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## Walden University

College of Management and Technology

This is to certify that the doctoral study by

Godwill Wanga

has been found to be complete and satisfactory in all respects, and that any and all revisions required by the review committee have been made.

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Walden University 2017

#### Abstract

Hedging of Exchange Rate Risks

by

Godwill Wanga

MA, University of Dar es Salaam, 1998 BA, University of Dar es Salaam, 1993

Doctoral Study Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Business Administration

Walden University

February 2017

#### **Abstract**

Risks associated with fluctuating exchange rates affect investment cost and investor profitability. Approximately 50% of firms in emerging markets have significant exposure to fluctuating exchange rates. Grounded in principal-agent theory (PAT), the purpose of this case study was to explore hedging strategies to mitigate risks of fluctuating exchange rates. The population comprised a census sampling of 12 bank hedgers (risk managers and controllers) in Dar es Salaam in Tanzania, East Africa. Data collection involved semistructured interviews, casual observations of the work environment, and analysis of reports including risk management, internal control, and compliance policies. Data were analyzed by coding and grouping narrative segments and significant statements into themes of participants' experience in hedging exchange rate risks. Method triangulation and member checking were used to increase the trustworthiness of interpretations. Four themes emerged directly related to the PAT conceptual framework: training and skills development, management of hedging strategies and contracts, corporate governance, and benefits to management and the organization through effective compensation programs. A focus on training and skill development helped develop appropriate exchange rate hedging strategies and corporate governance improved compliance with laws, regulations, and policies. The benefits of effective hedging strategies include a reduction in cost and increase in profitability. The findings may help improve the soundness of professional hedging practices, which will increase the stability of the Tanzanian banking system.

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#### Dedication

To my loving wife, Mariam, and our children, George and Godin, you are wondeful boys to cherish. Your prayers and encouragement have been invaluable. I am overwhelmed with gratitude to all who supported me to study to become part of the scholars. Through this doctoral study process, I have learned to love all of you more now.

#### Acknowledgments

I thank my God the almighty for keeping me alive and without his blessings this would not be possible. All that I am or hope to be, I owe to our God. I recocnize and thank my family for constant prayers and continued support until this point. I acknowledge my gratitude to my chair, Dr. Wen-Wen Chien, for her scholarly and professional guidance, feedback, and inspiration throughout the doctoral study journey in collaboration with Dr. Roger Mayer. I express my appreciation to my committee members, Dr. Kevin Davies and Dr. Judith Blando, for your informed and constructive comments on clarity and correctness of this doctoral study. I owe a debt of profound appreciation to every one of you for your professional and generous scholarly support throughout this doctoral study process. Needless to say, the final responsibility and accountability on this doctoral study rest solely upon myself.

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#### Section 1: Foundation of the Study

Effective hedging strategies improve profitability by mitigating risks associated with business transactions (Iatridis, 2012). Chong, Chang, and Tan (2014) noted that bank leaders undertake hedging strategies to invest excess cash and reduce risk. To mitigate such risks of fluctuating exchange rate, bank leaders executed cost-effective hedging strategies, including buy-low and sell-high spot exchange rates, prompt settlement of foreign currency denominated obligations, and selling or buying of hedge derivatives contracts (Frestad & Beisland, 2015; Raghavendra & Velmurugan, 2014; TIB Development Bank, 2015). The purpose of this study was to explore the strategies bank leaders use to mitigate risks of fluctuating exchange rates.

#### **Background of the Problem**

The exchange rate regime comprises fixed exchange rate and floating exchange rate systems (Born, Juessen, & Müller, 2013; Breedon, Pétursson, & Rose, 2012; Makin & Rohde, 2012). The fixed exchange rate system collapsed in the 1970s and contributed to the price and economic crises, and emergency of floating exchange rate regime brought about risks including higher exchange rate volatility, sensitivity and variability of cash flows, and inflation that affected the value of investments (Hanappi, 2015; Sikarwar, 2014; Treepongkaruna, Brooks, & Gray, 2012). Similar to many countries, Tanzania adopted a flexible exchange rate regime with transactions denominated in foreign currencies (Governor of Bank of Tanzania, 2014). This strategy did not eliminate risk; in 2012, the central Bank of Tanzania (BOT) suffered a loss of Tanzania Shilling (TZS) 153.6 billion from exchange rate appreciation, and in 2013, another loss of TZS 11.25

billion (BOT, 2014). The appreciation of UK Sterling by 5% cut the rate of import inflation by 4.5% and the UK consumer price inflation by around 0.5% (Kirby & Meaning, 2014). Bank leaders adopted short and long derivatives contracts or spot market transactions including buy-low and sell-high transactions to increase values, liquidity, and earning of their investment or holdings in foreign currency (Lamia & Faouzi, 2014; Mohanti & Priyan, 2014; Raghavendra & Velmurugan, 2014). While BOT encouraged business leaders to hedge against exchange rate risks by buying forward contracts (Controller and Auditor General, 2015), business leaders need knowledge of cost-effective hedging strategies to mitigate risks of fluctuating exchange rates.

#### **Problem Statement**

Fluctuating exchange rate risks negatively affected investment value and profitability (Chong et al., 2014; Raihan, 2013). About 50% of 1,523 firms sampled from 20 countries were significantly exposed to fluctuating exchange rate risks (Ye, Hutson, & Muckley, 2014). The general business problem is fluctuating exchange rates affect business leaders' ability to manage transactions denominated in a foreign currency. The specific business problem is that some Tanzanian bank leaders lack effective hedging strategies for mitigating risks of fluctuating exchange rates.

#### **Purpose Statement**

The purpose of this qualitative single case study was to explore what strategies

Tanzanian bank leaders use to mitigate risks of fluctuating exchange rates. The target

population included managers directly involved in hedging activities to mitigate risks of

fluctuating exchange rates in a private bank in Dar es Salaam, Tanzania. The implications

of this study include contribution to positive social change by helping business leaders to recognize the significance of effective hedging strategies to mitigate risks of fluctuating exchange rates to enhance likelihood of organizational profitability. The study results can influence the economy and real needs of communities of customers, depositors, managers, and shareholders.

#### **Nature of the Study**

Research methods include quantitative, qualitative, and mixed methods (Marshall & Rossman, 2015). I used a qualitative method for this study. The qualitative method is appropriate for inductive research on human practices, experiences, and perceptions of a phenomenon for which the researcher does not start with a hypothesis but generates meaning and analysis from the collected data from participants (Koch, Niesz, & McCarthy, 2014). Quantitative researchers use numerical data for analysis of statistical relationships between variables about a quantifiable phenomenon as opposed to studies of human experiences and perception (Norris, Plonsky, Ross, & Schoonen, 2015).

Onwuegbuzie and Byers (2014) suggested mixed method for collecting, analyzing, and interpreting quantitative and qualitative data in a single study. Because I did not analyze numeric data, quantitative and mixed methods were not appropriate for this study.

The use of a single case study design was appropriate for this study to explore hedging strategies to mitigate risks of fluctuating exchange rate risks. The case study design focused on a specific bounded system or problem localized in a single organization through detailed, in-depth data collection from multiple sources (Love & Barrett, 2015; Yin, 2014). Researchers use a phenomenological study design to explore

the lived experiences and perceptions as the fundamental sources of knowledge (Dasgupta, 2015; Welch, Rumyantseva, & Hewerdine, 2015). Researchers also applied ethnographic design for direct observation and description of cultural behavioral patterns, conditions, and beliefs (Levine, 2015; S. Robinson, 2013). Both the phenomenological and ethnographic study designs would have failed to meet my goal of exploring a specific bounded system.

#### **Research Question**

The overarching research question was the following: What hedging strategies do Tanzanian bank leaders use to mitigate the risks of fluctuating exchange rates? Qualitative researchers narrow the focus of the question to specific interview questions to capture the data and information required (Bolderston, 2012). I conducted personal, indepth interviews with 12 senior bank officials who hedge and trade in the foreign exchange market in Tanzania. Researchers use interviews to understand the research problem, clarify and respond to questions and answers, share insights and knowledge, and raise new or complex issues by using probing and spontaneous questions to explore the breadth of their perspectives (Kanter, 2012).

#### **Interview Questions**

The PAT, which Fama (1980) developed, provided a guide to formulate interview questions. The insights gained from focused interview questions help the researcher answer the research question (Andrews, 2013). The interviews consisted of 10 openended interview questions directly linked to the PAT constructs to influence conversations

with participants. Through interviews, I captured the experiences and perceptions of participants in line with the conceptual framework of PAT:

- 1. What hedging strategies does your bank use to mitigate risks of fluctuating exchange rate?
- 2. What hedging strategies have you seen used by other bank leaders to mitigate risks of fluctuating exchange rate?
- 3. What guidance do you receive from the board of directors on hedging to mitigate risks of fluctuating exchange rate to improve bank's performance?
- 4. What benefits do the shareholders, board of directors, and management earn by undertaking effective hedging strategies to mitigate risks of fluctuating exchange rates?
- 5. What influences hedging strategies to mitigate risks of fluctuating exchange rate?
- 6. What estimated exposure or cost is covered by effective hedging strategies to mitigate risks of fluctuating exchange rates?
- 7. What performance contract or agreement exists between the shareholder and management for undertaking effective hedging strategies to mitigate risks of fluctuating exchange rate?
- 8. What compensation or reward do you claim for the earned benefits of undertaking effective hedging strategies to mitigate risks of fluctuating exchange rate?

- 9. What special knowledge or skill do you need for undertaking effective hedging strategies to mitigate risks of fluctuating exchange rates?
- 10. What else, if anything, would you like to add to our conversation about the success factors and strategies related to hedging to mitigate risks of fluctuating exchange rates in your bank?

#### **Conceptual Framework**

I used the conceptual framework of PAT in this doctoral study. The PAT was appropriate for my study because the theory provides a framework for understanding management, governance, accountability, and trust in business performance (Ebrahim, Battilana, & Mair, 2014: Fama, 1980). The PAT is relevant to this doctoral study because the constructs of PAT frame top-down, string control, and prudential mechanisms or processes that influence behavior, performance, and outcomes of shareholders, board of directors, management, and other employees (Bachtler & Ferry, 2015; Shaoul, Stafford, & Stapleton, 2012). The PAT constructed an efficient and viable form of economic organization through the separation of security ownership by shareholders, the board of directors, and the management or agents (Y.-J. Chen & Zhao, 2013; Fama, 1980). PAT constructs are compatible with the business models, facts, objectives, strategies, and resources in the interest of shareholders, board of directors, and management of business organization (Csaszar, 2013; Katz, 2014). Shareholders apply PAT to incorporate a business firm and influence their course through election of the board of directors to offer policies, regulations, and a nexus of binding contracts with different agents or management professionals to enhance business profitability and fair market value of

business holdings (Fama, 1980; Jensen & Meckling, 1976; Katz, 2014). The PAT conceptual framework helped frame this study on the strategies to mitigate the risks of fluctuating exchange rates.

#### **Operational Definitions**

Technical terms in the doctoral study requiring definitions are the focus of this section. Researchers form different operational definitions for specific purposes, including pragmatic and realistic measurement or indicators (Jirout & Klahr, 2012). The terms and definitions are as follows:

Cash flow: Cash flow is a measurement of inflows and outflows of cash and cash equivalent classified as operating, investing, or financing activities (International Accounting Standards Board [IAS], 2013).

