area. The researcher looked at various studies and linked the study variables with those in this study. By relating with those of other scholars, some of the methodologies analysed are different based on this study's results. Therefore, the researcher investigated effects of ARM, internal control procedures and firm characteristics on performance of SEs as well as the findings that related and linked to this study are summarised in relevant tables.

In the first objective, the study tested the hypothesis and revealed a positive and significant relationship between ARM and performance of SEs in Uganda. The study results were similar as those obtained from Noor and Abdalla (2017) who found significant relationship between the variables. Liquidity is a vital aspect in every organisation as articulated. The study is therefore in agreement with liquidity risk as it has an effect on performance. The findings also were in concurrence with the outcomes obtained by Dee Souza (2012) showed positive and significant relationship between ARM practices and their effect on performance of public enterprises.

As an illustration of the importance of financial reporting, Cohen and et al. (2014) conducted an analysis of financial statements using the composite index to examine the link between the ARM and business performance. They discovered that budget performance is affected by exposure to risk measurement, assessment, reaction, and monitoring. There was also an investigation into corporate risk management and budget performance using composite indexes in Chen et al. (2014) ARM and business performance were examined in a research by Cohen

et al. (2014), which used the composite index to analyse financial accounts. There was a correlation between exposure to risk measurement, assessment, response, and monitoring and the budget's performance. Using a composite score, Chen et al. (2014) examined the link between enterprise risk management and budget performance. This study supports their findings on measures of budget performance and results were similar. The study similarly supported the results of management's performance through subjective appraisal of management structures, control strategies and quality of staff.

In the second objective, the tested hypotheses showed that internal control procedures had a significant mediating effect on the relationship amongst ARM and performance of SEs in Uganda. This finding was in concurrence with the findings obtained by Muraleetharan (2013), in his survey of statutory organisations in Malaysia while testing the impact of internal control procedures on performance. From findings approval of authority, documentation and physical audits significantly influence on organisation performance. In addition, Ghani, et al. (2014) conducted research on how critical internal factors affect firm performance in 80 insurance companies in Yemen, focused on ERM and firm characteristics and why state enterprises were collapsing relating to financial losses. Findings concurred with our study findings by indicating that unauthorised persons had access to records and got electronic passwords thus inflating payments through collusion with insiders. In a related study, our findings were supported by the findings obtained by Mawanda (2016) who analysed the role of internal control schemes on achievements of universities and tertiary institutions in Uganda. Results showed a strong consequential association linking internal control procedures and performance. The results showed that improved revenue and management efficiency on controls will enhance

performance. This will also improve accountability and reporting systems on transparency of activities in budgetary control measures.

In the third objective, the study showed, firm characteristics had a significant moderating effect on the link amongst ARM and performance of SEs in Uganda. This finding was in concurrence with the findings obtained by (Odalo, Njuguna & Achoki, 2016) who evaluated how size may affect performance of agricultural firms in Kenya. Findings revealed positive relations between ARM and the performance of Ugandan state enterprises were shown to have a substantial mediation influence on the link between firm characteristics and ARM performance. While this study found that company size had an impact on the success of agricultural businesses in Kenya, (Odalo, Achoki, & Njuguna, 2016) found the opposite. Using three measures, ROA, ROE, and earnings per share (EPS), the study found a positive correlation between organization size and performance of listed agricultural firms. Larger enterprises, on the other hand, had a significant edge over their smaller counterparts when it came to performance.

Findings by Aluoch, Kaijage and Iraya (2019) who studied how NSE-listed commercial enterprises' performance was influenced by corporate governance, financial features, and macroeconomic variables were also backed up by this study. The results indicated that liquidity and interest rate significantly affected ROA, however, investments, corporate governance; leverage growth rate, inflation and domestic product growth rate were significant. Other findings conceded that the firm's investment was strongly related to performance of quoted companies on the NSE while leverage, corporate governance, liquidity, inflation and domestic product growth rate had no significant effects on the listed firms. As Usman and Zahid (2015) observed in a research of public organisations in Japan, ownership differentiates the top

performing entities in terms of growth. Findings also found out that organisations with ownership participation survived in businesses because of effective ARM constructs (that is, risk management, assessment, monitoring and control).

In the fourth objective, the study revealed the joint significant effect of ARM, internal control procedures and firm characteristics on performance of SEs in Uganda. Findings by Harp and Barnes (2018) revealed that inadequate internal control procedures impedes management responsibilities and gives allowance to engage in suspicious activities. They as well practise poor accounting practices that lead to financial misstatements. Similar studies including a study conducted by Ghani et al. (2014) revealed that internal factors significantly influenced performance of insurance companies in Yemen. In addition, subsequent research by Ofosu and Amoh (2016) supported the findings on the relationship between ERM and performance of Ghanaian quoted banks, used panel data of all quoted banks using regression model of risk index, capital adequacy, bank size, and liquidity and credit risks on performance. They used ROA, ROE, and found a positive relationship. Similarly, findings by Ondigo (2016) confirmed a positive relationship between internal control procedures and performance of banks. The recommendations were management of commercial banks, board and regulators should ensure implementation, oversight and monitoring activities are in line with corporate objectives to improve the bank's financial performance.

Further, a study that supported the findings includes a study by Mohamed (2016) who assessed budgetary control on the delivery services of banks in Somalia. The results on the efficiency of budgetary control procedures revealed that responsibility accounting, zero-based budgeting and variance analysis improves budget control and productivity. Finally, a similar study by

Ruzindana (2012) who carried out a study on the level of corruption in parastatals in Uganda revealed a positive relationship, an indication that risk measurement, risk assessment, documentation, physical checks and audit deficiencies led to corruption therefore affected performance.

## 5.7 Summary of the Findings

The chapter presented analysis, discussed the results on information provided by characteristics of respondents, descriptive statistics of research variables, as well as inferential analysis Cronbach D coefficient tested reliability and construct validity whereas diagnostic tests determined linearity, normality, multicollinearity. Heteroscedasticity was tested to find out if the error term differed across observation. Linear regression determines levels of goodness-of-fit and tests the four study hypotheses. The chapter discussed results by providing implication of findings on objectives and hypotheses. Lastly comparisons with other studies in the same area were appropriately expressed in the study. Table 5.14 is a summary of objectives, hypotheses and discussion on findings.

**Table 5. 14 Results Summary**

| Objectives | Hypothesis | Findings | Conclusion |
|---|---|---|---|
| Examine the effect of ARM on performance of state enterprises in Uganda. | $H_{1:}$ ARM does not influence the performance of state enterprises in Uganda. | **Performance model**<br>R= .689[a], $R^2$= .684, F Statistic = 3.678Sù 0.260 (p<0.05) | ARM was significant in explaining firm performance of state enterprises in Uganda. Hence ($H_1$) were rejected |
| Determine the effect of internal controls on the relationship between Arm and performance of state enterprises in Uganda. | $H_2$: Internal control procedures do not have an intervening effect on the relationship between ARM and performance of state enterprises in Uganda. | **Internal control procedures, ARM and performance model**<br>Step 1: $R^2$=.684, F Stat=3.678, p<.05<br>Step 2: $R^2$=.509, F Stat=31.12, p<.05<br>Step 3: $R^2$=.618, F Stat=5.378, p<.05<br>Step 4: $R^2$=.710, F Stat=4.648, p<.05 | Internal control procedures had a partial intervening effect on the association between ARM and performance of state enterprises in<br>Uganda. Hence $H_2$ was rejected |
| Determine the impact of firm characteristics on the relationship between ARM and performance of state enterprises in Uganda. | $H_3$: Firm characteristics do not have a moderating effect on the association between ARM and performance of state enterprises in Uganda. | **Firm age, ARM and performance model**<br>Step 1: $R^2$= .684, F Statistic= 3.678, (p<.05), β=.260, p<.05)<br>Step 2: $R^2$= .637), F Statistic=.12.572, p<.05, $\beta_1$=.507, p<.05; $\beta_2$ =.324 p<.05<br>Step 3: $R^2$= .657), F Statistic=15.842 p<.05, $\beta_{1=}$.443 p<.05, $\beta_2$ =.364 p<.05, $\beta_{3=}$-.145 p<.05 | Firm characteristics (firm size and firm age) had a moderating effect between ARM and performance of state enterprises. Hence $H_{3b}$ and $H_{3c}$ were rejected.<br>However, it was not rejected. |

| | | | |
|---|---|---|---|
| | | **Firm size ARM and performance model**<br>Step 1: $R^2$= .684, F Statistic= 3.678, (p<.05), β=.260, p<.05)<br>Step 2: $R^2$= .733), F Statistic=17.853p<.05, $\beta_1$=.301, p<.05; $\beta_2$ =0.507 p<.05<br>Step 3: $R^2$= .778), F Statistic=21.543 p<.05, $\beta_{1=.043\ p<.05,}$ $\beta_2$ =.682 p<.05, $\beta_{3=-.184}$ p<.05<br>**Firm ownership, ARM and Performance model**<br>Step 1: $R^2$= .684, F Statistic= 3.678, (p<.05), β=.260, p<.05)<br>Step 2: $R^2$= .691, F Statistic=13.726 p<.05, $\beta_1$=.507, p<.05; $\beta_2$ =0324 p<.05<br>Step 3: $R^2$= .731), F Statistic=16.382 p<.05, $\beta_{1=.443\ p<.05,}$ $\beta_2$ =.364 p<.05, $\beta_{3=-.426}$ p<.05 | |
| Assess the joint effect of ARM, internal control procedures and firm characteristics on performance of state enterprises in Uganda. | $H_4$ There was no joint effect among ARM, Internal control procedures and firm characteristics on performance of state enterprises in Uganda. | **Performance model**<br>Bivariate Model 1: $R^2$=.684, F =3.678,<br>Bivariate Model 2= $R^2$=.563, F =5.378,<br>Multiple Model 3: $R^2$=.731, F =11.285,<br>Joint Model 4: $R^2$=.784, F =10.106 | There was a joint effect of ARM, internal control procedures and firm characteristics on performance of state enterprises in Uganda, but the effect was robust compared to individual effects. Hence $H_4$ was rejected. |

## 5.8 Modified Empirical Model

The study deduces, based on the findings that the conceptual model as originally anticipated holds. While accounting risk management directly affects company performance, firm variables (firm size and ownership) significantly moderate this relationship (Figure 5.1) accounting risk management has an important direct impact on firm performance. Both accounting risk management and internal control processes have a substantial impact on Ugandan state-owned company performance. The summary statistics supporting the modified empirical model are obtainable in Table 5.48.