Conflict of interest: A situation that can arise if a person or firm acts in two or more separate capacities and occurs when an outside influence affects professional decisions regarding research is an example of a conflict of interest (Turski, 2012).

Contract: Contract specifies the terms and conditions of an agreement between two parties and represents the legal relationship coordination mechanism and reminder of transaction's terms or work to be done in a variety of forms, ranging from informal promises to formalized agreements, in which identity matters as both parties adapt to disturbances (Schepker, Oh, Martynov, & Poppo, 2014).

Exchange rate: A price of local currency in foreign currency or the ratio of exchange for two currencies is an exchange rate, whereas an increase in an exchange rate

is an appreciation of foreign currency and a depreciation of local currency (International Financial Standards Board [IAS], 2013).

Fair market value: Fair market value is an estimate price that a party would receive upon selling an asset if transactions were to be conducted in an orderly market on the measurement date or paid to transfer a liability in an orderly transaction between market participants at the measurement date (IAS, 2013).

*Firm*: A set of contracts covering the way factors or inputs are joined to create outputs and the way receipts from outputs are shared among inputs and each factor or input is owned by somebody is a firm (Fama, 1980).

Foreign exchange option: The right to buy or sell a specified amount of foreign currency or natural commodities at a specified price or known exchange rate at any time up to a specified expiration date of future contract during the future contract validity period is a foreign exchange option (A. Singh, 2014).

*Hedging*: A way of managing risks by disposing or taking an offsetting position in the market is hedging (Quetsch, n.d).

*Interbank money market*: A market that refers to the borrowing and lending of money between financial institutions with the interbank interest rate (Rujira & Zongjun, 2015).

*Monetary items*: Monetary items refer to units of currency held as assets and liabilities to be received or paid in a fixed or determinable number of units (IAS, 2013).

#### **Assumptions, Limitations, and Delimitations**

The subsequent subsections include definitions and details on the assumptions, limitations, and delimitations of the study. The underlying assumptions deepen understanding of perspectives behind research questions whereas limitations reflect the conceptual foundation and design of study, and delimitations focus on boundary of relationships (Marshall & Rossman, 2015). I included basic assumptions, limitations, and delimitations in this study.

#### Assumptions

Assumptions are necessary concepts and beliefs without sufficient or concrete proof (Neuman, 2013). Assumptions are ideas acceptable as self-evident truths or facts that usually stem from the research methods and influential factors to inform the scope of analysis of research study (Fan, 2013; Leedy & Ormrod, 2013). The qualitative researchers report their preconceived views, assumptions, and concepts within the context of specific applications (Collins & Cooper, 2014; Keele & Minozzi, 2013). The understanding of study assumptions helps a researcher develop robust conclusions (Nkwake, 2013). I assumed that hedging was a strategy that creates value of investment. Another assumption was that all participants were honest and provided candid responses or true data to interview questions that created value for this study. The analysis of participants' responses and the review of current literature indicated appropriate hedging strategies to mitigate risks of fluctuating exchange rates in the banking business.

#### Limitations

Limitations are uncontrollable threats or constraints to the research methods, validity, scope or extent, and outcomes of research study (Jackson, Botelho, Welch, Joseph, & Tennstedt, 2012; Silverman, 2013). Research limitations resulting from research designs challenge conceptual framework and generalizability or conclusiveness of study, and the discussion about limitations demonstrates understanding of such a reality (Marshall & Rossman, 2015). The limitations of this research included the short time limit of a case study. The participants' data might not reflect best practices in the banking industry. The hedging strategies that worked in the past might not work in future economic environment. The identified limitations helped to restrict the scope of this study.

#### **Delimitations**

Delimitation refers to the constraints or narrow choices the researcher makes to alert readers about the contextual boundary line or scope of study (Barbour, 2013; Hyett, Kenny, & Dickson-Swift, 2014). The geographical location marked the study and data delimitations (Battaglia & Mazzuca, 2014). I delimited the scope of this single case study to a small sample of participants from a single organization in Eastern Tanzania, and the results would not be generalized to any different culture beyond this geographic area. This case study included organizational cultural values, customs, symbols, and artifacts of participants with the focus on exploring effective hedging strategies leaders of banks used to mitigate risks of fluctuating exchange rates. I did not analyze the cost of emerging technologies in the banking industry that change the hedging decisions.

#### Significance of the Study

Individuals shard knowledge based on study findings, conclusions, and recommendations (Patria, 2012). The results of this study contributed to the existing knowledge of how to hedge effectively to mitigate risks of fluctuating exchange rates. Lan, Chen, and Chuang (2015) recommended the need of firms to hedge exchange rate risks of all currencies. The study also captured potential implications for positive social changes at individual, family, organizational, and social levels consistent with its scope.

#### **Contribution to Business Practice**

This study contributed to effective business practices and solutions regarding hedging strategies to mitigate risks of fluctuating exchange rates. The hedge derivatives contracts are essential to mitigate economic, political, credit, market, liquidity, and operational risks in both domestic and foreign markets of financial and commodity investments (Javier, 2014; Manchiraju, Hamlen, Kross, & Suk, 2015). Zhou and Wang (2013) suggested the derivatives as effective hedging strategies against risk exposure of unfavorable exchange rate fluctuations in the foreign exchange markets to varied degrees. IAS (2013) recommended effective hedging strategies to mitigate operational risks and foreign exchange exposure on investments and to improve disclosure to the public of a bank's financial condition and performance in accordance with IAS 39. This study contributed knowledge to the leaders of banks who effectively hedge to mitigate risks of fluctuating exchange rates of local (TZS), vehicle, or international currencies (US\$) and other financial assets. The results of this study inform bank leaders to mitigate exchange rate risks to enhance cash flows, liquidity, and profitability for rewarding of shareholders

or principals, compensating the management, and improving fair market value of holdings. The exchange rate fluctuations determined the bank profitability through return on equity and noninterest margin (Osuagwu, 2013). The failure of a bank affects economic performance regarding credit risks and loss of employment, which contribute to poverty incidence.

#### **Implications for Social Change**

The results of this case study informed bank leaders of comprehensive risk management strategies, guidelines, and prudent practices for the benefit of the entire banking system and livelihood of the communities of customers, depositors, and shareholders in the economy. The effective hedging strategies to mitigate exchange rate risks reduce the rate of bank losses, improve financial savings, enhance bank liquidity and profitability from expansion and economies of scale or scope for dividends to their shareholders, increase taxes to the government, and increase employment opportunities.

Increased awareness of cost-effective financial hedge derivatives helps banks mitigate market risks and improve economic conditions in the communities where they serve. The cost-effective hedges cut transaction and marketization costs that affect economic growth (Cheng, 2013). Patria (2012) proposed the positive social change management by innovative agents to shift the balance of driving and opposing forces and pressure and to leverage the drivers of change. Leaders of banks and financial institutions who complied with risk management and regulatory guidelines controlled their credit, liquidity, market, operational, and foreign exchange risks (BOT, 2014).

#### A Review of the Professional and Academic Literature

The literature review includes the critical analysis of theoretical, methodological, thematic, professional, and technical studies regarding the foundation and scope of the case study. Scholars in a new discipline anchor their work on the shoulders of giants and experts in at least a foundational discipline (Mudambi, Hannigan, & Kline, 2012). Such giants or scholars contribute to journals, books, reports, and government documents that provide context and justification of research. Researchers review literature to structure and focus the study, to formulate research problem and purpose and to confirm a conclusion or existing theory (Carolan, Forbat, & Smith, 2015). The theory is the basis, foundation, guiding framework, and lens with which to articulate research questions and to promote understanding of data and knowledge (Y.-J. Chen & Zhao, 2013; Koch et al., 2014). The review of the literature includes the conceptual framework of PAT that Fama (1980) elaborated.

Researchers review empirical research literature to identify gaps and sharpen questions about the topic and new knowledge (Koch et al., 2014; Yin, 2014). The current literature review has indicated the importance of the research questions, case study, and the analysis of foreign exchange rate risks and hedging strategies for sustaining growth in the innovative financial economy. Donaldson, Qiu, and Luo (2013) insisted on reviewing literature to understand some study designs conventionally regarded as insufficient with inconclusive findings for generating research questions for new research study. The review covers an analysis of PAT constructs that account for the existence of a real-world

business case, including the hedgers who use specific derivative strategies to mitigate risks of fluctuating exchange rates.

I have summarized, paraphrased, and synthesized prior research works pertaining to the topic of this case study. The review of literature reflects the conceptual foundation of a study and gaps in the existing body of knowledge (Denney & Tewksbury, 2012; Poulis, Poulis, & Plakoyiannaki, 2013). The content of literature review section includes secondary sources such as peer-reviewed journals, scholarly or seminal books, reports, Walden publications and dissertations, and government and multinational institutional publications. The literature review is organized in subtopics including analysis of PAT and alternative theories, exchange rate, hedging, and relevance of the study.

#### **Organization of Review of Literature**

The literature review organization includes the strategy for searching literature, the PAT, and alternative theories such as game theory and stakeholders' theory. Groß (2015) organized the existing knowledge in the literature on retail mobile shopping by using term-based search methods to peer-reviewed articles in English language journals of a certain date in online databases. I reviewed literature that included the analysis of exchange rate fluctuations, hedging strategies, and relevant research methodologies to this study. The literature map in Figure 1 indicates a diagram of study's literature review.

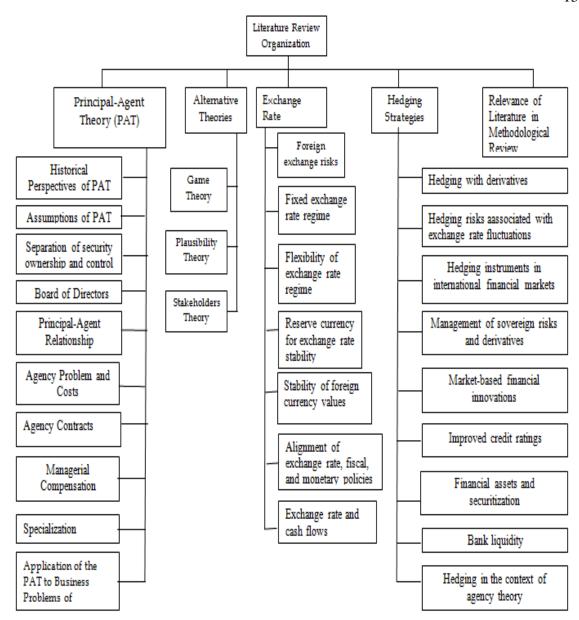


Figure 1. Literature review organization diagram.

#### **Research Strategy for Searching Literature**

I searched for the literature sources by using various strategies such as navigating the websites, identifying and retrieving scholarly or journal articles from online databases or websites via the Internet and through reference lists of articles I had already retrieved.

Examples of sources used to find scholarly documents include the Walden University Library's electronic databases, Thoreau with Full Text, ProQuest Central, ScienceDirect, Google Scholar, Emerald Management Journals, Sage Premier, Business Source Complete, LexisNexis Academic, Medline with Full Text, and other official websites of organizations such as BOT, NMB Bank, and CRDB Bank. The search for online literature involved the following search terms: exchange rate, interest rate, supply of currency, exchange rate risks, interbank markets, currency risk, banks, theory, hedging, derivatives, futures, forward, option, swaps, debts, case study, design, method, sampling, limitation, assumptions, reliability, validity, principal-agent and so on. The sources of reviewed literature include the websites and journals with peer-reviewed articles, books, and seminal articles.

The number of references is 444, including 429 articles and 15 books. Of these 444 references, 409 (92%) are peer-reviewed articles. The number of sources published within 5 years of my expected graduation in 2016 is 417 (94%). The reviewed articles, books, and dissertations focused on the purpose of this study, exploring hedging strategies Tanzanian bank leaders use to mitigate risks of fluctuating exchange rates.

#### **Principal-Agent Theory**

The PAT is the primary conceptual framework for this doctoral study. The PAT includes assumptions on the assets or security ownership by shareholders or risk-bearers, effective control of firm by board of directors, and management of assets by agents or risk-averters in the context of contractual principal-agent relationship as an efficient and viable form of economic organization (Fama, 1980; Jensen & Meckling, 1976; Schepker

et al., 2014). The principal authorizes and entrusts an agent through a contract to invest and manage business in his or her interest. The principal grants trust and authority to an agent through a formal or informal contract (Garber & Pate-Cornell, 2012). The increase in trust by 10% improved the growth rate of gross domestic product (GDP) by 0.5% and manufacturing employment by 1.3% (Algan & Cahuc, 2010). The agent performs a basic managerial function of systematically searching for worthwhile growth opportunities and return on capital. The incorporation of shareholders or assets into a corporate body in accordance with legal rules acts as a single or fictional person who might sue or be sued, lend, borrow, or issue stocks and acts in many other ways distinct from the shareholders and the agents who manage it (Fama, 1980). The advantage of a corporate body includes pooling of sufficient resources for share ownership and large-scale operations (Katz, 2014). D. Chen (2015) noted that alienability of legal claims applies on shares with limited liability that frees each stakeholder from dependence on the amount of wealth of every other stockholder and holds the promise of increasing access to justice and stricter judicial scrutiny. Shareholders, board of directors, and agents act with maturity, rationality, and sensitivity for a corporation's fundamental purpose of value or income creation and continued growth.

Historic perspective of the PAT. The basic assumption of PAT is the existence of a double asymmetry between the principal and the agent because they have different preferences as well as different levels of information. Lapuente (2011) argued that PAT evolved in the field of economics in the 1970s to understand the prevailing problem between the principal and the agent at a given price. The leaders comply with principles

of effective corporate governance to address principal-agent problems and success in decision-making and operation by management in the market economy (Fülöp, 2013). The shareholders or stockholders exercise good governance and control of corporate affairs through their board of directors (Raelin & Bondy, 2013). The PAT explores how contracts should be designed to address variations in the informational asymmetries between principal and agent. For instance, the solution to double asymmetry of a customer or principal who wants a loan and the manager or agent who wants to receive good pay, bonus, or high interest rate to afford the transaction costs is an outcome-based contract.

Assumptions of the PAT. According to Fama (1980), the main conceptual assumption about a firm is that management controls but does not own resources. While shareholders and agents act from self-interest, both parties realize that their destinies depend on the survival of team (Fama, 1980). Lane (2013) applied PAT framework to bureaucratic politics on basis of conflicts, information asymmetry, and interactions between agents or bureaucracy and public policy makers. In the PAT framework, the government is the principal for agents or employees in public service delivery, and population is principal for political agents including members of parliament. The PAT provides for the principal to own enough stock to exercise voting and effective control of a board of directors and incumbent management or agent.

**Separation of security ownership and control.** While the principal is the owner, the board of directors delegate corporate control to agents or management. The difference of interests between agents and shareholders exists because of separation of ownership

and control (Gailmard, 2012). Ryder, Griffins, and Singh (2012) suggested that the agent owes to the principal some legal obligations including carrying out of contractual obligations and duties, obeying the principal's instructions, avoiding any conflict of interest and corruption, and accounting for the resources. The top executives attribute the company's performance, compensation, and maximization of shareholders satisfaction to the strength of linkage between security ownership and control (Ngai, 2012). The separability and alienability help leaders to specialize in managerial decisions, coordination, and control of productivity and ability without bearing the risk in production (Bardhan, 2013). In this case study, the business leaders or agents undertook hedging strategies including spot, forward, and swap contracts to mitigate exchange rate risks for maximizing wealth of banks.

Board of directors. Fama (1980) noted the roles of boards of directors in the PAT framework, including sound oversight or governing of a business entity in a relatively low-cost way to protect the shareholders' assets and ensure decent return on investment and to maximize value and the best interest of society. Luhman and Cunliffe (2013) recommended the treatment of a board of directors as part owners who employ managers or agents. Fülöp (2013) recommended the board of directors to apply and comply with the principles of effective corporate governance. Masulis and Mobbs (2015) noted that the board of directors' responsibility is to hire, fire, appoint, and remunerate corporate officers, balance competing interests, address or avoid conflict of interest, and mediate conflicts between shareholders and agents who run the corporation. The board of directors, including outside directors who are nonexecutive or independent nonexecutive

directors, and inside directors or executive directors monitor the presumably self-serving top management executives and set their compensation (Ngai, 2012). Ngai (2012) argued that the boards of directors affliated with incumbent management compromised their roles to monitor and to provide their expertise. Fama (1980) suggested the inclusion of outside directors in the board to make it viable as a market-induced mechanism, institution, and referees for low-cost mechanisms of internal control, scrutiny, contracting, and remuneration of highest decision makers.

Halman (2013) articulated principal-board relationship that the principal is owner of a business while the board of directors serves as an autonomous fiduciary body, entrusted with the power to balance competing interests and forces on behalf of and for the benefit of the principal. The board acts on behalf of, and is subordinate to, the organization's full assembly of shareholders that usually chooses the board of directors as the highest authority in the management of corporation. The board of directors applies knowledge and experience to undertake fiduciary and legal duties in the care or best interest of a business organization, shareholders or principlas, depositors, and creditors (Bailey, 2015). The role of board of directors of a bank includes reviewing investment safety, risks, liquidity or marketability, and earnings, and ensuring compliance with approved written policies and strategies regarding risk appetite, exposure, and management. For instance, the board of directors ensures that the open foreign exchange position is within the risk tolerance set by the BOT.

**Principal-agent relationship.** The objective of the principal-agent relationship includes decisions based on the principle of maximizing wealth (Garber & Pate-Cornell,

2012; Ryder et al., 2012). The agency cost affects the principal agent relationship in business context. D. Wang, Xu, and Li (2015) argued that the principal-agent relationship is not always smooth, including the low trust between central government and local government, because each party became suspicious of other party's motives or interest. Schepker et al. (2014) recommended application of good governance principles to enhance high trust and contractual relationship to promote transparency, free knowledge exchange, and creation of value that is shared by both parties. The contractual principalagent relationship exists whenever the principal or shareholder who bears the residual risks hires the agent or manager who works for the shareholder to represent his or her interests in business. The bank owners, through their board of directors, hire managers to develop hedging strategies to mitigate fluctuating exchange rate risks of loans in foreign currencies at a competitive interest rate or commission to reduce the risks and enhance business profitability. The incentives of bank management include sale of such loans at the best interest rate for a bonus or commission of a certain percent of sales of such loans instead of a flat interest rate.

Agency problem and cost. The agency cost is the cost to a principal for hiring an agent on its behalf without sufficient information to ensure that the agent acts in its best interests. Agency problem and costs exist because of different interests and information asymmetry of the agents and in the shareholders (Jensen & Meckling, 1976). Hallman (2013) noted that agency problem or conflict of interest is inevitable because of conflicting agenda and lack of enforceable contract to align the interests between shareholders and managers. Ngai (2012) noted the agency problem of squandering

shareholders' money on ill-advised schemes or projects, refusing to liquidate while fair market value falling below liquidation value, debt finance and delusions or external financial control of management by debtors or creditors. The agent or management brought about agency costs or principal-agent problem when pursued own interests at the expenses of shareholders (Falato, Kadyrzhanova, & Lel, 2014). The agency problem is driven by pursuing self-serving and economic advantage agenda by an agent at the expense of principal rather than minimizing agency costs (Chang, 2014; Schepker et al., 2014).

Renders and Gaeremynck (2012) found that severe agency conflict index negatively affects the quality and effectiveness of corporate governance and value, and recommended legal reforms to improve disclosure to reduce agency costs. Segal and Lehrer (2012) noted that opportunism puts the personal interests first, a situation that create agency problem to shareholders. The strategies to mitigate agency costs included prudential regulations, offering ownership rights or equity in the form of stock options to agents, and regular payments of cash dividends (Bardhan, 2013; Halman, 2013). Bao, Chan, and Zhang (2012) proposed holding of cash reserves for addressing the agency problem. The company deployed capital funds from within or outside because of cash flow volatility, asset tangibility, access to capital, and agency costs (Hugonnier, Malamud, & Morellec, 2015). The alignment of agent's interest with those of shareholders or principals decreases the agency problem and costs and principals, even though they know only imperfectly what management is doing, can have a fair degree of confidence in management to serve their interests.

**Agency contract.** The agency contract is the agreement between the principal and agent for procuring or hiring an agent's services on its behalf and serves as a monitoring instrument. Fama (1980) recommended complete contracts in the principal-agent relationships because a risk-averse agent has superior information than the principal and firms negotiate and endorse rental agreements for all factors of production from the beginning to the end of each production period. The imperfectly constructed contracts and undue exploitation led to agency costs with the potential conflict of interest between principals or shareholders and agents (Jensen & Meckling, 1976). Halman (2013) argued that there is no enforceable contract that can perfectly align the interests of shareholders and management. Agents or business leader procured incentives to take actions that maximize the shareholder value (Manchiraju et al., 2015). The dynamic and attractive contracting based on calibrated incentives and returns for robust performance diminished the agency problem of limited liability, moral hazard, and adverse selection (Chassang, 2013). Contracting is severely affected by limited observation of contingencies and asymmetric relationships. Insurance premia may vary with coverage to counter the effects of diverse selection or moral hazards.

Managerial compensation. Fama (1980) defined management as a type of labor characterized with a special role of decision making and control of firm to encourage interest and maximize stock price that increase the value, safety, liquidity or marketability, and earnings of principal's investment. The managerial wage contracts provided for manager's wage that is consistent with financial performance or share value of marginal product, and that high payout ratio reflects management compensation in line

with the interests of of shareholders and other stakeholders (Halman, 2013). Albonico, Kalyvitis, and Pappa (2014) suggested the maintenance of principal's capital for creation of value and returns for the benefits of both creditors and stockholders. The agent or management maintains share capital to ensure going concern position of corporate.

A well-designed equity arrangement associated executive payoffs to long-term stock (Sur, Magna, & Cordeiro, 2015). The top management and employees improved motivation and business performance through higher pay and stock value or worth (von Lilienfeld-Toal & Ruenzi, 2014). The sensitivity of high-level chief executive officer (CEO) compensation to firm performance is usually important because investments with unusually long terms were vulnerable to market swings or shocks and depressed both their prices and liquidity (Bachtler & Ferry, 2015). The assumptions and predictions of PAT are not generalized to explain top executive compensation at least for the major listed companies and a mere compensation contract that is linked with company performance (Ngai, 2012). The rewarding of bank's management is related to ability to command demand in the labor market and higher salaries because of success in pursuing the goals of wealth maximization.