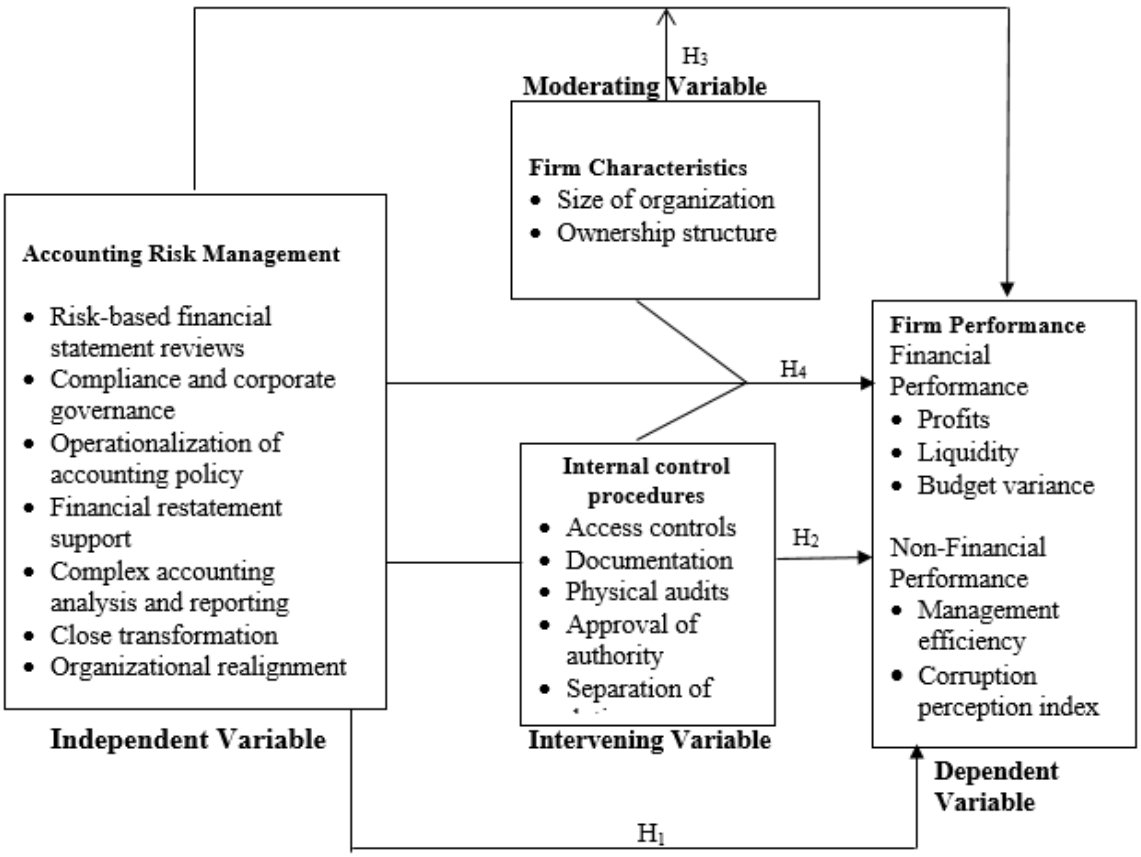



Figure 5. 1 Modified Empirical Model

(Source: Researcher 2022)

## 5.9 Chapter Summary

In this chapter, the study conducted an analysis of hypotheses using OLS, specifically multiple linear regression models. Furthermore, the chapter presented discussion of the findings, drew conclusions and compared with previously reviewed studies. Additionally, to illustrate the study's contribution, a revised empirical model was presented. The next chapter covered summary, conclusion and recommendations.

# CHAPTER SIX: SUMMARY, CONCLUSION AND RECOMMENDATIONS TO THE FINDINGS

## 6.1 Introduction

The section summary of inferences and commendations of findings on four hypotheses directed the study. It explored the relationship amid the variables, firm characteristics, ARM, internal control procedures and the performance of Uganda's state enterprises (SEs). As a result of this study, we were able to determine how ARM and firm characteristics are related to each other, how internal control procedures are associated to performance in firms, and the way firm characteristics are related to ARM and how ARM, firm characteristics, and internal control procedures are related to the performance of Ugandan SEs.

Methodologically, a population of 34 SEs were to be investigated, however, only 32 were assessed. The study adopted a positivist philosophy along with correlation descriptive research designs. It was imperative to subject data collected to preliminary statistical tests for example, Cronbach coefficient, and descriptive statistics to study the mean, standard deviation and hierarchical linear regression analysis to test the hypotheses. During the study, limitations were encountered with instant mitigations. Suggestions for further research have also been highlighted in the recommendations.

## 6.2 Summary of the Findings

### 6.2.1 Accounting Risk Management and Firm Performance

The study on objective one, examined the effect of ARM on performance of the SEs. A significant effect of the relationship among ARM and performance of SEs was evidenced, as indicated in hypothesis $H_{01}$, the research's initial hypothesis. Financial statement evaluations based on risk, compliance with corporate governance standards, and the operationalization of accounting policy are all sub constructs of ARM that were employed to accomplish this aim and test the hypothesis stated in the research. The organisation's financial and non-financial results were used as a measure for organisational restructuring (budget variance and corruption perception index).

A simple regression model was applied to evaluate hypothesis $H_{01}$ and the findings showed that ARM significantly improved company performance. The study therefore rejected hypothesis, concluding that there was evidence of a significant influence from ARM to firm performance of state corporations. It can be implied from the findings that for desirable and improved firm performance among state enterprises in the country, ARM is a critical success factor.

### 6.2.2 Accounting Risk Management, Internal Control Procedures and Firm Performance

Objective two, the research sought to evaluate how internal control processes affect the association of accounting risk management on firm performance among state corporations. The corresponding second hypothesis of the research, $H_{02}$: Internal controls do not substantially influence the impact of ARM on firm performance of SEs in Uganda, was confirmed. A

mediating variable, internal control methods, was assessed by five sub-constructs to address the aim and test the relevant hypothesis.

As part of the research, $H_{02}$ was tested by doing a step-wise regression analysis, which found that when internal control measures were implemented, the impact of ARM on business performance was still significant, albeit with a lower beta coefficient. There is a large and favourable indirect relationship amongst internal control processes and business success Secondly, the research sought to evaluate how internal control processes affect the association among ARM and firm performance among state corporations. That's consistent with $H_{02}$, the study's second hypothesis, which stated: In Uganda, ARM had a substantial impact on SEs performance, and internal controls have little influence on this. The study used five sub-constructs to assess the mediating variable, internal control processes, in order to test the hypothesis.

To test $H_{02}$, the researchers conducted a step-wise regression analysis, which found that when internal control procedures were implemented, the influence of ARM on firm performance remained significant, though the bet coefficient was lower when ARM was implemented. The effectiveness of a company's internal controls was revealed to have a considerable and beneficial impact on its overall performance. Consequently, the results reveal that there was partial mediation by internal control procedures on the association of ARM and firm performance. Null hypothesis two ($H_{02}$), that states that internal control procedures do not significantly mediate the influence of accounting risk management on firm performance of state corporations in Uganda, was rejected. The findings imply that for the ARM practices

adopted by state enterprises to translate to desirable and/or improved firm performance, they ought to have the requisite internal control procedures.

### 6.2.3 Accounting Risk Management, Firm Characteristics and Firm Performance

Objective three was to determine the firm's impact on the relationship between ARM and firm performance in state-owned enterprises. According to $H_{03}$: Business characteristics do not substantially alter the impact of accounting risk management on firm performance in Uganda, these results were in tandem with the third of our hypotheses. Three sub-variables were used to assess the moderating variable, firm characteristics, which included the organisation's size, age, and ownership structure.

The research tested $H_{03}$ by doing a hierarchical regression analysis, which found that the interaction term had a substantial impact on the association of accounting risk management and business performance, thereby satisfying the requirements for moderation. Firm age, on the other hand, was different. According to $H_{3b}$, firm age has no significant impact on the association between accounting risk management and Uganda state businesses' performance. Accounting risk management had a considerable influence on the performance of state businesses in Uganda, whereas firm ownership has a large impact on the relationship amongst ARM and performance.

### 6.2.4 Accounting Risk Management, Internal Control Procedures, Firm Characteristics, and Firm Performance

The fourth objective was to assess the relationship among ARM, internal control procedures and firm characteristics on firm performance. As a result, the firm's performance was evaluated

using a combination of budget variance and CPI deviation. This relationship was tested across the different individual models and compared to the joint model of firm performance. The overall F statistic(s) was interpreted. Both bivariate and multiple linear regression analyses were conducted. As a result the null hypothesis that ARM, internal control procedures and firm characteristics have no influence on the performance of Uganda's state enterprises has been rejected. The research found that accounting risk management (ARM), internal controls, and the company's characteristics had a substantial impact on performance in Uganda state enterprises. This was the case for every metric used to measure the performance of Uganda's state enterprises.

## 6.3 Conclusion

Accounting risk management has been identified as an important character not addressed leading to mismanagement of resources and pathetic controls. Management therefore, have to come up with resolutions on procedures and policies to overcome poor performance of SEs in Uganda. As internal control procedures facilitate and have implications on decision-making processes in organisations, measurement and feedback are paramount to evaluate control mechanisms.

ARM, firm characteristics, internal control procedures, and firm performance were all examined, and so were the mediating impacts of internal control procedures on the bond among ARM and firm performance, the impact of firm’s characteristics on firm performance as a moderator variable, and the combined influence of ARM, firm characteristics and internal control procedures on state enterprise’s performance in Uganda. Theories of risk management

were utilised to guide the study. Similar to the positivist philosophy, this study was led by direct observation of phenomena, their qualities, and the links between these phenomena. With a 94% response rate, data from Ugandan state enterprises was gathered for secondary and primary purposes.

The hypothesis $H_1$ was rejected, which proposes that there is a strong association among ARM and performance of Uganda's state companies. A significant association has been found between state business performance and adherence to the ARM principles. State business success may be attributed to improved financial reporting regulations, operationalizing financial reporting policies in order to support a financial restatement, and difficult accounting analysis such as financial statements.

ARM and the state-enterprises performance in Uganda were compared using Hypothesis $H_2$ as a mediator. The results revealed that the link between ARM and the performance of state-enterprises might be affected by internal control mechanisms. ARM and the performance of Uganda's state-owned firms may now be verified to have a direct relationship because of internal control processes.

Firm size and ownership had a moderating influence on the association between ARM performance in Ugandan state businesses and company performance, as shown by the rejection of hypothesis $H_3$. State-enterprises in Uganda were not affected by their size or ownership structure, according to this study.