**Specialization.** Specialization is the setting apart of a particular organ for the performance of a particular function by applying different productive inputs or talents. An extreme form of specialization like operational focus led to efficient provision of service-mix and uses of resources (Capkun, Messner, & Rissbacher, 2013). Cunat, Gine, and Guadalupe (2013) recommended specialization that permits adoption of good governance associated with positive abnormal stock returns and improvements in long-

term value and operational performance of corporate body. Absolute specialization is positively linked to wage dynamics (Kemeny, & Storper, 2015). The specialization rests on the structure of private property rights and system to allocate resources to higher market value uses.

Application of the PAT to business problem. Zhu (2013) applied the principal-agent setting to study and derive the optimal contracts with shirking actions during relaxation and suspension of agents. Yousfi (2013) applied the PAT to study the Islamic banking based on Shariah rules and found stronger contractual principal-agency relationships and fewer agency problems than in conventional financial systems. The principal-agent relationship, information asymmetry, and mechanisms to control agency costs were fundamental elements of PAT to manage diverse business settings (Wiseman, Cuevas-Rodríguez, & Gomez-Mejia, 2012). Gailmard (2012) recommended the PAT to focus on the agents' responsiveness, decisions, actions, and corporacy status to leverage realization of the principal's goals within the institutional settings in which they interact. The PAT provides for the relationship between investors or shareholders and managers in business and nonprofit organization.

The business leaders employed systematically organized business knowledge and skills to enhance the business profitability by using contract to inform the agent, broaden the agents' vision, and allow agent to arrive at a better understanding of entire picture (Y.-J. Chen & Zhao, 2013). Marttonen, Monto, and Kärri (2013) suggested that the decision makers consider the importance of working capital management in their industry and attention should be paid to active management of working capital for profitable

businesses. The bank owners or delegate to the management the control of daily activities of banks such as hedging decision making under the oversight of board of directors to enhance profitability.

The role of management is to operate the bank in compliance with applicable laws and within the confines of board-adopted policies and regulations. For instance, the board of directors set the maximum risk appetite, exposure or exchange rate risk tolerance for the bank to run or assume. Van de Venter, Michayluk, and Davey (2012) noted that financial risk tolerance is a stable trait that is unlikely to change regularly. The board performs an annual review of bank's risk management initiatives including hedging or insurance program. In addition to performance review, the board evaluated the management processes that control the bank through operations. The responsibility for identifying risks, making decisions to hedge such risks, and implementing appropriate control procedures rests within the board of directors and management including a knowledgeable hedging agent.

In the banking industry, the shareholders invest and management deals with foreign currency liquidity, capital adequacy, profitability, and compliance with risk management strategies. The foreign currency activities include exchange trading operations, foreign currency loan portfolio management, foreign currency reserves and deposit accounts, foreign currency balances (liabilities or assets), the due payments from banks accounts, and foreign currency costs (BOT, 2014). IAS (2013) noted that bank's management team hedges to mitigate risks of fluctuating exchange rates, interest rates including the exchange differences that affect banks' capital or equity, net realized and

unrealized gains, and losses recognized in profit or loss statement in accordance with the requirements of IAS 21. Accounting standards promulgated by the IAS mandate bank leaders to apply the hedging instruments, hedged items, and functional currency that most faithfully represents the economic effects of underlying transactions, events, and conditions, and relevant foreign operations. Firms with strong internal firm-level or external country-level governance created significant value premium by using currency derivatives to hedge exchange rate exposure (Allayannis, Lel, & Miller, 2012). Exposure to the currency risk occurs in the context of foreign exchange transactions, holdings of foreign exchange reserves, foreign currency positions of assets, liabilities, and equity at carrying amounts, and participation in local interbank financial exchange market (IFEM; Gatopoulos & Louberge, 2013).

Principals or shareholders and agents may perceive different games and the principal's contract offer may not be optimal from the agent's viewpoint. Love and Levin (2012) noted that corporate leaders lack integrated and holistic frameworks to address economic failure, competitive inferiority, and a range of business concerns including unattainability of economic viability of core businesses. The risk bearers, principals, or residual claimants in the modern corporation may suffer from the failings of management team or agents; and risk-averse management will always choose to share part of risk or uncertainty in the evaluation of his performance with the firm's risk bearers. As a result, principals or owners may shift risks among agents or management teams with relatively low transaction costs and may hedge against failings of any given team by diversifying their holdings across teams.

I applied the PAT in this case study. The bank leaders and managers embarked on initiatives to reduce agency costs, analyze information to act in shareholder's interests, invest money prudently, and expand business to maximize the value of banks' worth. The bank leaders adopted the theoretical constructs or prescriptions of PAT to ensure that the fluctuating exchange rate did not affect cash flows for operations and financing of investment.

#### **Alternative Theories for PAT**

I used the PAT as a strong main business theory for this study. Other theories complemented PAT including game theory, and stakeholders' theory. According to the PAT, agency costs are associated with conflict of interest at the expense of principal's interest and compromises the significance of PAT in business organizations (Jensen & Meckling, 1976). The opportunism puts the personal interests first without pejorative intent is controlled by stewardship in the principal-agent theoretical framework (Segal & Lehrer, 2012). The discrepancy of interests between principal and agent creates the strict contrast with the standard game theory that assumes common knowledge and information of game to all. The visionary principal agency relationship reflects stakeholders, stewardship and commitment like that of government of people, by the people, for the people (Katz, 2014; Segal & Lehrer, 2012). I reviewed the game theory and stakeholders' theory to cover all other aspects beyond the PAT. The rigorous analysis of alternative theories involved creativity in analogical reasoning and positive transfer of ideas to new context of case study research.

Game theory. Hanappi (2015) noted that Neumann and Morgenstem codified the game theory in 1944 and in the early 1950s and John Nash generalized the results and provided the basis of modern field of game theory. According to Hanappi (2015), the major assumptions in the classic game theory include rationality, common knowledge, and actions that make every player such as managers, shareholders, and debt-holders as happy as possible, potentially at the expense of other opponents. Dekel and Siniscalchi (2014) explained principles of epistemic game theory as opposed to classic game theory including natural and rational ways of reasoning by taking into account choices of opponents before reaching own final decisions because such choices determine outcomes in the game.

The game theory approach is useful in analysis of strategic behavior of an agent including risk appetite, risk tolerance, preferences and endowments and dynamics of markets (Bardhan, 2013; Schepker at al., 2014). The game theory was important to model the realistic firm claims, decisions and best practices (Amato, Zillante, & Amato, 2015). The game theory reflects the consequence of interaction between actors such as managers, shareholders and debt-holders in the zero sum market to the extent that any gain is at somebody else's expense. Glesbert and Steiner (2015) recommended disciplining of a firm by competition and innovation opportunities as such a firm realizes its destiny on survival of its management team in competition with other management teams. I declined to use the game theory in this study because it is based on the assumptions of mathematical quantitative forms, from very strong and likely unrealistic to much weaker forms in the study of behavioral game theory.

**Stakeholders' theory.** Freeman (1984) described the stakeholders' theory as based on the principles of stakeholder's management by examining the relationships and responsibilities of a corporate body to employees, customers, suppliers, society, and the environment regarding corporate governance concerns. Stakeholders such as regulator, controller, partner, and owner influence management's legitimacy, power, participation, and relevance, in the organizational relationship (Mainardes, Alves, & Raposo, 2012). Management is a fundamental stakeholder to integrate both business discourse and moral substance for special and close relationship in the stakeholder theory (Tullberg, 2013). Stakeholder theorists put attention to factors that create values and enhance firm performance measures for stakeholders' benefits (Harrison & Wicks, 2013). Managers are accountable to stakeholders for their actions, strategic corporate vision, and value maximization (Jensen, 2010; Sen & Cowley, 2013). Managers attempted to balance the interests of all corporate stakeholders, including financial claimants, employees, customers, communities, and governmental officials (Jensen, 2010). The stakeholders' framework defined how managers account for their actions, provided corporate vision, strategy, and tactics to unite firm's constituencies in its efforts to complete and add value to investors.

The agency theory, game theory, and stakeholder's theory apply to social and business settings. The game theory was not applied to this study because included mathematical models to the interaction under the assumption that each person's behavior influences the wellbeing of other stakeholders in the game, representing serious situations for serious purpose of businesses. Puyvelde, Caers, DuBois, and Jegers (2013) combined

the agency theory with aspects of stakeholder theory and used the stakeholders' theory perspectives to identify categories of principal-agent relationships in nonprofit organization to avoid internal agency problems. In this study, I used PAT to explore the principal-agency principles that influence practices among all stakeholders including shareholders, board of directors, and management.

#### **Exchange Rate Fluctuations**

IAS (2013) defined exchange rate as value of a currency regarding another currency in the foreign exchange market of competitive trading between buyers and sellers. Exchange rate influences spending decisions that involve translation of different countries' prices into comparable terms (Raihan, 2013). Bystrom (2014) noted the exchange rate movement as an essential element in the estimation of actual portfolio credit risks in line with the monetary theory that provides for currency as a medium of exchange and pricing of goods and services and the supply of money. The depreciation of foreign currencies relative to the U.S. dollar affected economic growth, eroded practical liquidity of investment portfolio, threatened capital funds, fueled inflation and loss risks (Treepongkaruna et al., 2012; Wei, Sihai, & Tao, 2014).

Foreign exchange risks. The Controller and Auditor General (2015) defined exchange rate risks as loss of value of foreign exchange reserves or purchasing power of portfolio or transactions in the IFEM occasioned by adverse foreign exchange fluctuations. Raihan (2013) found that multinational companies suffered low competitiveness from exchange rate risks because their supply chains, output markets,

and sources of finances are situated in different nations. The exchange rate fluctuations subjected industries to exposure and called for new hedging policies (Sikarwar, 2014).

Severe financial consequences of exchange rate exposure included transaction exposure in IFEM and economic or market exposure that affects demand, market share position, and present value of future cash flows to meet international transaction requirements (IAS, 2013). The banks and financial institutions mitigated risks of exchange rate fluctuations on investments through derivative contracts such as swap, forward, and futures contracts and their respective options in vast and rapidly growing global financial markets (Chong et al., 2014; G. Singh, 2013). In the flexible or floating exchange rate regime, the relationship between local and foreign currencies depends on common and spillover information and hedging position the traders take in one currency to offset the risk exposure of a position taken in other currency (Treepongkaruna et al., 2012). The hedging strategies are essential to mitigate foreign exchange risks exposures to the bank.

Fixed or pegged exchange rate regime. The main characteristics of fixed exchange rate regime in emerging markets indicated trade openness, economic development, foreign-currency liabilities, and foreign exchange reserve holdings (Ghosh, 2014). Tamgac (2013) used survival analysis model to examine factors that influence the survival rate of fixed exchange rate regime including time, openness, change in foreign reserves, growth, real exchange rate alignment, claims on government, and sociopolitical instability. In fixed exchange rate regime, dollarization was high during high capital inflows and low during high capital outflows (Boudias, 2015).

The economies that operated rigid or fixed exchange rate regimes suffered from low financial sustainability (Gnimassoun & Coulibaly, 2014). The outcome of foreign reserves depletion included the collapse of fixed exchange rate regime and foreign currency credit policy in favor of domestic banks in Korea (Kang, 2013). The movement or fluctuations of pegged renmimbi to dollar exchange rate influenced the dollar-euro exchange rates in both the long run and the short term (Peijie & Bing, 2014). The International Monetary Fund (IMF, 2014) discouraged the countries from adopting fixed exchange rate regimes as it limits rooms for the exchange rate policy. In the fixed exchange regimes, the monetary and fiscal policies, and availability of foreign exchange limit pressure for exchange rate movements in the economy.

Flexibility or floating of exchange rate regime. The exchange rate regime determined firm-level exchange rate exposure for emerging markets firms and the floating exchange rate regime minimized exposure of foreign exchange rate fluctuations (Ye et al., 2014). The growth recovery in flexible exchange rate regime fared well in global financial crisis (Tsangarides, 2012). Countries should adopt an internationally agreed system of managed flexible exchange rates to target a competitive or real exchange rate that is consistent with a sustainable current-account position (IMF, 2014). IMF argued that policies to achieve real exchange rate depreciation or nominal exchange rate devaluation allowed a stronger current account balance for a given level of economic output or GDP and affects fiscal balance. Countries with fully floating exchange rate and sufficient buffers relied on market absorption mechanisms such as depreciation and counter-cyclical macroeconomic stabilization policies (Burns, Kida, Lim, Mohapatra, &

Stocker, 2014). Countries with less flexible exchange rate regimes, large external liabilities, and foreign denominated credit focused on prudential policies and financial inflow regulation (Burns et al., 2014). The change in the market-based exchange rates depend on the currency values, future needs for currency, commission, profit on exchange, and volume of business transactions in the currency. These elements are beyond the control of individual banks and trigger risks mitigation strategies by each bank leader.

Reserve currency for exchange rate stability. The exchange rate stability can be achieved through interventions by using reserve currencies. The effectiveness of hedging strategies and exchange rate interventions is short-term and a country's ability to deploy them would depend on the size of reserves that it had accumulated in the past (Burns et al., 2014; Drakopoulou, 2014). In India, for instance, the net exporting industries gained from depreciation of rupee and any central bank's intervention such as appreciation of rupee above a certain level was not beneficial to the economy (Sikarwar, 2014). In contrast, the Sub-Saharan countries appear to have elevated the risk, with deteriorating reserve positions and accumulation of external debt, along with high exposure to shortterm external debt service in a few cases (Burns et al., 2014). The U.S. dollar served as a vehicle currency for foreign exchange intervention and settlement of trade and financial transactions, an international reserve currency because most countries use it as a unit of exchange, medium of exchange, and store of value, and a reference currency in exchange denominations and invoicing of trade and financial transactions (Treepongkaruna, Brailsford, & Gray, 2014). The Renminbi emerged as new international currency that

would account for about 3% to 12% of international reserves by 2035 because of its convertibility as an international currency within and around the Asian region and strong growth of China economy (J. Lee, 2014). The single reserve currency such as the U.S. dollar that is convertible currency for domestic currency such as TZS, might be more efficient than multiple vehicle currencies regarding enhanced yield and exchange rate stability.

**Stability of foreign currency values.** The stability of foreign currency values is a necessary condition for the economy and exchange rate stability. Theoretically, exchange rate stability could be achieved through a variety of policy options including a single currency, a currency basket or an anchor currency, managed float exchange rate regime, stability of other prices such as consumer price index and interest rates (Rajaguru, Khalid, & Barbera, 2014). Historically, no international currency maintained its status in face of high inflation rates because it hurt lower income majority groups disproportionally and aggravates real income inequality (Journard, Pisu, & Bloch, 2012). Exchange rate stability can be affected by Dutch disease that reflects the negative effects on an economy of anything that gives rise to a sharp inflow of foreign currency, such as discovery of large reserves. The Dutch disease phenomenon affected the exchange rate movement that accounted for the manufacturing employment loss between 33% and 39% between 2002 and 2007 (Beine, Bos, & Coulombe, 2012). The currency inflows through exports led to currency appreciation, making the country's other products less price competitive on the export market (Sikarwar, 2014). The erosion of price competitiveness of Australia as a tourist destination for instance was associated with exchange rate

appreciation that promoted outbound tourism at the expense of inbound tourism (Dwyer, Pham, Jago, Bailey, & Marshall, 2014). The frequent movements in exchange rate expectations caused interest rate volatility and financial instability, reduced the productivity growth and profitability of firms, and hampered economic growth (Haddad & Pancaro, 2010). The interventions in the foreign exchange market enhance exchange rate stability.

The types of exchange rates to stabilize include exchange rate for spot, forward, and swap contracts that sellers or buyers quote for trade, delivery, and payment on a specific future date. The BOT participated in the IFEM to complement instruments for liquidity management in the economy and smoothening out short term volatility in the exchange rate (BOT, 2014). BOT (2014), on behalf of government, required the financial and public sector institutions to hold government bonds for liquidity management purpose. The quoted buying or selling rates incorporated margin or commission for the money dealers in trading and different rates may also be quoted for cash for immediate sale or resale, electronically, and documentary transactions albeit additional time and cost of clearance. A bank leader solves volatility problems by encouraging the government to comply with global prudential policy measures and foreign exchange management policies and procedures for improved financial sustainability of the country's economy.

The growth in financial economy reflects the enhancement of value of the international currency in the international transaction that is subject to inflationary erosion. The currency depreciation kept inflation in double digits although accommodative monetary policy stance stimulated demand in many countries (World

Bank, 2014). If the market demand is high, the price will increase, and the high demand for local products implies high demand for the currency needed to pay for those products (Wei et al., 2014). The currency value depended on its attractiveness in the market place and financial excesses that influence inflationary expectations, on interest rate it offers, and the expected change in the currency's exchange rate against other currencies (Lin & Fang, 2013). The bank leaders manage risks on the decline in economic growth that typically accompanies economic mismanagement that cause international currencies to lose their status or value.

Alignment of exchange rate, fiscal, and monetary policies. The link or interaction between fiscal and monetary policies and exchange rate instruments affects the economy. The macroeconomic variables of growth in GDP, inflation, bank deposits and assets, capital adequacy, operational efficiency, and liquidity determined profitability of commercial banks in Sub-Saharan Africa (Munyambonera, 2013). The exchange rate fluctuations reflected the monetary policies of the countries (BOT, 2011). The financial executives executed monetary policies and risk management strategies based on positive relationship between risks of exchange rate and interbank offered rate (Rujira & Zhongju, 2013). The monetary and fiscal policies and decisions on concessional and commercial loans in foreign exchange led to accumulation of huge debts with high interest bill that affected exchange rates and interest rates (Dosi, Fagiolo, Napoletano, Roventini, & Treibich, 2015). The external borrowing facilitated appreciation of exchange rate that damaged exports, encouraged importation, reduced excess demand for domestic goods and services, and jeopardized the sustainability of fiscal position such as increase in tax

burden (Doğan & Bilgili, 2014). The deficit financing by external debt facilities reduced economic growth (Ramzan & Ahmad, 2014). The concessional loans with high content of grant and sound macroeconomic policy address the negative effects of external debt on economic growth and pressure on fluctuating exchange rates. The tight monetary policy and stable nominal exchange rate impinge on real interest rate, cost of debt service, and viability of fiscal position.

The fiscal policies include fiscal consolidation efforts such as a cut in spending to reduce deficit, debt, inflation and raising taxes to increase revenues or a combination of two measures to reduce deficits in foreign exchange position (Erceg & Lindé, 2013; Hernández de Cos & Moral-Benito, 2013). The determinants of fiscal consolidation framework indicated budget deficit, taxation, public debt sustainability, openness, inflation rate, interest rate and per capita GDP (Agnello, Castro, & Sousa, 2013). The governments and central banks encouraged consolidation in the banking system in an attempt to fight the financial crisis and implicitly or explicitly to control for the current fundamental characteristics of banks (IMF, 2014). The fiscal consolidation and monetary policies involve amalgamations of financial undertakings toward a solid economic base.

The challenges of aligning exchange rate and fiscal and monetary policies include inconsistencies or trilemma in the economic fundamentals. Yusoff and Febrina (2014) noted the unattainable macroeconomic trinity of exchange rate stability, unfettered capital flows, and monetary policy oriented toward domestic objectives at the same time. The devaluation of Renminbi against the U.S. dollar pushed up foreign demand for domestic surplus (Cheng, 2013). Erceg and Lindé (2013) found that fiscal consolidation

measures are politically difficult in democracies to cut sizably government spending and to raise taxes. The bank leaders manage the safety, liquidity, and markets risks through macroeconomic and fiscal consolidation policies to enhance bank performance.

**Exchange rate and cash flows.** Cash flow is the inflows (gross receipts) and outflows (gross payments) of cash and cash equivalents, classified into operating, investing, and financing activities (IAS, 2013). The cash flow from operations includes income from operations plus noncash expenses less noncash sales and the movement of money in or out of business during a specified time of operations ought to be trending upward or stable. Most theoretical work and motivations for corporate risk management of foreign exchange rate exposure focused on cash flow from operations, investments, and financing activities and hedging to address volatility in cash flows (Hatefi, Moradi, & Reza, 2015). The trend of cash flow from operations, whether trending upward, downward, or stable, indicated financial performance including profitability of investment (Harvard Business School Publishing Corporation, 2005). Firms suffered exchange rate risks and exposures from undertaking foreign currency-based activities, such as imports and exports to the extent that corporate cash flows and firm value were a function of exchange rate, and rendered the management of exchange rate risk an important corporate objective and activity (Lan et al., 2015). The bank leaders and investors determined the intensity of hedging of exchange rate fluctuations risks based on the investment liquidity, cash flows regarding operations, fixed assets, and financial activities reflected in changes in working capital. For instance, the exchange rate exposure affected the cash flows of a bank, and so hedging ensured cash flows to the

banks when risky investment opportunities have low payoffs and banks can pay out low hedge finance or commission to meet the anticipated higher cash flows.

## **Hedging Strategies**

Hedging is the process of managing risk by disposing, taking, or running offsetting positions in the market to maintain profit margin (Quetsch, n.d). Leading states in the international financial system hedged to avoid confrontation risks (Tessman, 2012). Le (2013) advocated hedging as a rational and viable option for normalization, economic pragmatism, direct engagement, and hard and soft balancing of strategic international relations. The bank leaders applied hedging strategies such as spot, forward, swap, and options contracts to mitigate or offset any risks for upkeeping profit margins and value of holdings (Bardhan, 2013; Lindberg, 2012). The hedging strategies include short position hedge and long position hedge with derivatives such as futures, forward, swaps, and options contracts to buy or sell currencies to minimize risks, enhance profitability, and meet obligations such as capital adequacy and to avoid bankruptcy. Every firm is exposed to foreign exchange risk because of complex and integrated financial markets and the hedging strategies amounted to 50% of total turnover of derivatives traded in 2010 (Chong et al., 2014). An effective hedging strategy involves hedging instruments and hedged items or underlying asset, whose fair value or cash flows affected by hedged risk.