Hypothesis $H_4$ examined the influence on Ugandan state businesses' performance of ARM, internal control processes, and firm characteristics. The research found that company characteristics and ARM, internal control processes, and firm characteristics have an impact on the performance of Ugandan state-owned firms. The evidence suggests that a company's ability to function well is enhanced when it has the right features.

## 6.4 Recommendations

It is imperative that firms in state enterprises use a multidimensional strategy to diversify their services and goods to boost their overall performance. For long-term profitability, maintaining a healthy liquidity position, and maintaining management abilities, they must justify their spending and adhere to budget constraints. Additionally, they must monitor and keep note of any variations in the budget so as to prevent wasting money. But for relevant and profitable business choices, companies should use the ARM tool and put in place robust internal control mechanisms. There are three critical pillars for achieving successful performance: Financial accounting, management accounting and financial management. The facts gathered during this study have confirmed that the existence of effective state enterprises ARM and internal control procedures will impact incremental performance. To improve the financial strength, there is a need to adopt a pragmatic incremental approach on liquidity and management efficiency to by safeguarding resources for sustainability. At the same time, checks and balances should be appreciated to curb corruption tendencies by falsifying financial reports.

Risk-based financial reports evaluations, adherence and company governance, accounting rule operationalization, provision of financial restatement, analysis and reporting of complex accounting, close transformation, and firm re-alignment should be considered by government

authorities, policymakers, and the management of state-owned enterprises. Similarly, joint alignment of ARM, internal control procedures and firm characteristics be considered and implemented in state enterprises as they build a very strong positive relationship with firm performance. Management and the stockholders of state enterprises adopt firm characteristics (that is, size of organisation and ownership structure) because they are considered as accelerators that enhance the association between ARM and firm performance.

It is important for management and owners to increase internal control processes (such as access controls, documenting procedures, physical audits, approving authorization, and delegating responsibilities) since they are major factors that impact ARM's ability to improve performance. Improved internal control procedures are needed to operationalize the ARM indicators (risk-based financial statement evaluations, corporate governance, accounting policy operationalization, financial restatement support, complex accounting analysis and reporting, close transformation and firm realignment) in order to improve performance.

Performance has been linked to both effectiveness and efficiency in a number of contexts. However, in order to ensure long-term viability, ARM constructs need to be implemented and supported by internal control mechanisms.

Organisational performance is measured by how well they employ their resources from their core method of operation to create profits. Measurements evaluate the financial gains realised as a result of achieving the organisation's objectives through cost-effective undertakings. Activities should be supervised and reviewed using internal control indicators to ensure that

they are performing as intended. To be self-sustaining and to be able to expand, the organisation has to generate income to survive. Liquidity should be monitored to ensure that short-term commitments are met and that the company does not face a legal shutdown. This should be the outcome of effective management and sound governance structures, among other things. As a result, it is critical for state-owned firms to include anti-corruption principles into their corporate values and operations. Staff, clients and creditors would have more confidence in government firms if a zero-tolerance policy against corruption is implemented and implemented effectively. The management team should also examine and understand the risks that the company faces and plan for them; as a result, they should identify chances to enhance the business and ensure that policies are followed.

### 6.4.1 Policy Implications

The objective of this study was to examine the influence of ARM, internal control methods, and state- enterprises characteristics. The objective was to address the widespread constant dismal state enterprise's performance in Uganda. Different researchers, academicians and scholars have attempted to answer different questions about poor performance of state enterprises. Many of them have used enterprise risk management to assess how to enhance performance of public or state-owned enterprises. This was the first study to focus on ARM, which included concepts such as risk-based annual financial reports evaluations, adherence and corporate control, accounting rule operationalization, financial restatement support, reporting complex accounting analysis, organisational realignment and close transformation, among others.

In addition to internal control indicators, such as documentation, access controls, physical reviews, separation of responsibilities and approval of authority enhance performance and firm characteristics, for example size and ownership in presence of ARM were considered influential on performance levels. The findings of this research revealed that finance directors in state enterprises should pay attention to ARM and firm characteristics because of their significance on state enterprises performance considered in this research. It was observed that any variation in any of the variables above may not be shown in the level of performance. However, other factors that financial directors need to explore in depth to reverse the low productivity, liquidity inadequacy, and poor budget performance. They may also be the cause of budget variances, fraudulent activities, and corruption tendencies in state enterprises.

The public sector is a major contributor to GDP of Uganda and state enterprises sub-sector together with other sectors like telecommunications, electricity generation, transmission and distribution, wildlife and tourism, and oil drilling have been earmarked as areas of policy emphasis in the development of the Ugandan economy. The state enterprises in Uganda form part of the nexus by attracting foreign investors. Policy makers should, therefore, put more emphasis on the promotion of ARM policies and stringent internal control procedures to attract foreign investors into the country.

The corruption perception index (CPI) comparison ranking table is published every year by Transparency International. The exercise started in 1995 and ranks countries based on perception levels of government organisations. Corruption is determined by opinion surveys and expert valuations by professional assessors through global surveys. Scholars have

conceptualised corruption as a dishonest behaviour by those in positions of power, such as government officials and managers. Subsequently, corruption involves unaccepted and unwarranted transactions by manipulating and diverting funds for personal gains. Amongst common reasons for corruption are the economic and political environment, expert ethics, habits, morality, culture, customs, traditions and demography. Their effects on the economy should be well researched and the influence on performance. It is emphatic that forms of corruption vary, but comprise bribery, extortion, nepotism, closed-mindedness, patronage, influence peddling, graft, and embezzlement. Researchers concur that; different countries with growing economies experience a high level of corruption that deter their development, Uganda inclusive.

The public and different stakeholders are affected by the resultant unproductive misallocation of resources, the presence of a shadow economy, and low-quality healthcare and education. Corruption affects and impedes sustainable economic development, creates immoral ethical values, and dispensation of unfair delivery of judicial services. The latter in a way endangers the rule of law and destabilises the economy. Corruption results in consequences such as delays in infrastructural development, poor quality building and attracts other additional costs.

### 6.4.2 Contribution to Knowledge

The findings of this research make a valuable contribution to the understanding of performance factors in Ugandan state-owned firms. By examining the influence of company characteristics, ARM (asset and risk management), internal control processes, and firm characteristics, this study sheds light on the key drivers that significantly impact firm performance. The

identification of these factors provides important insights for both academics and practitioners in the field of organisational management. The research underscores the significance of considering company-specific attributes, such as size, industry, and ownership structure, in assessing performance outcomes. Moreover, the study highlights the vital role of effective asset and risk management practices and robust internal control processes in enhancing performance in state-owned firms. The findings contribute to the existing literature by deepening our understanding of the unique contextual dynamics and factors that shape the performance landscape of Ugandan state-owned firms. The implications of this research can guide policymakers and managers in formulating strategies and implementing measures that foster improved performance and sustainable growth in state-owned enterprises.

### 6.5 Theoretical Implications of the Findings

The findings of this research align with institutional theory, agency theory, stewardship theory, and risk management theory. Firstly, institutional theory suggests that organisations are influenced by societal norms and pressures. In this study, the emphasis on internal control processes on governance mechanisms reflects compliance with external norms and regulations, illustrating the influence of institutional forces on firm practices and performance.

Secondly, agency theory provides insights into the relationship between principals and agents. The research highlights the impact of internal control processes on performance, which relates to agency theory as effective controls can help align the interests of managers and owners/shareholders. By mitigating agency problems, robust internal controls ensure that managers act in the best interest of the organisation and its stakeholders.

Thirdly, stewardship theory focuses on the positive alignment of interests between managers and the organisation. The study's emphasis on asset and risk management practices in enhancing performance aligns with stewardship theory. Effective risk management practices demonstrate responsible stewardship as managers proactively safeguard the organisation's resources, contributing to improved performance outcomes.

Further, risk management theory provides insights into identifying, assessing, and mitigating risks. The research findings on the impact of risk management practices on firm performance directly align with risk management theory. The study underscores the importance of robust risk management processes in achieving positive performance outcomes and highlights the relevance of risk management theory in understanding and managing risks in state-owned firms.

As such, this research contributes to the theoretical understanding of internal control processes, risk management practices, and their influence on firm performance in the context of Ugandan state-owned firms. These theoretical perspectives provide valuable insights for practitioners and policymakers in enhancing organisational practices and achieving better performance outcomes.

## 6.6 Limitations to the Study

There were several limits to the study, but the researcher devised counter measures to compensate for these drawbacks, which were implemented. When survey respondents indicated apprehension about completing the questionnaire because of its span and the sophistication of numerous research tool item(s). However, the scholar simplified the difficult research tool items in a way that was readily accessible to the respondents. In addition, the scholar hired a research associate during the distribution of surveys and the timely receipt of completed questionnaires for analysis.

In addition to the limitations, there were other limitations encountered during the study. However, the researcher took appropriate measures to address these limitations. One limitation was the potential for self-reporting bias, where respondents may provide inaccurate or socially desirable responses. To mitigate this, the researcher ensured anonymity and confidentiality when collecting data, emphasising the importance of honest and unbiased responses. Another limitation was that the study was conducted within a specific timeframe, which may limit the ability to capture long-term effects or changes. To account for this, the researcher acknowledged the limitations and emphasised the need for future research to explore the topic over an extended period. By addressing these limitations and acknowledging the need for further investigation, the study aimed to strengthen the validity and reliability of its findings.

## 6.7 Areas of Further Research

The researcher advocates for further research where firm characteristics (such as firm age) be employed as an intervening variable in the model, because firm age specifically was insignificant as moderator variable amid the relationship between ARM and firm performance.

Future scholars can employ different approaches to measure the constructs of the study. In the same measure, firm characteristics may be measured using BOD tenure, board composition, internal politics, internal economic factors and features apart from those observed in this study. The ARM should also consider constructs like qualifications of board members, composition of audit committee, strategic risks and operational risks. Subsequently, firm performance can also consider concepts like ROA, ROE, market-based values and EPS. Similarly, a comparative study is carried out in developed and developing countries.

Since it gives useful information for product design, the investigation might potentially take on a more qualitative approach by including qualitative components into the study's variables. A qualitative study could provide detailed information on emotions, personal characteristics, and human behaviour, which is not captured by this quantitative study. In addition, a triangulation of using other methods of study could also be considered over an extended period of time.

# REFERENCES


Ademola, I. S., Adedoyin, O, A., & Alade, O. R. (2015). Effect of internal control system in Nigeria public sector: A case study of Nigeria national petroleum corporation. *International Journal of Economics, Commerce and Management United Kingdom,* 3(6), 234-240.

Al-Homaidi, E. A., Almaqtari, F. A., Ahmad, A., & Tabash, M. I. (2019). Impact of corporate governance mechanisms on financial performance of hotel companies: Empirical evidence from India. *African Journal of Hospitality, Tourism and Leisure*, 8(2), 1-21.