The bank leaders ran exchange risks after determining the cost-effective hedging strategies to mitigate exchange rate exposure (Churchill et al., 2014; Raihan, 2014). The leader of CRDB Bank, like NMB Bank, applied both the IAS 39 and guidelines issued by the BOT to hedge by using instruments such as derivatives, forward, futures, and options

contracts or instruments to reduce and leverage risks (CRDB Bank, 2013; NMB Bank, 2012). NMB Bank (2012) noted that running or taking credit risk, liquidity risk, and market risks including operational risk are core and inevitable transactions to the banking business. The recording and classifying of hedge transactions need to be in accordance with formally recognized procedures (BOT, 2014). Banks held small dollar amounts on their balance sheets for minimum risk retention. The CRDB Bank hedged within the set exchange rate exposure limits of TZS 693 million in 2012 and TZS 911 million in 2011 (CRDB Bank, 2013), while NMB hedged within TZS 342 Million in 2012 and TZS 315 Million in 2011 (NMB Bank, 2013). The amount and timing of receivable (earnings), payable, or operating cash flow be known with reasonable certainty for execution of an effective hedging strategy.

The management of banks hedge effectively for protecting against risks of changes in exchange rates, fair value, and cash flows of hedging instruments that undercut their profit to the extent that the spot exchange rate and the future exchange rate cancel or offset each other out. The effectiveness of hedging reflected the degree to which changes in the fair value or cash flows a hedged item attributable to a hedged risk were offset by changes in the fair value or cash flows of hedging instruments (IAS, 2013). IAS (2013) noted hedging instrument as a designated derivative (for a hedge of risk of changes in foreign exchange rates only) or a designated nonderivative financial asset or nonderivative financial liability whose fair value or cash flows are expected to offset changes in the fair value or cash flows of a designated hedged item to maintain profit margin. IAS (2013) noted also that hedged item include asset, liability, firm commitment,

highly probable forecast transaction or net investment in a foreign operation that exposes the entity to risk of changes in the fair value of future cash flows, and is designated as hedged. This implies the use of realized profit to offset the higher exchange rate the bank will have to pay for the US dollar in the IFEM.

The leaders of the CRDB Bank derived and quoted future exchange rates from the spot rates in the interbank markets and covered the long position by an offsetting short position as viable hedging instruments to manage exchange rate exposure, improve profitability, and enhance value of their holdings (CRDB Bank, 2013). Bank leaders who participate in the IFEM do hedge to mitigate risks of fluctuating exchange rate of currencies including appreciation and depreciation of US\$ and TZS, respectively. The increase or decrease in unrealized appreciation or depreciation resulting from the monthly adjustment should be charged or credited to income (IAS, 2013). This type of hedging strategy maintained both short position and long position undertakings in the underlying assets for options sold and purchased (Mohanti & Priyan, 2014). In entering into interbank markets, the bank is confident and ensures that the counter-party has the financial soundness and liquidity to meet their obligations. If the counter party is unable to deliver the currency based on the contracted to sell, the bank must either dispose the currency acquired for delivery under the contract or purchase the currency expected to receive and had in turn contracted to deliver to a third party.

**Hedging with derivatives.** The characteristics of derivatives included: (a) change in value in response to changes in interest rates or foreign exchange rates, (b) lacks ownership representation, and (c) have a future settlement date (IAS, 2013). The

most important derivatives contracts or contingent financial claims were futures, options, and swaps, whose behavior depended on the underlying value of traded assets (Kubendran, Rachiraju, Mishra, & Bommareddy, 2014). The hedge derivatives were too costly and risky because of uncertainty of future returns or price levels between spot and futures market prices and the structure of markets, whereas, a deep market would offer products including the offering of currency derivatives (Beber & Fabbri, 2012; Raghavendra & Velmurugan, 2014; G. Singh, 2013). Bank leaders bet on how exchange rate will move over a given time and use derivatives to mitigate risks through hedging by using hedge instruments such as spot, forward, swaps, and debt contracts, as hybrid investments for future cash payments. The hedging contracts include provisions for each bank to decide how much and from whom to borrow that in turn determine the interbank interest rates and exchange rates.

Futures contract refers to a promise or right to buy a specified amount of foreign currency that will be delivered on a specified date in the future and hedging by futures contracts was too risky because of uncertainties on the future nominal price level (Bick, 2012; G. Singh, 2013). The increase in demand for hedging by producers raised hedging costs or premium through price-pressure in futures markets and spot prices when speculative activity reduces (V. Acharya, Lochstoer, & Ramadorai, 2013). A bank leader hedges receivables with futures contracts to maintain the set profit margin in foreign currencies (Bardhan, 2013). Future contracts are standardized contracts traded on organized exchanges, like interbank markets, to sell or buy a specified security, money

market instrument, or other financial or natural commodities on future date undertaking at a specified price.

Forward contract involves a foreign exchange forward trading agreement that parties agree to exchange currencies in future date at a prenegotiated exchange rate to ensure receiving of same amount of foreign currency or natural commodities on the established date. A forward transaction involved a contract between parties who agreed and set the price to trade for dollars in 90 days (Chong et al., 2014; Mohanti & Priyan, 2014). A forward contract in the forward market is similar to an over-the-counter (OTC) instrument directly through the bank, like booking a hotel room to be paid for later, while the price or rate is set, but exchange occurs at future date. The forward contracts for forward placement or delayed delivery of securities; a party agrees to purchase and another to sell a specified security at a specified price for future delivery and differs from spot exchange rate that is the exchange rate for immediate delivery (IAS, 2013). In spot market such as IFEM, banks realize profit or loss through purchase and sale of foreign exchange at different exchange rates.

Swap contract is a derivative with specific date on which counterparties agree to calculate over a notional principal amount and exchange streams of cash flows such as foreign exchange rate, collateral or periodic interest payments of one party's financial instrument against or for those of other part's financial instrument. Yang and Han (2012) recommended currency swaps to be used by central banks to provide short-term liquidity to help enhance financial stability for both counterparts. The currency swaps provided for the actual or notional exchanges between the two parties of a fixed amount of one

currency for fixed amount of another (Rahman & Ramil, 2015). H. Wang, Yang, and Zhang (2015) advised bank, insurer, and investor to sign equity-for-guarantee swaps to hedge credit risks attributed to borrower who could not access direct loans because of low credibility and resolved problems of financing constraints and improved growth of welfare level. Contrary to the futures, forward, or option contracts, the notional amount of swap is not exchanged between counterparties but to hedge certain risks such as fluctuations in foreign exchange rate or interest rate risks.

Option is an opportunity to make buy and sell decisions if the market takes the right turns. In a contract between a buyer and the seller of option, the buyer purchased the right to buy something and the seller obligated him or herself to deliver item or perform some service (Kubendran et al., 2014). X.-T. Wang, Zhao, and Fang (2015) proposed the mixed hedging strategy in option pricing and portfolio hedging. Options in the form of put and call options in hedging protected the underlying positions from downturn; and proposed call options when strike prices were less than 80% and put option applied for strike price more than 120% (R. Pathak, Bhattacharjee, & Reddy, 2015). The option contract gives opportunities and right to buy or sell a specific underlying investment at a price within a preset time period for a profit. The financial futures, forward, swaps, and options contracts in their respective markets are deals for hedging to offset or net some of their possible risky exposures and the opportunity for the gains in future.

Business leaders hedge to enhance principal's value by reducing the adverse effect of volatility of cash flows through fluctuating exchange rates. The hedging mitigated negative effect of borrowing costs on capital expenditure and firm value and consistently

and economically reduced costs of debt, bankruptcy risks, agency costs, information asymmetry in industries (J. Chen & King, 2014). By using the qualitative case study I understood the hedging strategies and transactions, analyzed how and why hedging mitigates the fluctuating exchange rate risks in a commercial bank.

**Hedging risks associated with exchange rate fluctuations.** The hedging of risks of fluctuating exchange rates is a common phenomenon in banking industry. The bank leaders hedged cash flow to reduce precautionary demand for cash, improve reliance on credit lines, and leverage the bank's value (Disatnik, Duchin, & Schmidt, 2014). The bank leaders hedged by using foreign exchange derivatives including currency options, currency swaps, forward, and futures contracts to lock in foreign exchanges the corporations should retain or transfer and to control and mitigate foreign exchange risks related to currency-based assets and liabilities (Drakopoulou, 2013). A bank leader hedged receivables with futures contracts to maintain or improve value at risk, ensure gains or profits, and protect against loss because of exchange rate fluctuation in the flexible or floating exchange rate regime (Raihan, 2013). In hedging, a manager or trader takes the opposite position in a cash market securities or derivate instruments (future contract); so that any loss in the position held will be offset by a gain in the opposite position (Lindberg, 2012). The theoretical motivations for corporate risk management of foreign exchange risk are based on significant difference across various forms of countries, diversification, cash flow volatility, and standard deviations of changes in the exchange rates. In agency theory, a bank, like any other firm, is a nexus of contracts between different parties including managers or agents and shareholders or principals,

who legally empower the agents to act on their behalves within binding contractual arrangements.

**Hedging instruments in international financial markets.** The hedging of risks of fluctuating exchange rates in the IFEM is necessary to enhance the safety, liquidity or marketability, and fair market value of bank's investments. The BOT licensed banks to invest in various foreign currencies and to hedge by applying hedging derivatives, hedged items, and hedging instruments in compliance with the IAS 39 and IAS to mitigate risks associated with foreign exchange rates fluctuations (BOT, 2014). The large banks acted as brokers or dealers of hedging transactions for big companies or speculative bets for investment funds (Alquist & Gervais, 2013). The bank and other financial institutions meet shareholders' and customer's foreign needs by granting loans, accepting deposits, or providing spot or forward exchanges. Hedgers mitigated risks of foreign exchange exposure on financial instruments denominated in a foreign currency other than the functional currency or nonmonetary items (IAS, 2013). Researchers used the results of two empirical tests to indicate that fund managers failed to manage their exposure (Javier, 2014). The change in exchange rates influences on the cash flow of bank and economic conditions both domestic and foreign markets. The adaption of risk management strategies depends on the economic conditions and nature of risks to be hedged including credit risks, market risks, liquidity risks, and operational risks.

Management of sovereign risks and derivatives. The banks and financial institutions used various strategies to manage risks (Brunnermeier, & Oehmke, 2013). Soin and Collier (2013) suggested broader definition of risk management including

management control, responsibility, and accountability. The leaders of banks and financial institutions mitigated risks on the exchange rate fluctuations and cash flow downward trending through derivative investments such as procurement of futures and forward contract and options to take and reduce risks (Gamba & Triants, 2013). Song, Wang, and Yang (2014) advocated for investment in liquid financial market to partially hedge cash flow risk. Kalteier, Molt, Nguyen, and Posch (2014) proposed the value-based approach to assess sovereign risk that combined both market measures from government bond, credit derivatives and other markets as well as economic indicators help to evaluate sovereign risk on their asset side. The application of macro-prudential policy and regulations helped leaders to manage risks of credit and liquidity crises, and the effects of asset securitization to maximize gains (Calmès & Théoret, 2013; Claessens, Ghosh, & Mihet, 2014). Kalteier et al. (2014) proposed banking leaders need to manage risks by using financial derivatives in financial markets and undertake comprehensive legal and regulatory reforms to ensure solvency for the sovereignty debt sustainability. The risk management practices include risk identification, measurement, control, and treatment or hedging against loss exposures.