Altaf, N. & Shah, F.A. (2018). Ownership concentration and firm performance in Indian firms: Does investor protection quality matter? *Journal of Indian Business Research*, 10 (1), 33-52.

Aluoch, O. M., Kaijage, E. S., & Iraya, C. M., Magutu.M. (2019). Corporate governance, financial characteristics, macro-economic factors and performance of commercial and service firms listed on the Nairobi Stock Exchange. *International Journal of Business and Social Science*, 10(3), 212-223.

Anas F., & Fauziah, H. (2014). The impact of financial risk on Islamic banks profitability. Retrieved from: http:// icehm.org/upload/7350ED0314503.pdf. Paper presented *at, International Conference on Business Sociology and Applied Science. Kuala Lumpur (Malaysia).*

Anto, B., Marko, P., & Lana, Z. (2018). Financial performance of state-owned enterprises: Prudent and responsible public sector financial management. *Journal of Public Finance and Public Choice*, 8(6), 16-18.

Anwar, M., Tajeddini, K., & Ullah, R. (2020). Entrepreneurial finance and new venture successĞthe moderating role of government support. Business Strategy & Development, 3(4), 408-421.

Asiamah, N., Mensah, H., & Oteng-Abayie, E. F. (2017). General, target, and accessible population: Demystifying the concepts for effective sampling. *The qualitative report*, *22*(6), 1607-1621.

Arwinge, O. (2013). Internal control: A study of concepts and themes. Contributions to Management Science, ISBN.978-3-7908-2881-8. Publisher, Physica-Verlag Heidelberg.

Azam, M., Usman, S., & Abassi, Z. (2011). The Impact of Corporate Governance on Firm's Performance: Evidence from Oil and Gas Sector of Pakistan. *Australian Journal of Basic and Applied Science,* 5(12), 2978±2983.

Ba, H. (2019). Improving detection of credit card fraudulent transactions using generative adversarial networks. Retrieved, arXiv preprint arXiv: 1907.03355.

Baqar, H. B., & Atiqa, S. (2017). Financial performance of state-owned enterprises in emerging economies in Pakistan. A case study of Pakistan Railways. *Journal of the Chartered Institute of Management Accountants,* 8(2), 2-6.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable, distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology,* 5(16), 1173-1182.

Bauwhede, V., Barney, J., & Tyler, B. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99-120.

Bayirima, D. K. (2015). Measuring corporate image and profitability from the perspective of comprehensive income and social cost reporting, survey of quoted companies in Nigeria. *International Journal of Economics, Commerce and Management*, 6(3), 258265.

Behl, L., & Phaup, M. (2015). Management information systems: Corporate and accounting scandals. McGraw-Hill education. ISBN:978-93-5316-466-9.

Bhatti, I., & Phaup, M. (2015). Budgeting for fiscal uncertainty and bias: A federal process proposal. *Journal* of *Public Finance*, *35*(2), 89-105.

Bogodistiv, Y. & Wohlgemuth.V (2017). Enterprise risk management. A capability-based perspective. HTML.emerald.com. *The Journal of Risk Finance*, 57 (3), 273-282.

Brownell, P. (2015). A field study examination of budgeting participation and locus of control. *The Accounting Scientific Research Journal*, 12(10), 177-203.

Bruno, E., Gallier, R., & Gabillon, A. (2019, November). Enforcing access controls in IoT networks.DOI:10.1007/s42979-019-0022-z. *In International Conference on Future Data and Security Engineering*, 429-445). Springer, Cham.

Cabrita, R., & Bontis, N. (2008). Intellectual capital and business performance in Portuguese banking industry. *International Journal of Technology Managemen*t, 43(4),212-237.

Candia, E. (2017). The law and practice of prosecution in Uganda. an alternative path to justice. SRRN: https://ssm.com/abstract=2991966.

Cao, Z. F., Leng, E., Feroz, & Davalos, S. (2015). Corporate governance and default risk of Organization cited in SECs Accounting and Auditing Enforcement Releases. Review of Quantitative Finance and Accounting, 44(1), 113-138.

Chao, H. (2017). On the Legal Liabilities for Commercially Using Portrait Right Illegally. *Journal of Beijing College of Politics and Law*, 24(1), 198-220.

Ciftci, I., Tatoglu, E., Wood, G., Demirbag, M., & Zaim, S. (2019). Corporate governance and firm performance in emerging markets: Evidence from Turkey. *International Business Review*, *28*(1), 90-103.

Coleman, L. (2009). Risk strategies, dialing up optimum organizational risk. Burlington, USA: Gower E-Book Publishing.

Committee of Sponsoring Organizations of the Treadway Commission (COSO). (2017). *Enterprise Risk Management: Integrating with Strategy and Performance.*

Cooper, D., & Schindler, P. (2008). Business research methods (10th Edn.). New York: McGraw-Hill Education.

COSO- (2013). Committee for Sponsoring Organizations of the Treadway Commission: Internal Control ² Integrated Framework.

Creswell, J. W. (2014). Research designs: Qualitative, quantitative and mixed methods approach. (4th Edn.). Thousand Oaks: Sage Publications.

Cronbach, L. J., & Shavelson, R. J. (2004). My current thoughts on coefficient alpha and successor procedures. Educational and Psychological Measurement, 64, 391-418. Retrieved from https://doi.org/10.1177/0013164404266386.

D'Amore, G., Lepore, L., Landdrian, L, Paoline, F. & Matteo, P. (2019). Ownership Structure.

Firm performance and corruption. : *An empirical analysis of EU countries*.319-415.

DOI:10.22495/ncpr_49

David, M. V. S., & Sylke, J. K. (2007). Agents or stewards: Using theory to understand the government social service contracting relationship. *Journal in Public Administration,* 17(2), 157-187.

Davis, J. H., Schoorman, F. D., & Donaldson, R. (1997). Toward a stewardship theory of management. *Academy Of Management Review Journal*, 22(1), 20-47.

Dawes, J. (2000). Market orientation and company portability: Further evidence incorporating longitudinal data. *Australian Journal of Management*, 25(2), 173-199.

Dawodu, H. O. (2018). Corporate governance and accountability of corporations; the way forward for Nigeria.

Duan, X., & Jin, Z.-m. (2014). Positioning decisions within strategic groups: the influences of strategic distance, diversification and media visibility, Management Decision. *Accounting, Auditing & Accountability Journal,* 52(10), 1858-1887. Emerald Group Publishing.

DiMaggio, P., & Powell, W. (1991). The iron cage: Institutional isomorphism and collection rationality in organizational fields. *American Sociological Review Journal,* 48(6), 147160.

Donaldson, F. D., & Davies, J. H. (1991). Stewardship theory or agency: CEO, governance and shareholder returns. *Australian Journal of Management*, 22(3), 467-472.

Egwemi, V. (2012) Corruption and corrupt practices in Nigeria: an agenda for taming the monster. *Journal of Sustainable Development in Africa*, 14 (3), 72-85.

Ehrlich, J., Becker, G. (1972). Market Insurance, Self-Insurance and Self-Protection, *Journal of Political Economy*, 80, 623-648.

ElBannan, M. A., & Mohamed, A. (2014). Corporate governance and accounting Performance: A balanced scorecard approach. Accounting and finance research. *Journal in Accounting and Finance Research*, 19(4), 345-350.

Eniola. A. A. (2020). International Journal of Scientific & Technology Research https://www.researchgate.net/publication/339412945. ISSN 2277-8616. International Journal of Scientific & Technology Research.

Epstein, M. J., & McFarlan, F. W. (2016). Measuring efficiency and effectiveness of a non-profit making organization's performance.. T*he Journal on Strategy in Finance*, 29(8), 27-34.

Etengu, R. O., & Nasieku, T. (2015). The relationship between accounting-based performance measures and investment decisions. *A theoretical review. International Journal of Contemporary Advanced Sciences.* 2(12), 62-80.

Ewool, L. M., & Quartey, J. A. (2021). Evaluation of the Effect of Risk Management Practices on the Performance of Microfinance Institutions. *International Journal of Academic Research in Accounting Finance and Management Sciences*, 11(1), 211-240.

Fadun, O., S. (2017). Corporate governance, a risk management tool for enhancing performance. Study of Nigerian Stock Exchange listed companies. *International Journal of Finance and Banking*, 6(4), 12-27.

Felch, V., Asdecker, B., & Sucky, E. (2019). Maturity models in the age of Industry.https://hdl.handle.net/10125/59953:ISBN:978-0-9981331-2-6.*Proceedings of the 52nd Hawaii International Conference on System Sciences.*

Field, A. P. (2009). Discovering statistics using SPSS (3rd Edn.). London: Sage Publication Limited.

Fox, M. A., & Hamilton, R. T. (1994). Ownership and diversification: Agency theory or stewardship theory. *Journal of Management Studies*, 31(1), 69-81.

Galindo, M-A. & Mendez, M.T. (2014). Entrepreneurship, economic growth and innovation. Are feedback effects at work effective. *Journal of Business. Research,* 67(5), 825-829.

Gault, D. A. (2017). Corruption as an organizational process: Understanding the logic of the denormalization of corruption. Contaduría y administración, 62(3), 827-842.

Gemma, A., & Ibrahim, K. (2015). Creating youth employment through entrepreneurship financing: the Uganda youth venture capital fund. www.eprc.or.ug *Economic Policy Research Centre*. Research series 122.

Ginting, C. U., & Hidayat, W. (2019). The Effect of a Fraudulent Financial Statement, Firm Size, Profitability, and Audit Firm Size on Audit Delay. *International Journal of Innovation, Creativity and Change*, 9(7), 287-300.

Golshan, M. & Rasid, A. (2012). Determinants of Enterprise Risk Management Adoption: An Empirical Analysis of Malaysian Public Listed Firms. *International Journal of Social Science,* 5(7), 246-255.

Gupta, A., Sahu, T. N. & Manna, A. (2016). Impact of ownership structure and board composition on corporate performance in Indian Companies, Indian. *Journal of Corporate Governance*, 9(1), 44-66.

Harelimana, J. B. (2017). The role of risk management in financial performance of banking institutions in Rwanda. *International Business Journal*, 8-284-10.4172.

Harp, N. L., & Barnes, B. G. (2018). Internal control weaknesses and acquisition performance. *The Accounting Review Journal*, 93(1), 235-258.

Hicks, R., & Tingley, D. (2012). Causal mediation analysis: Research article. Retrieved. Promoting communication on statistics and strata. *The Stata Journal*: 11(4),1-15.

Hong, C. C., Ramayah, T., & Subramaniam, C. (2018). The relationship between critical success factors, internal control and safety performance in the Malaysian manufacturing sector. *Journal on Safety Science, 104*, 179-188.

Jallad, Y. B. (2020). The Effects of Board Characteristics and Ownership Structures on

Compliance with Mandatory IAS/IFRS Disclosure Requirements: Evidence from Qatar. *International Business Journal*, 8(2), 104-172.

Jankensgard, H. (2019). A theory of enterprise risk management. Corporate governance. *The International Journal of Business in Society*, 15(18), 128-135.

Javeed, S. A., & Lefen, L. (2019). An analysis of corporate social responsibility and firm performance with moderating effects of CEO power and ownership structure: *A Case Study of the Manufacturing Sector of Pakistan. Sustainability*, 11(1), 248.

Jensen, M., & Meckling, W. (1976). Theory of the organizational: managerial behavior, agency costs and ownership structure. *Journal of Financial Economics,* 8(3), 305-360.

Jones, M., & Library, E. B. L. E. (2011). Creative accounting, fraud and international accounting scandals. *Accounting and Business Research*, 41(4), 411-412.

Kakanda, M. M., & Salim, B. (2017). Corporate governance, risk management disclosure, and firm performance: A theoretical and empirical review perspective. *Asian Economic and Financial Review*, 7(9), 836.

Kao, M. F., Hodgkinson, L., & Jaafar, A. (2019). Ownership structure, board of directors and firm performance: evidence from Taiwan. *Corporate Governance: The International Journal of Business in Society*.

Kaplan, A., & Norton. S. (2015). Organizational performance, meeting the challenges of the new business environment. *Journal of Scientific Research and Practice*, 4 (10), 165172.

Kaplan, R. S., & Norton, D. P. (1996). The balanced scorecard: Translating strategy into action. Harvard Business Press.

Kasmiati, M., & Santosa, P. W. (2019). The effect of earning information, cash flow components, financing decision, and Stock Return: Empirical Evidence on Indonesia stock exchange. *Journal of Economics, Business &Accountancy,* 22(2), 157-166.

Kasser, J. E. (2020). Systemic and Systematic Risk Management. CRC Press.

Keay,A. & Moore.S.T. (2014). Comply or explain in corporate governance codes: In need of greater regulatory oversight. *Journal of Public Finance*. 34(2), 279-304.

Kiconco, P., Agaba. M, Turyasingura.J.B.& Kabagambe.J. (2023). Internal controls' impact on Saccos performance in Uganda. International journal of management in business Applied, vol. 2 (1), e-ISSN-2827-9840

Khisa, M. (2019). Inclusive co-optation and political corruption in Uganda: Inge Amundsen (ed.), *Political Corruption in Africa,*5, 95-115, Edward Elgar Publishing.

Kijjambu, F. N. (2014). Factors affecting performance of commercial banks in Uganda-A case for domestic commercial banks. *International Review of Business Research Papers,* 10(1), 300-340.

Kinuu, D. (2014). Top management team psychological characteristics, institutional environment team processes and performance of companies listed in Nairobi Securities Exchange, URI.http://hdl.handle.net/11295/75610. Publisher University of Nairobi.

Kinyua, J. K. (2016). Effect of internal control systems on financial performance of companies Quoted in the Nairobi SecuritiesExchange.URI:http://hdl.handle.net/ 123456.7Jomo Kenyatta University of Agriculture and Technology

Klimecka-Tatar, D. (2021). Analysis and Improvement of Business Processes Management² Based on Value Stream Mapping (VSM) in Manufacturing Companies. *Journal of Management Studies*. 23(4), 213-231.

Kobia, J., Vanessa, J., Wiebke, G., & Aykut, B. (2017). Organization performance and accounting risk management. *Journal in Finance and Accounting*, 6(10), 456-461.

Kotler, J. K., & Heskett, J. L. (2014). A risk management-based view of growth; risk management orientation and value creation from growth. *Strategic Management Journal,* 33(10), 10.1174-1193.

Lan, L. L., & Heracleous, L. (2021). Concentrated Ownership, Socio-emotional Wealth and the third possibility. Bringing society back in. *Journal of Management Studies, 4*9(1),224-239.

Lepore, L., Paolone, F., Pisano, S., and Alvino, F. (2017). A cross-country comparison of the relationship between ownership concentration and firm performance: does judicial

system efficiency matter? Corporate Governance: The *International Journal of Business in Society*, 17(2), 321-340.

Letangule, S. L., & Letting, N. K. (2012). Effects of performance contract on organization performance: The case study of .HQ\Dµs ministry of education. *International Journal of Management and Business Studies*, 10(2), 29-37.

Levene, H. (1960). In Contributions to probability and statistics: Essays in honour of Harold Hoteelin, I. Olkin et al. eds. Stanford University Press, 278-292.

Manab, N., Othman, S. & Kassim, I. (2012). Enterprise-wide risk management best practices: The critical success factors, OIDA. *International Journal for Sustainable Development,* 6(4), 87-92.

Mandala, N., Kaijage, E., Aduda, J., & Iraya, C. M. (2018). An empirical investigation of the relationship between board structure and performance of financial institutions in Kenya. *Journal of Finance and Investment Analysis*. 7(1) 1-3.

Mandala, N., Kaijage. E., Aduda & Iraya, C. M. (2017). Board structure, CEO and performance of State Enterprises in Kenya. *European Scientific Journal*, 13(10), 1857-7431.

Mang'unyi, E.F. (2011). Ownership structure and corporate governance and its effects on performance: A case of selected banks in Kenya. *International Journals of Business*, 2(3), 1-17.

Manicas, P. (2008). Austrian economics and critical realism: *Journal of Critical Realism*. 7(2), 208-234.

Markowitz, H. (2000). Markowitz theory of portfolio management: Financial economics: Mean variance analysis in portfolio choice and capital markets Wiley. ISBN 978-1883-24975-5.

Matonti, G. (2018). Big 4 Auditors and Audit Quality in Non-Listed Companies: Empirical Evidence from Italy. *Big 4 Auditors and Audit Quality in Non-Listed Companies*, 1140.

Matovu, R. (2019). Effects of financial management systems on quality-of-service delivery at national planning authority in Uganda. Published doctoral dissertation, Uganda management institute.

Mawanda, S. P. (2016). Effects of internal control systems of financial performance in an institution of higher learning in Uganda. Millichamp (1999). Auditing. Cengage Learning EMEA.

McConnel, J. J., & Servaes, H. (1990). Additional evidence on equity and corporate value. *Journal of Financial Economics*, 27(2), 595-612.

Mehr R. I., & Hedges, B. A. (1963). Risk management in the business enterprise, Irwin, Homewood, Illinois.

Meyer, J., & Rowan, B. (1997). Institutionalized enterprises, formal structure as myth and ceremony. *American Journal of Sociology*, 8(3), 340-363.

Miller, K. D. (1992). A framework for integrated risk management in international business. *Journal of International Business Studies*, 23, 311-331.

Mohamed, I. A. (2016). Analysis of the effectiveness of budgetary control techniques on organizational performance at Dara-Salaam bank headquarters in Hargeisa Somaliland. *International Journal of Business Management and Economic Research,* 6(6), 327-340.

Mohammad. A. M, Nawzad, M. H., Arshad, S. A, Fria. A. K, & Ranjdar, M. A. (2020). Perceived Effect of Internal Control on the Financial Performance of Manufacturing Firms in Kurdistan Regional Government of Iraq. *Journal of Critical Reviews*. ISSN-2394-5125, 7(15). 457-468.

Morck, R., Shleifer, A., & Vishny, R. W. (1988). Management ownership and market valuation: an empirical analysis. *Journal of Financial Economics*, 20 (2), 293-315.

Mugenda, O. M., & Mugenda, A. G. (2003). Research in quantitative and qualitative approach. (2Ed.), Nairobi African Centre for Technology.

Muraleetharan, P. (2013). Internal control and impact of financial performance of the

organizations; special reference public and private organizations in Jaffna District. *Journal of Financial Economics*, 25(6), 383-402.

Munther, A., Sinan, S., A., Ahmad, A. & Habib A. (2021). Risk Management Practices and Firm Performance with a Mediating Role of Business Model Innovation. Observations from Jordan. *Journal of Risk and Financial Management*. 13(14), 234-245

Nabukeera, M., Boerhannoeddin, A., Raja N. & Binti. R. (2014). Performance assessment of public service state-owned commercial enterprises: A case for Kampala Capital City Authority in Uganda. *World Journal of Social Science*, 8 (2), 56-62.

Nahar,S., Azim, M.I., & Jubb, C. (2020). Risk governance and performance. a developing country perspective. *Managerial Auditing Journal*, 31(3):250-268.

Ndung'u ,A.W. (2013). Effect of financial risk management on financial perfoemnce of oil companies in Kenya, Published Doctoral dissertation, University of Nairobi.

Netemeyer, R. G., Beardedn, W., & Sharma, S. (2003). Validity and reliability of the research instrument; how to test the validation of a questionnaire/survey in research, SRRN, *Electronic Journal,* 5(3):28-36.

Ngugi, D. (2015). Growth of Nairobi Stock Exchange primary market. Discussion Paper. No. 47, KIPPRA.

Nguyen, T. T. M., Evans, E., & Lu, M. (2017). Independent directors, ownership concentration and firm performance in listed companies: Evidence from Vietnam. *Pacific Accounting Review, Journal*, 29(2), 204-226.

Noouroozi, A., & Gholamian, H. (2020). Investigating and Identifying the Causes of Rural Management Inefficiency from the Viewpoint of the Local Population of Saman County. *Journal in Investment and Finance*, 17(63),196-215.

Nunnally, J. C. (1978). Psychometric theory: Inequality and heterogeneity. (2 Ed.). McGraw-Hill. 6 Blau, New York: McGrawHill.

Obalola, M., Thomas, I., Akpan, O., & Abas, A. (2014). The relationship between enterprise risk management and organizational performance: Evidence from Nigeria insurance industry. *Research Journal of Finance and Accounting*, 5(14), 152-158.

Odalo, S. K., Achoki, G., & Njuguna, A. (2016). Relating company size and financial performance in agricultural firms listed in the Nairobi Securities Exchange in Kenya. ISSN;1916-9728.*Journal of Economics and Finance*, 10(8), 34-36.

Ofosu-Hene, E. & Amoh, P. (2016). Risk management and performance of listed banks in Ghana. *European Journal of Business of Science and Technology*, 2(2), 108-123.

Okiro, O. K., Aduda, J., & Omoro, N. (2015). The effect of corporate governance and capital structure on performance of firms listed at the East African community securities exchange. *European Scientific Journal,* 11(7), 517-546.