Market-based financial innovations. The international finance is a dynamic area that introduces new financial products and process overtime. Glesbert and Steiner (2015) suggested enhancing the value and benefits of financial products by the quality of experienced services, emotions, perceptions, expectations, and social benefits the bank provides. In this area, business leaders used money as raw material for trade and exchange through banks (Beus & Whitman, 2015; Patterson, 2014). These include bonds,

private placements, notes, securities, preferred stocks, and debt (Raihan, 2013; Wesoff, 2014). The innovation in the financial industry was a reality of information and communication technology (ICT) revolutions for improved efficiency in financial markets (Sassi & Goaied, 2013). Hsu, Tian, and Xu (2014) noted that countries with developed equity markets support technological innovation rather than credit markets for industries that depend on external finance. Hedging was inevitable in the banking system because it used disaster-prone technology for financial growth that subjected the economy to vulnerability of credit crunches (Miller, 2012). The financial innovations increase the scope for financial initiatives and offer unique solutions to meet the demand for the financial instruments and assets in the financial economy.

Improved credit ratings. The loose credit rating is associated with higher default rates (Alp, 2013). The sovereign credit rating influenced private investment in re-rated economies (S. Chen, Chen, Chang, & Yang, 2013). The effectiveness and efficiency of legal system promoted bank efficiency, risk taking, and credit rating (J. Zhang, Wang, & Qu, 2012). Hirth (2014) recommended regulatory intervention to address dishonest and inflating credit rating agencies in the current credit rating market. The credit rating agencies with most often difficulties triggered sudden shifts in risk perceptions, procyclical effects of automatic contractual or regulatory mechanisms, escaping local regulations, oligopolistic market, and US-centric (White, 2013). The automated rating procedures and datasets of creditors and debtors information reduced costs to determine and enhance credit worthiness and judgment regarding likelihood to fulfill their obligations (Hajek & Michalak, 2013). The credit rating agencies comply with the credit

rating principles and regulatory procedures including increased transparency, integrity, financial flexibility, and measures of credit quality.

Financial assets and securitization. Salah and Fedhila (2014) referred securitization to the process of selling of financial assets, loans, securities and derivatives previously held to maturity on the balance sheet of financial institution to secure funds in the capital market. The characteristics of commercial banks that undertook securitization include higher credit risk exposure, profitability, higher funding costs, less liquidity, and less diversified loans. Securitization minimized financial costs, repaid existing debts, and financed shareholders without affecting debt-holders (Lemmon, Liu, Mao, & Nini, 2014). Agarwal, Chang, and Yavas (2012) proposed the securitization strategy of using innovative mortgage backed securities as low-default-risk loans in prime mortgage market and secondary markets and of higher-default-risk in loan portfolios. Financial securities and assets facilitated transfer of funds from households to firm for economic development despite the low demand because of weak and short-term insurance contracts and futures markets of nominal prices such as interest and exchange rates not indexed to the inflation rate (G. Singh, 2013). Securitization transferred more credit risks than claims-paying assets (Ortiz, Stone, & Zissu, 2013). Other researchers argued that the securitization market did not necessarily produce negative effects (Battaglia & Mazzuca, 2014). The business entities with scarcity of funds innovate or design financial securitization to leverage business and assets that meets the needs of company and attracts potential creditors and investors, while considering the legal and regulatory elements.

Bank liquidity risk. Munteanu (2012) noted that misunderstanding of liquidity risk and lack of bank liquidity triggered negative events. The foreign exchange undertakings included payments to partners' foreign exchanges (Lederman, & Maloney, 2012). Gertler and Kiyotaki (2015) proposed mitigation of liquidity risks resulting from liquidity mismatch between bank assets and bank deposits that may adversely affect equilibrium or stability of bank including bank run and liquidation of bank assets to repay depositors and creditors. The bank's liquidity influenced on its liquidity risk that depends on the banks' shares of core deposit funding and investments in foreign exchange (Correa, Goldberg, & Rice, 2014). The government borrowing at high and inflationary interest rates affected bank liquidity and cut economic growth (V. Acharya & Mora, 2015). An active liquidity risk management ensured safety and soundness of banks based on the macro prudential and Basel II regulatory mechanisms and supervisory practices that set minimum capital requirements to absorb losses and risks exposure, and optimal portfolios to be obtained with such minimum capital requirements (Gauthier, Lehar, & Souissi, 2012; Rossignolo, Fethi, & Shaban, 2012; Santos, Nogales, Ruiz, & van Dijk, 2012). The exchange rate loss affects bank's liquidity and banks need to adjust their solvency to mitigate risks of both internal and external objectives and transactions in their balance sheets.

Hedging in the context of agency theory. Chong et al. (2014) recommended hedging to mitigate exchange rate risk, improve cash flows, lower cost of debt, and increase value of business organization in the PAT setting. The PAT was applied to analyze optimal contracts with shirking actions during relaxation and suspension of

agents (Zhu, 2013) and the moral hazard problem in the Islamic banking (Yousfi, 2013). Wojakowski (2012) noted managers undertake selective hedging if exposed to convex cash flow structures and that hedging decision is independent of their risk preferences or appetite of firm but worthy to lock in profits. Similar to Wojakowski (2012), Yousfi (2013) and Zhu (2013), I applied the PAT to a specific business problem of what effective hedging strategies the bank leaders apply to mitigate risks of exchange rates fluctuations. Hedging involves costs, claims, losses, and profit. The PAT facilitates to view the hedging phenomenon to leverage the fair market value, ensure significant returns or profitability, ameliorate agency problems, and control and treat risks appropriately in business practices.

# Relevance of Literature in Methodological Review

The reviewed literature is relevant to this case study research. I used the literature in reference to capture existing knowledge, important terms and concepts in the operational definitions, theoretical propositions, relevant conceptual framework, and identify shortcomings or gaps that will help to determine data collection and analysis strategies (Yin, 2014). The literature review provided for development of conceptual framework of PAT prior to the collection of case study data on hedging to mitigate risks of fluctuating exchange rates in the banking industry. The PAT constructs of separating ownership from control of business, principal-agent relationship, fiduciary role of board of directors, agency contract, agency problem and cost, and management compensation are founding the proposed study of hedging exchange rate risks. Through case study, I obtained knowledge and awareness of cost-effective financial hedge derivatives to

mitigate risks exposures on the future nominal price level in rapidly growing global financial markets (Duke, Dundas, & Messer, 2013; Raghavendra & Velmurugan, 2014). The results of this PAT-based case study assist bank leaders to execute appropriate hedging strategies to mitigate risks of fluctuating exchange rate to improve profitability or reduce loss, increase performance of banks' assets, and reduce the cost of funds and funding costs. The reviewed literature in the previous sections inform the research method and design, prevailing theories or conceptual framework, a fresh set of empirical observations, and real-world questions on the case study.

## **Transition Summary**

In this Section 1, I cover background and purpose statement of study, conceptual framework, and review of literature on the mitigation of risks of fluctuating exchange rates in a bank operating in the IFEM in Tanzania. The reviewed literature indicates gaps and the foundation of this proposed research study. The reviewed issues include hedging initiative to reduce risks and enhance business' profitability, fair market value of its holdings, cash flow, and investment through financial innovations. The risk management strategies to address risks on financial instruments and derivatives include innovation of financial products for leveraging technological development efforts and business profitability and safety. The securitization initiative is important. The hedging strategies of currency exposures is an obligation of business leaders to reduce the principal-agent problem or agency cost and loss that reduces cash flows for dividends or the net worth of organization. The bank leaders hedge to mitigate risks of fluctuating exchange rates.

In Section 2, I elaborate the study's purpose, role of researcher, participants, research methods and designs, population and sampling, ethical research considerations, data collection instrument, data collection, organization and analysis techniques, reliability and validity. The analysis of data helped in identifying themes and hedging strategies to mitigate risks of fluctuating exchange rate in a banking organization.

In Section 3, I present the qualitative, single case study research findings in line with the conceptual framework of PAT. The findings, conclusions, and recommendation are based on the data and information from a review of literature or documents, observations, and semistructured open-ended interviews with research participants who applied hedging strategies to mitigate risks of fluctuating exchange rate.

### Section 2: The Project

This section includes the stages of the research project such as the role of researcher, participants, and research method and design for high quality research work. Scholars in new disciplines must stand on the shoulders of giants and experts in the foundational disciplines (Mudambi et al., 2012). The stages of a qualitative study include review of relevant literature, articulation of research problem and purpose that establishes the central direction of study, developing theoretical framework and research questions, choosing the research method and design, undertaking data collection and analysis, and results discussion and reporting (Dasgupta, 2015; V. Pathak, Jena, & Kaira, 2013). This section covers the justifications and details on the purpose statement, role of researcher, participants, research method and design, population and sampling, ethical considerations, data collection, organization, and analysis techniques, reliability and validity, and summary and transition. In this section, I also provide an overview of Section 3.

## **Purpose Statement**

The purpose of this qualitative single case study was to explore what strategies

Tanzanian bank leaders use to mitigate risks of fluctuating exchange rates. The target

population included managers directly involved in hedging activities to mitigate risks of

fluctuating exchange rates in a private bank in Dar es Salaam, Tanzania. The implications

of this study include contribution to positive social change by helping business leaders

recognize the significance of effective hedging strategies to mitigate risks of fluctuating

exchange rates to enhance likelihood of organizational profitability. The study results

may influence the economy and real needs of communities of customers, depositors, managers, and shareholders.

#### Role of Researcher

The collection and analysis of data are fundamental responsibilities of a qualitative researcher (Tufford & Newman, 2012). Kyvik (2013) suggested six tasks of a researcher, including networking, collaboration, managing research, doing research, publishing research, and evaluation of research. Collins and Cooper (2014) recommended a researcher's self-awareness, listening for better understanding, and reacting during interviews as essential qualities to connect and communicate with participants. The stages of executing case study research include developing the conceptual framework, the case study design, and the framework of data analysis (Rytterstrom, Unossom, & Arman, 2013; Spinney, 2015). My role as a researcher was to collect data through in-depth interviews with the participants from a commercial bank in Dar es Salaam, Tanzania. I recorded and backed up all conversations with participants, who used both Swahili and English languages interchangeably during interviews. I transcribed the interview data, developed code categories and themes, and analyzed and interpreted the data into coherent thematic patterns, conceptual categories, links, and storylines that bring meaning to guide actions or interactions in the banking industry.

I developed interest in the topic of hedging exchange rate risks from the literature reviewed during and after coursework, and I had no preconceived biases related to my proposed case study topic. A researcher's personal interest in the topic influences participatory behavior and data quality (Keusch, 2013). Zhe, Zhiyuan, Lichan, and Ed

(2015) suggested signaling and building of an interest in a topic and its contents from mastering language, consumption, and publishing behaviors to construct better profiles. Scott, Hinton-Smith, Harma, and Broome (2012) recommended qualitative researchers' attention to interaction, social process, and reflective dialogue with participants. The researcher-participant relationship aids rapport, promotes empathy, and enhances understanding of participants' responses (Johnson, Rogers, van der Linden, & Blanchi-Berthouze, 2012). Marshall and Rossman (2015) suggested the relationship between researcher and participants to encourage social reflexivity to shape and reinforce interactions and maintaining consent.

I did not have any prior relationship with the case study participants. Researcher or interviewer characteristics and practices create unique interview conversational spaces to elicit detailed narratives from participants in qualitative research (Pezalla, Pettigrew, & Miller-Day, 2012). The smooth relationship with participants improves the learning process via asking questions, listening, taking notes or recording interviews for clear understanding of the case, connecting or relating with the interview questions, and determining the qualities, themes, and possible meanings of the case under the study (Rao & Stupans, 2012; Wolfe, 2012). The participants from the participating bank's single case study were interested in the hedging strategies to mitigate risks of fluctuating exchange rate.