Oluwatuyi, A. S. (2019). Effect of Forensic Accounting on the Detection of Fraud Risk Indicators in Public Enterprises in Ondo State, Nigeria.*Research Journal of Finance and Accounting,* 10,52-66.

Ondigo, H. O. (2016). Corporate governance, risk management, organizational characteristics and financial performance of commercial banks in Kenya. (PhD Thesis, University of Nairobi).

Ongore, V. O., & Kusa, G. B. (2013). Determinants of financial performance of commercial banks in Kenya. *International Journal of Economics and Financial issues,* 18(12), 456464.

Osho, A. E., & Omolola, R. A. (2018). Exploring the Neglect of Accounting Theory in Current Academic Research in Nigeria. *European Scientific Journal*, 8(2), 175-187.

Otley, D., & Pollanen, R. (2000). Budget use and managerial performance: A critical appraisal using new evidence. *Journal of Accounting Re-search, Spring*, 31(2), 483-496.

Ozili, P. K., & Uadiale, O. (2017). Ownership concentration and bank profitability. *Future Business Journal*, *3*(2), 159-171.

Pallant, J. (2005). SPSS survival manual: A step by step guide to data analysis using SPSS for Windows (Version 12). Maidenhead: Open University Press.

Perevoznyk, A., & Lytvynenko, O. (2020). Transformation of approaches to risk management of bank loan portfolio. *The Scientific Heritage*, 57(3), 32-39.

Perols, J. (2011). Financial statement fraud detection: An analysis of statistical and machine learning algorithms. Auditing: *A Journal of Practice & Theory*, 30(2), 19-50.

Raffournier, B., & Schatt, A. (2018). The impact of International Financial Reporting Standards (IFRS) adoption and IFRS renouncement on audit fees: The case of Switzerland. *International Journal of Auditing*, 22(3), 345-359.

Raguseo, E., Vitari, C., &Pigni, F. (2020). Profiting from big data analytics: The moderating roles of industry concentration and firm size. *International Journal of Production Economics,* 229, 107758.

Raja, K. & Binti, M. (2014). Corruption and human rights in India; comparative perspective on transparency and good governance. New Delhi, Oxford University Press.

Ramanujan, V., & Varadarajan, P. (2006). Strategic management: Research on corporate diversification. A synthesis.*Strategic Management Journal*, 10(6), 523-551.

Rapoport, A., & Horvath, W. J. (2017). Thoughts on organization theory. *In Systems Research for Behavioural Science systems Researc*h. ISBN.9781315130569, 71-75. Routledge.

Riyadi, B. S. (2020). Culture of abuse of power due to conflict of interest to corruption for too long on the management form resources of oil and gas in Indonesia. *International Journal of Criminology and Sociology*, 9(2), 247-254.

Romer, P.M. (1986). Increasing Returns and Long Run Growth, *Journal of Political Economy,* 98 (6), 71-102.

Romney, M. B., Steinbart, P. J., Mula, J. M., McNamara, R. P., & Tonkin, T. (2013). Fraud, controls and audit in accounting information systems. *Journal in Accounting Information Systems,* 8(5), 338-373.

Roychowdhury, S., Shroff, N., & Verdi, R. S. (2019). The effects of financial reporting and disclosure on corporate investment: A review. *Journal of Accounting and Economics*, 68(2-3), 101246.

Sarbanes-Oxley Act (SOX), Public Law No.107-204, Washington, DC: Government Printing

Office.

Saunders, M. N. K., Lewis, P., Thornhill, A. & Wang, C. L. (2009). Research methods for business students (5th Edn.) Prentice Hall, UK.

Saurav, S. (2020). Review of Corporate Governance in Emerging Economies from the Perspective of Principal±Principal Conflict. The Financial Landscape of Emerging Economies. *Journal Academy of Marketing Science*,111-121, Springer Publishing International.

Schreyer, M. (2019). Adversarial learning of deep-fakes in accounting. Retrieved. arXiv:1910. 03810. cs. LG.

Sekaran, U. (2010). Research methods for business, a skill building approach (4th Edn.). Carbondale: John Wiley and Sons.

Selznick, P. (1994). Ownership and diversification: Agency theory or stewardship theory. The fundamental agency problem and its mitigation. ISSN; 978-3-030-6000-5. *Journal of Management Studies.* Retrieved from https://doi.org/10.1111/j.1467.6486.tb.00333.x. -6007-5

Shad, M.K., Lai, F., Fatt, C.L., Klemes., & Bokhari, A. (2019). Integrating sustainability reporting into enterprise risk management and its relationship with business performance: A conceptual framework. *Journal of Cleaner Production,* 208, 415-425.

Shahab U.D, Muhammad. A. K., Majid J.K., & Muhammad Y.K. (2021).Ownership structure and corporate financial performance in an emerging market in Pakistan: a dynamic panel data analysis: ISSN: 2237-0722, 11(2),1654-1664.*International Journal of Emerging Markets. Emerald Publishing Limited.*

Shapiro, S. S., & Wilk, M.B. (1965). An Analysis of Variance Test for Normality (Complete Samples). *Biometrika,* 52(3/4),591±611, Oxford University Press.

Ssendagire, L. D. (2018). Working capital level, working capital financing approaches, firm size and firm size and profitability of manufacturing Firms in Uganda. ISSN 2320-9186. *Global Scientific Journal*, 6(6), 224-246.

Ssuuna, P. M. (2011). Effects of internal control systems on financial performance in an institution of higher learning in Uganda: A case of Uganda Martyrs University URI. http://hdl.handle.net/20.500.12280/44, (Doctoral dissertation, Uganda Martyrs University).

Teece, D. J. (2019). A capability theory of the firm: an economics and (strategic) management perspective. *New Zealand Economic Papers*, 53(1), 1-43.

Turyanebwa. A., Byamukama.E.M., and Sunday.A. (2022). Internal controls, corporate governance and financial performances of Micro Finance Institutions in Uganda. Kabale University Research journal. ISSN 2790-1394, Vol 1 (4)

Ural, T., & Acaravic, S. (2015). The effects of firm's strategic factors on firm performance: A comparison of permanent and sporadic exporters. *Journal on Small Business Economics,* 22(3), 36-44.

Usman, G., & Zahid, M. (2015). Factors influencing performance of micro-finance organizations in Pakistan; Firmage, size and ownership and focus on market orientation international. *Journal of Academic Research*, 3(5), 25-67.

Valaskova, K., Kliestik, T., & Kovacova, M. (2018). Management of financial risks in Slovak enterprises using regression analysis. -ISSN 2083-1277, *Oeconomia Copernicana Journal*, 9(1), 105-121.doi: 10.24136/oc.2018.006

Vander, J. R., Bauwhede, H. J. C., & Willekens, M. (2008). Disclosure on corporate governance in the European Union. Corporate Governance: *An International Review,* 16(2), 101-115.

Vargas-Hernández, J. G., & Teodoro Cruz, M. E. (2018). Corporate governance and agency theory: Megacable case. *Corporate Governance and Sustainability Review*, 1(2), 59-69.

Verbeenten, F. H. M. (2019). Performance management practices in public sector organizations: Impact on performance. *Accounting, Auditing and Accountability Journal*, 21(3), 427-454. Emerald Publishers Ltd.

Waheed, A., & Malik, Q. A. (2019). Board characters, Ownership concentration and firms' performance: South A contingent theoretical based approach. *South Asian Journal of Business Studies*, 8(2), 146-165.

Wakaisuka, J. I., Aduda J., Wainaina, G., Iraya, M., & Ntim, C. G. (2016). Corporate governance, firm characteristics, external environment and performance of financial institutions in Uganda. *A Review of Literature. Cogent Business &Management,* 3(1), 1-14.

Wanjohi, S., Wanjohi, G., & Ndambiri, M. (2017). The effect of financial risk management on the financial performance of commercial banks in Kenya. *International Journal of Finance and Banking Research*, 3(5), 70-81.

Wanyoike, R. (2016). Quality management practices and firm performance among manufacturing firms in Kenya. http://ir-libray.ku.ac.ke/handle/123456789/14971.

Waweru, N., & Kisaka, E. (2012). The effect of enterprise risk management implementation on the value of companies listed on the Nairobi Stock Exchange. *Journal of Applied Finance and Banking*, 3(3), 81-105.

Weichao, L., Daoguang, Y., & Siyi, L. (2018). Accounting information comparability, demand differences and cross-firm information transfer. *China Journal of Accounting Studies*, 6(3), 321-361.

Westmore, B. (2013). R&D, Patenting and Growth: The Role of Public Policy, OECD Economics Department Working Papers. No. 1047, OECD Publishing, 2-48.

Willekens, M. (2018). Disclosure on corporate governance in the European Union. A configurationally analysis of board involvement in intergovernmental organizations: Corporate governance, international review. *Journal of Corporate Governance,* 3(4), 1-18.

Yang, S., Ishtiaq, M., & Anwar, M. (2018). Enterprise risk management practices and firm performance, the mediating role of competitive advantage and the moderating role of financial literacy. *Journal of Risk and Financial Management,* 11(3), 35.

Yu, T., Lin, Z., & Tang, Q. (2018). Blockchain: the introduction and its application in financial accounting. *Journal of Corporate Accounting & Finance,* 29(4), 37-47.

Zhao, X., Qu & Huang (2016). Effects of firm characteristics on enterprise risk management: Case Study of Chinese Construction Firms Operating in Singapore. *Journal of Management in Engineering*, 32(4), 0501-6008.

Zikmund, W. G., & Saunders, M. (2006). Business research methods (7th Edn.). Boston, MS: Cengage Learning Publishers.

# Appendix I: Letter of Introduction


**UNIVERSITY OF NAIROBI**
**COLLEGE OF HUMANITIES & SOCIAL SCIENCES**
**SCHOOL OF BUSINESS**

Telephone: 4184160-5 Ext 215
Telegrams: "Varsity" Nairobi
Telex: 22095 Varsity

P.O. Box 30197
Nairobi, KENYA


12th July, 2019

**TO WHOM IT MAY CONCERN**

**INTRODUCTORY LETTER FOR RESEARCH**
**MAFUMBO PATRICK WABWIRE REGISTRATION NO. D80/93987/2014**

The above named is a registered PhD candidate at the University of Nairobi, School of Business. He is conducting research on ***"Accounting Risk Management, Firm Characteristics, Internal Controls and Performance of State Enterprises in Uganda''.***

The purpose of this letter is to kindly request you to assist and facilitate the student with necessary data which forms an integral part of the thesis. The information and data required is needed for academic purposes only and will be treated in **Strict-Confidence**.

Your co-operation will be highly appreciated.

**Prof. Mary Kinoti**
**Associate Dean, Graduate Business Studies**
**School Of Business**

*MK/jm*

# Appendix II: Questionnaire

Dear Respondent,

This questionnaire is designed to collect data from state enterprises in Uganda to establish the relationship between, **accounting risk management, firm characteristics, internal control procedures and firm performance.** The data collected will be used solely for academic purposes and will be held in strict confidence. Your assistance in facilitating the study is extremely valuable. All information contained in this questionnaire will be treated as strictly confidential and will be accessed by only academic researchers involved in this study.

The questionnaire is divided into three sections.

**Section 1: General Information**

Name of the Firm (Optional) .....

Year established.....

**Section 2: Firm Profile**

1) What is the Name of your Organization (optional?) ……

2) What is the number of employees in the organisation? (Kindly provide the number)

3) What is the ownership status of your organisation? (Please TICK as appropriate)

| Status of ownership | | |
|---|---|---|
| i) | Fully owned by the state | |
| ii) | Partially by the state and registered members | |
| iii) | Others (Please specify) | |

4) Please select the items below that best describe your primary reason for existence.

| **Status of Business** | |
|---|---|
| Profit oriented | |
| State service delivery | |
| Savings for members | |

## Section 3: Accounting Risk Management

(1 = Not at all; 2 = Small extent 3 = Moderate extent 4 = Great extent 5 = Very great extent)

**3.1** To what extent has your state enterprise implemented the following risk-based statement reviews in accounting risk management where

| **Risk Based Statement Reviews for Accounting Risk Management** | **Respondents rating** | | | | |
|---|---|---|---|---|---|
| | Not at all (1) | Small extent (2) | Moderate extent (3) | Great extent (4) | Verygreat extent (5) |
| The state enterprise has a well-documented accounting risk management framework manual. | (1) | (2) | (3) | (4) | (5) |
| The state enterprise has procedural manual for preparation of financial statements. | (1) | (2) | (3) | (4) | (5) |
| The Board adopts the state enterprise's statements after the auditor general's review | (1) | (2) | (3) | (4) | (5) |
| The enterprise encourages and provides resources to employees to undergo appropriate training to develop their skills in accounting risk management. | (1) | (2) | (3) | (4) | (5) |
| The organisation provides mechanisms to address compliance with GAAPs. | (1) | (2) | (3) | (4) | (5) |

| | | | | | |
|---|---|---|---|---|---|
| The institution has a well-defined network of information and communication technology systems. | (1) | (2) | (3) | (4) | (5) |
| The accounting system provides rational assurance regarding the financial statements' reliability. | (1) | (2) | (3) | (4) | (5) |

**3.2** To what extent has your state enterprise implemented the following compliance and corporate governance in accounting risk management where (1 = Not at all; 2 = Small extent 3 = Moderate extent 4 = Great extent 5 = Very great extent)

| **Compliance and Corporate Governance** | **Respondent's rate** | | | | |
|---|---|---|---|---|---|
| | Not at all (1) | Small extent (2) | Moderate extent (3) | Great extent (4) | Very great extent (5) |
| The compliance policies are well laid down in the procedural manual of accounting. | (1) | (2) | (3) | (4) | (5) |
| The enterprise adopts reports as outlined by auditors | (1) | (2) | (3) | (4) | (5) |
| The accounting procedural weaknesses are addressed by management and rectified immediately | | | | | |
| The organisation's accounting operating rules and procedures are available on the organisation's official website. | (1) | (2) | (3) | (4) | (5) |
| The Board of Directors meets frequently to ensure that business is conducted in accordance with established rules and procedures. | (1) | (2) | (3) | (4) | (5) |
| The Firm has an audit committee in place | (1) | (2) | (3) | (4) | (5) |
| The audit manual is available and accessible by staff | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| There is periodic assessment and monitoring of procedural weaknesses and accounting risks | (1) | (2) | (3) | (4) | (5) |
| **Operationalization of Accounting Policies** | **Respondents' rating** | | | | |
| | Not at all (1) | Small extent (2) | Moderate extent (3) | Great extent (4) | Very great extent |
| The financial statements are prepared in compliance with internationally recognized accounting standards and generally accepted guidance | (1) | (2) | (3) | (4) | (5) |
| The implementation of policies in the accounting manual are well documented and available in the organisation | (1) | (2) | (3) | (4) | (5) |
| There is a designated officer in charge of ensuring compliance with the adherence to corporate governance policies, procedures and code of ethics | (1) | (2) | (3) | (4) | (5) |
| The Board of Directors is active and possesses an appropriate degree of management, technical, and other expertise, coupled with the mind-set necessary to perform its oversight responsibilities on accounting policies | (1) | (2) | (3) | (4) | (5) |
| The organisation possesses clearly well-defined and publicly accessible disclosure policy that define principles, rules and procedures of reporting to shareholders, relevant authorities, public and other related parties | (1) | (2) | (3) | (4) | (5) |
| The enterprises engage stakeholders in the development of policies, which leads to better compliance with regulations during implementation | (1) | (2) | (3) | (4) | (5) |

| | Respondents rating | | | | |
|---|---|---|---|---|---|
| **Operationalization of Accounting Policy** | Not at all (1) | Small extent (2) | Moderate extent (3) | Great extent (4) | Very great extent (5) |
| The financial statements are prepared in keeping in compliance with internationally recognized accounting standards, IFRS and GAAPs guidance | (1) | (2) | (3) | (4) | (5) |
| The implementation of policies in the accounting manual are well documented and available in the organisation | (1) | (2) | (3) | (4) | (5) |
| There is a designated officer responsible for ensuring compliance with company's corporate governance policies and code of ethics | (1) | (2) | (3) | (4) | (5) |
| The Board is engaged and possesses the necessary management, technical, and other expertise, as well as the mind-set, to effectively oversee accounting policies. | (1) | (2) | (3) | (4) | (5) |
| The organisation has a clearly well-defined and publicly accessible disclosure policy which defines principles, rules and procedures of reporting to stockholders, relevant authorities, public and other related groups | (1) | (2) | (3) | (4) | (5) |
| The enterprises engage stakeholders in the development of policies, which leads to better compliance with regulations during implementation | (1) | (2) | (3) | (4) | (5) |
| **Financial Restatement Support** | **Respondents rating** | | | | |

| | Not at all (1) | Small extent (2) | Moderate extent (3) | Great extent (4) | Very great extent (5) |
|---|---|---|---|---|---|
| The enterprise possesses financial and programmatic reporting, and mandating monitoring and evaluation mechanisms in place | (1) | (2) | (3) | (4) | (5) |
| The audited financial statements with attached disclosure notes of the enterprise for the last ten years are available for public viewing | (1) | (2) | (3) | (4) | (5) |
| The firm has been addressing material restatements of the business's financial statements for the last 5 years | (1) | (2) | (3) | (4) | (5) |
| The Board of Directors and audit committee review crucial findings and matters as pointed in the firm's financial statements by auditors | (1) | (2) | (3) | (4) | (5) |
| The enterprise publishes annual reports of its business operations in compliance with the principles and provides explanations in line with the law on commercial entities | (1) | (2) | (3) | (4) | (5) |
| The financial performance is communicated to stakeholders, employees after the financial statements immediately they have been audited | (1) | (2) | (3) | (4) | (5) |
| The errors discovered by external auditors in the financial statements are communicated and rectified before the financial statements are passed by the directors. | (1) | (2) | (3) | (4) | (5) |
| The audit committee is diligent in its examination of all financial transactions, including revisions to the evaluation of external auditors' reports. | (1) | (2) | (3) | (4) | (5) |
| | **Respondents rating** | | | | |

| **Complex Accounting Analysis and Reporting** | Not at all (1) | Small extent (2) | Moderate extent | Great extent (4) | Very great extent (5) |
|---|---|---|---|---|---|
| The accounting and financial processes are clear and well elaborated | (1) | (2) | (3) | (4) | (5) |
| Staff understand the operations and its activities the business the organisation is operating | (1) | (2) | (3) | (4) | (5) |
| The management understand the operations of activities carried out in the organisation | (1) | (2) | (3) | (4) | (5) |
| The financial statements are prepared in accordance with the International Financial reporting Standards, the GAAPs and laws of Uganda | (1) | (2) | (3) | (4) | (5) |
| The financial reports are written in a language understood by all management staff | (1) | (2) | (3) | (4) | (5) |
| Services and goods purchased are paid on cash and accrual basis | (1) | (2) | (3) | (4) | (5) |
| The statutory requirements are paid in time, PAYE, NSSF | (1) | (2) | (3) | (4) | (5) |
| The criteria for required expert and professional knowledge and experience, as well as other eligibility requirements for appointment of Board members, are adhered to. | (1) | (2) | (3) | (4) | (5) |
| The system records the allocation of expenditures per the respective guidelines | (1) | (2) | (3) | (4) | (5) |
| Staff undergo refresher training in their relevant areas annually | (1) | (2) | (3) | (4) | (5) |
| The fraudulent activities are easily monitored and identified for remedial concern | (1) | (2) | (3) | (4) | (5) |
| The Board of Directors questions and scrutinise wrongful management's activities, offers | (1) | (2) | (3) | (4) | (5) |

| | | | | | |
|---|---|---|---|---|---|
| alternative views, and act in the face of wrongdoing | | | | | |
| The process documentation is clear and procedural | (1) | (2) | (3) | (4) | (5) |
| **Close Transformation** | **Respondents rating** | | | | |
| | Not at all (1) | Small extent (2) | Moderate extent (3) | Great extent (4) | Very great extent (5) |
| Policies and procedural manuals are available and accessible by staff | (1) | (2) | (3) | (4) | (5) |
| The control systems are strong and reliable and computers are only accessed by only authorised persons | (1) | (2) | (3) | (4) | (5) |
| Each staff is given a password to access any computer in the organisation | (1) | (2) | (3) | (4) | (5) |
| The information and technology systems are up to-date and function well | (1) | (2) | (3) | (4) | (5) |
| The accounting systems are automated and work efficiently | (1) | (2) | (3) | (4) | (5) |
| The information technology systems are interlinked for all the departments | (1) | (2) | (3) | (4) | (5) |
| The accounting information is disseminated in time to management | (1) | (2) | (3) | (4) | (5) |
| The financial reports are submitted immediately after close of the financial year | (1) | (2) | (3) | (4) | (5) |
| The accounting system analyses the financial reports in detail ± P & L, Statement of financial position, budget analysis, funds-flow statements | (1) | (2) | (3) | (4) | (5) |
| The accounting software packages are changed every year | (1) | (2) | (3) | (4) | (5) |

| | | | | | |
|---|---|---|---|---|---|
| The computers are purchased after every three years | (1) | (2) | (3) | (4) | (5) |
| Budgets are prepared each year | (1) | (2) | (3) | (4) | (5) |
| Budgets are implemented and monitored promptly | (1) | (2) | (3) | (4) | (5) |

**Section 4: Effect of Firm Characteristics**

**3.3** To what extent has your state enterprise implemented the following Firm characteristics where 1 = Not at all; 2 = Small extent 3 = Moderate extent 4 = Great extent 5 = Very great extent

| **Firm Characteristics** | **Respondents rating** | | | | |
|---|---|---|---|---|---|
| | Not at all (1) | Small extent (2) | Moderate extent (3) | Great extent (4) | Very great extent (5) |
| The organisation structure is appropriate with operations | (1) | (2) | (3) | (4) | (5) |
| The organisation chart is not complex | (1) | (2) | (3) | (4) | (5) |
| The supervisor is available any time you need him | (1) | (2) | (3) | (4) | (5) |
| When work-related issues arise, they are resolved immediately. | (1) | (2) | (3) | (4) | (5) |
| The promotions are carried out every year | (1) | (2) | (3) | (4) | (5) |
| The enterprise has an organisation structure well elaborated | (1) | (2) | (3) | (4) | (5) |
| The workforce is sufficient to meet the enterprise's requirements. | (1) | (2) | (3) | (4) | (5) |

| | | | | | |
|---|---|---|---|---|---|
| The technology applied in the enterprise for risk management is current according to the market | (1) | (2) | (3) | (4) | (5) |
| The number of employees is quite big according to income | (1) | (2) | (3) | (4) | (5) |
| There is interference in operations from government | (1) | (2) | (3) | (4) | (5) |
| The enterprise's entire workforce is qualified. | (1) | (2) | (3) | (4) | (5) |

**Section 5: Effect of Internal Control Procedures**

**3.4** To what extent has your state enterprise implemented the following internal control procedures where 1 = Not at all; 2 = Small extent 3 = Moderate extent 4 = Great extent 5 = Very great extent

| **Internal control procedures** | **Respondents rating** | | | | |
|---|---|---|---|---|---|
| | Not at all (1) | Small extent (2) | Moderate extent (3) | Great extent (4) | Very great extent (5) |
| **Access Controls** | | | | | |
| The corporation maintains written policies and procedures governing physical security controls over computer equipment. | (1) | (2) | (3) | (4) | (5) |
| To restrict access to the computer room, physical access devices such as card-key or combination lock systems are used. | (1) | (2) | (3) | (4) | (5) |
| Staff have passwords to access information from all computers | (1) | (2) | (3) | (4) | (5) |

| | | | | | |
|---|---|---|---|---|---|
| The enterprise uses glass, cameras for surveillance to visually monitor | (1) | (2) | (3) | (4) | (5) |
| The enterprise uses glass, cameras for surveillance to visually monitor computer room access | (1) | (2) | (3) | (4) | (5) |
| The enterprise has security managers designated to control password security | (1) | (2) | (3) | (4) | (5) |
| Passwords are modified upon an employee's termination or transfer | (1) | (2) | (3) | (4) | (5) |
| | (1) | (2) | (3) | (4) | (5) |
| **Documentation** | | | | | |
| There is a policy regarding documents receipts and issuance | (1) | (2) | (3) | (4) | (5) |
| The corporation has standard documents used in all transactions when ordering for requisitions | (1) | (2) | (3) | (4) | (5) |
| The corporation has standard documents used in all transactions when ordering for requisitions | (1) | (2) | (3) | (4) | (5) |
| There is a central records department for all corporation departments | (1) | (2) | (3) | (4) | (5) |
| All receipts and payment vouchers are serially numbered | (1) | (2) | (3) | (4) | (5) |
| All documents are safeguarded and centrally locked up after payments | (1) | (2) | (3) | (4) | (5) |
| | | | | | |
| **Physical Audit** | | | | | |
| There is an inventory and assets register for the enterprise | (1) | (2) | (3) | (4) | (5) |

| | | | | | |
|---|---|---|---|---|---|
| The auditors often check physical assets to compare with the register | (1) | (2) | (3) | (4) | (5) |
| Auditors witness disposal of assets all the times | (1) | (2) | (3) | (4) | (5) |

| | | | | | |
|---|---|---|---|---|---|
| Auditors carry out regular checks of cash and other assets | (1) | (2) | (3) | (4) | (5) |
| Auditors are present for physical count of inventories on the day of closure of the financial year. | (1) | (2) | (3) | (4) | (5) |
| Auditors are present for physical count of inventories on the day of closure of the financial year. | (1) | (2) | (3) | (4) | (5) |
| | | | | | |
| **Authority of Approval** | | | | | |
| The designated managers are responsible for unit or departmental payments | (1) | (2) | (3) | (4) | (5) |
| The designated managers are responsible for unit or departmental payments | (1) | (2) | (3) | (4) | (5) |
| Managers approve documents before payment is made | (1) | (2) | (3) | (4) | (5) |
| Used documents are accessed by only designated officers attached to records department | (1) | (2) | (3) | (4) | (5) |
| All contracts for jobs are dully verified authorised by the public procurement and Disposal of assets Authority | (1) | (2) | (3) | (4) | (5) |
| Managers have passwords for passing payments | (1) | (2) | (3) | (4) | (5) |
| | | | | | |

| **Separation of Duties** | | | | | |
|---|---|---|---|---|---|
| One employees work is checked by the other | (1) | (2) | (3) | (4) | (5) |
| The institution is in possession of a clear procedures on separation of roles for all categories of staff | (1) | (2) | (3) | (4) | (5) |
| The staff authorising is not the same person making payments | (1) | (2) | (3) | (4) | (5) |
| The staff authorising is not the same employee collecting cash from the bank | (1) | (2) | (3) | (4) | (5) |

**Section 6: Firm Performance**

Please provide the following information on Firm Performance:

Financial Performance Indicators Measuring, profits, liquidity, budgetary variances and corruption perception index (CPI).

The figures regarding the performance in your enterprise-profits, liquidity, budget variances, and CPI for the period 2014 ± 2018.

# Appendix III: Secondary Data Collection Sheet

Analysis of the quantitative performance measurement of the above indicators: This was after standardising the figures and turning them into real values. It is from the real values that the Likert scale was applied after giving them their weighting of 1-5 of the Likert scale.

**Section 1: Financial Indicator of Measurement for Management Efficiency**

Measurement of Performance Indicators

| **Indicator** | **Measure** | **2014/2015** | | | **2015/2016** | | | **2016/2017** | | | **2017/2018** | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Profits | Ratio | | | | | | | | | | | | |
| Liquidity | Ratio | | | | | | | | | | | | |
| Budget variances | Ratio | Act. | Budg | Var | Act. | Budg | Var | Act | Budg | Var | Act | Budg. | Var. |
| CPI | Ratio | | | | | | | | | | | | |

Key to Budget Variances Act

= Actual amount

Budg= Budgeted amount

Var = The difference between the actual amount and budgeted figures

Analysis of the performance of the above indicators: This was after standardising the figures and turning them into real values. It is from the real values that the Likert scale was applied.

i. The averages of the profits for the years were calculated. The figures were turned into values from which the Likert scale was applied.

ii. Liquidity- The ratios were turned into values. It is from the values that they were turned into Likert scales.

iii. The averages of the variances were calculated. They were standardised by turning them into values. It is from the real values that the Likert scales were applied. iv. The average of the indices was calculated. This was then compared with the corruption perception index barometer to determine the degree of corruption and where the average lied.

**Section 2: Non-Financial Indicator of Measurement for Management Efficiency**

Indicate the extent to which you agree and disagree with each of the following statements regarding management efficiency. Rate of statements using: 1=Not at LL, 2=Small extent, 3=Moderate extent, 4= Great extend and 5 = Very great extent.

| **Management Efficiency** | Not at all (1) | Small extent (2) | Moderate extent (3) | Great extent (4) | Very great extend (5) |
|---|---|---|---|---|---|
| The government regularly publishes periodic accountability budget execution | | | | | |
| All major procurements must be handled through competitive bidding | | | | | |
| Promotions are based on documented performance | | | | | |
| There is conflict of interest rules for public Prevention procurement officials | | | | | |
| Employees are hired on merit after procedural interviews | | | | | |
| The conflict-of-interest rules for public procurement enforcement officials have | | | | | |
| There are rules protecting this the enterprise from political interference | | | | | |
| There is a mechanism that provides accountability, for investigation and | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| reporting of bureaucratic prevention of abuses and wrongdoing | | | | | |

**Thank you**

# Appendix IV: State Enterprises in Uganda

| No | Name of Enterprise |
|---|---|
| A. | Energy Sector |
| 1 | Uganda Electricity Transmission Co. Ltd |
| 2 | Uganda Electricity Generation Co. Ltd |
| 3 | Uganda Electricity Distribution Co. Ltd |
| 4 | Kilembe Mines Limited |
| B. | Education Sector |
| 5 | Nakivubo War Memorial Stadium |
| 6 | Mandela National Stadium Ltd |
| C. | Information and Communication Sector |
| 7 | Uganda Printing and Publishing Corporation |
| 8 | New Vision Printing and Publishing Company Limited |
| 9 | Uganda Post Limited |
| 10 | Uganda Broadcasting Corporation |
| 11 | Uganda Telecoms Ltd |
| D. | Trade and Tourism |
| 12 | Nile Hotel International Limited |
| 13 | Nile Hotel International Ltd |
| 14 | Uganda Property Holdings Limited |

15 Uganda Development Corporation (Group)

16 Uganda Wildlife Training Institute

17 Uganda Wildlife Conservation Education Centre

E. Lands and Housing Sector

18 National Housing and Construction Company Ltd

F. Gender Sector

19 National Social Security Fund

G. Agricultural Sector

20 Uganda Seeds Limited

H. Water and Environment Sector

21 National Water and Sewerage Corporation

I. Accountability Sector

22 Bank of Uganda

23 Post Bank Uganda Limited

24 Pride Micro Finance Ltd

J. Security Sector

25 NEC Farm Katonga Limited

26 NEC Construction Works & Engineering Limited

27 NEC Tractor Project

28 NEC Tractor Hire Scheme Limited

29 NEC Uzima Limited

30 NEC Luwero Industries Limited

K. Public Works and Transport Sector

31 Uganda Railways Corporation

32 Uganda Air Cargo Corporation

33 Civil Aviation Authority (2016)

34 Uganda National Oil Company Limited

Source: Office of the Auditor General, Ministry of Finance and Economic Planning and Uganda Bureau of Statistics 2019