I applied the ethical principles stipulated in the Belmont Report and other instruments for case study research processes, including requesting participants to decide and express their consent to participate in the study. The Belmont Report noted the basic

ethical principles of beneficence, justice, and respect of persons or subjects who participate in our research (Department of Health, Education and Welfare, 1979). The Belmont Report also identified the boundary between research and the application of such principles into practice. Marshall and Rossman (2015) recommended the acquisition of authorization from the Institutional Review Board (IRB), approval notification and number, and participants' informed consent based on individualism and free will. In one study, the nurses with dual role of researcher and care provider enhanced researcher-participant relationship by practicing ethical principles of autonomy, beneficence, justice, and informed consent (Judkins-Cohn, Kielwasser-Withrow, Owen, & Ward, 2013).

Tyldum (2012) encouraged the application of ethical principles including acquisition of an informed consent by participants, favorable risk and benefit assessments of research, and fair selection of subjects. Ethical consideration of case study design includes balancing of sufficiently detailed descriptions of context and rich narrative voice of participants without risking their anonymity (Carolan et al., 2015).

I was sensible of my personal bias and adopted strategies to mitigate any bias throughout the research process of collecting, analyzing, and intepreting data from participant interviews and literature reviews without any prejudice and reporting results, findings, and conclusions of this case study. Marshall and Rossman (2015) recommended antibias strategies by a researcher acting as a finely tuned research instrument, assuming a neutral position during the data collection and analysis, and analyzing the conceptual framework for limiting theoretical intepretation. A researcher with neutrality, objectivity, and impartiality would guard against unwarranted bias to improve study reliability and

validity, assess factual and relationship information, and operationalize and ground the theoretical propositions of research process (Platt & Skowron, 2013; Roulston & Shelton, 2015). A researcher in a study that involved a plethora of societal groups would inevitably take sides unconsciously, and a researcher should mitigate such bias with an alternative set of value positions and beliefs that account for unwitting expectations and priorities in research (Lumsden, 2012). Yin (2014) recommended that researchers should avoid bias by accepting research findings beyond prior expectations. The case study findings reflect the actual sentiments and perspectives of participants and the inquiry itself rather than the interests, perspectives, words, biases, prejudices, or interpretations of me as the researcher.

I applied an interview protocol (Appendix A), which described the set rules or procedures to coordinate the process of carrying out the research process including data collection from participants, exchange, transmission, or analysis. An interview protocol enhanced reliability and validity of the study (Platt & Skowron, 2013). The interview protocol provided for scope, direction, and consistency in gathering of study data and information (Hyett et al., 2014). Galleta (2013) recommended that an interview protocol with well-arranged semistructured open-ended questions guided systematic interviewing of participants and iterative gathering and efficient analysis of data. An interview protocol is a useful guide to qualitative researchers with open-ended questions to obtain details for qualitative study results (Yin, 2014). The interview protocol was an important instrument to guide systematic and easier-to-follow methods, procedures, and code of

correct research conduct across the entire case study research process to realize replication and reliability.

### **Participants**

Angrist (2015) noted that research participants are research partners. Qualitative researchers understand phenomena from the participants' perspectives instead of predetermined assumptions (Marshall & Rossman, 2015). The eligibility criteria to sample participants included their experience in the research phenomenon, interest in the purpose and significance of study, compliance with the ethical principles, and familiarity with the case and data (Englander, 2012; Manhas & Oberle, 2015). Stuart, Barnes, Spiby, and Elbourne (2015) suggested the eligibility criteria include participants' availability, sufficient time for appointments, and sufficient knowledge in the area of study.

Researchers applied the eligibility criteria for clinical trials participants who were declarative, expressive, and knowledgeable (Z. Huang, Teije, & van Harmelen, 2013). I identified participants who met the eligibility criteria, including sufficient time and knowledge to respond to interview questions, and asked them to read, understand, and express their informed consent to participate in this study on hedging of exchange rate risks.

I identified the director of treasury and capital markets of the bank as primary contact to coordinate my research activities at the bank. The director provided a list and contact information of the staff in his directorate as a study population or potential study participants. Researchers have used primary contact to build mutual trust, attention, comfort, and coordination between researchers and other participants (Doody & Noonan,

2013). The promise and reassurance to maintain confidentiality of participants' data and sharing of study findings enhanced relationship and obtaining substantial data from participants (Marshall & Rossman, 2015). I visited the bank CEO's office to explain to him regarding my case study objectives and obtained directive to meet the director of treasury and capital markets, who dealt with hedging undertakings. The director of treasury and capital markets of the bank issued a letter of cooperation (Appendix D) and helped me establish a working relationship and gain access to list of employees and their contact information as potential research participants. Researchers agree to set the date and time for appointments to conduct in-depth interviews with the participants after endorsing the consent form (Yin, 2014). Individual participants agreed upon the schedule of interviews after I acquired approval of from the IRB.

## **Research Method and Design**

This section includes description of methodological insights. Gregor and Hevner (2013) suggested the research method and design as critical for significant contributions to the knowledge base. I reviewed literature and selected the appropriate research method and design for this case study.

#### **Research Method**

Research is embedded within the meaning-making process and discursive representations that objectify a research participant's lived experiences (Marshall & Rossman, 2015). Smith (2012) suggested the steps of research methods including formulation of research problem by reviewing literature, conceptualizing a research method and design, constructing a reliable and valid instrument for data collection,

selecting a sample or sampling, writing a research proposal, collecting data considering ethical parameters, processing and displaying data, and finally writing a research report. A study should have a predetermined method to avoid research bias and to provide an orderly systematic process to its completion (V. Pathak et al., 2013). Gioia, Corley, and Hamilton (2012) suggested the systematic approach or design to bring qualitative rigor to the conduct and presentation of inductive research. Researchers applied the qualitative research method to understand social situations of persons, groups, organizations, people's beliefs, experiences, attitudes, behaviors, and interactions, and it generates nonnumerical data (Nespor, 2012; V. Pathak et al., 2013; Trotter, 2012).

A research method indicates processes and procedures to obtain or select participants and make research tools or instruments to guide data collection and analysis for high quality results that others researchers could confirm or corroborate (Reybold, Lammert, & Stribling, 2012). Yin (2014) confirmed the advantages of qualitative case study including the researcher's flexibility to incorporate multiple perspectives or paradigmatic theoretical positions and sources of data beyond data points for triangulation or validation and interpretive strategies. I used the qualitative method, which involved sharing of lived experiences to generate or construct meaning of a contemporary social case or phenomenon in its natural settings or environments through face-to-face open-ended interview and probing questions to sample of participants. The primary case or unit of analysis in this qualitative method included 12 hedgers as business leaders in the directorate of treasury who shared experiences and perceptions at both business organizational and individual levels of analysis.

I did not apply quantitative method or deductive method to investigate and conduct this case study research on hedging strategies to mitigate risks of fluctuating exchange rates. The quantitative study undertakes statistical analysis of data including a series of measurements or observations usually in numerical form, necessary for generation of statistics and interpretation of numerical insights (Marshall & Rossman, 2015; Norris et al., 2015). A survey or questionnaire was not used to collect data because a questionnaire provides open-ended questions for a pilot study, and a survey is a quantitative data collection instrument with closed-end questions for Likert scale, matching answers, or multiple choice answers (J. Xu & Thomas, 2011).

The adoption of mixed method was not possible. Ross and Onwuegbuzie (2014) noted that mixed methods provides for application and analysis of data from both qualitative and quantitative approaches. The mixed method is an innovative study approach that provides for coherence and congruence among all the research elements to strengthen the study findings in thorough and accurate representations of participants' experiences, practices, and meanings in all aspects of research (Denzin, 2012; Fakis, Hilliam, Stoneley, & Townend, 2014; Koch et al., 2014; R. Smith, 2015). Researchers have remained open to new research methods, avoided the fixed nature of many traditional forms of research, and posited the potential for new ways of acting and thinking (R. Smith, 2015). The adoption of mixed method implies application of both qualitative and quantitative methods, conceptual and theoretical frameworks, interview questions and hypotheses testing, and inductive and deductive methods in the same study, which may be tedious and may take a much longer time.

# **Research Design**

The research design is a blueprint for research method with study questions, articulated theoretical framework, purpose or goals, cases or subjects, and relevant data to collect, analyze, and report (Fourie & Theron, 2012; Yin, 2014). Toledo-Pereyra (2012) encouraged researchers to consider and develop the optimal research design that permits the best research data possible. Yin (2014) suggested the main components of case study design including the articulation of research questions, theory or theoretical propositions, unit of analysis, data collection, logical linking data to propositions, and criteria for analysis and interpreting the findings. The types and contexts of case study designs include single-case holistic design, single-case embedded design, multiple-case holistic design, and multiple-case embedded designs (Alexander, Moreira, & Kumar, 2012; Poulis et al., 2013). The case study design includes the logical sequence or plan of research processes that connects the empirical data to initial research questions and conclusions.

In this study, I used case study design. De Massis and Kotlar (2014) advised family business researchers to choose the case study design, define the unit of analysis, select cases or sampling, collect information, analyze information, present results, and ensure validity and reliability in research findings. Case study researcher restricted the study findings and conclusions to a specific case and geographic area (Yin, 2014). Yin argued that a single-case design might deviate from theoretical norms to extreme case of revealing insights connected to a large number of people, whereas, the common case captures the daily lessons, circumstances, conditions, and processes related to theoretical

interests. Yin noted that the single-case design includes revelatory case that covers a new prevalent phenomenon previously inaccessible to social science inquiry, and the longitudinal case that involves studying the same single case at two or more different points in time that reflect theoretical propositions posed by a case study. The single-case designs require careful investigation of potential case to address misrepresentation and enhance the access to collect the data or evidence. Both the instrumental and collective case study designs were not used in this study, as a collective case study involves the exploration of multiple instrumental case studies whereas an instrumental case study the case is secondary to the exploration of a specific issue, building theory, or redrawing generalizations.

I did not use the phenomenological study design to explore the strategies the bank leader applies to hedge to mitigate risks associated with fluctuating interbank exchange rate in Tanzania. The phenomenological research design did not use as it requires direct, face-to-face, semistructured open-ended interview and follow up questions, elaborations on answers, and focuses on analysis of experiences and perceptions of a minimum of twenty participants than a single case as a fundamental source of knowledge (Bevan, 2014; Moustakas, 1994; Welch et al., 2015). The phenomenological study also involves operationalization of constructs to prove and maintain construct validity and proof of internal and external validity (Dasgupta, 2015; Moll, Kitterlin, & Williams, 2015). The phenomenological design also provides for simple or snowballing technique of sampling, iterative approach and lives face-to-face, open-ended interview questions and probing questions to collect data and analysis of clear meaning, understanding, and interpretation

of experiences and perceptions of human beings in a particular context (Plunkett, Leipert, Ray & Olson, 2015; Washington & Williams, 2014). The use of qualitative phenomenological design was not be credible because it relies on descriptions and analysis of themes of lived experiences and perceptions of at least twenty participants, which are predictive, never entirely certain (Churchill et al., 2014). A phenomenology was not appropriate for this study because I interviewed fewer participants within a month (from July to August 2016).

The ethnography was not useful to this study because it focuses on understanding human experiences and social entities different from commercial banks. The ethnographic design involves application of an inductive logic to uncover meaning of purposeful acts and experiences of people in various situations to gain an improved quality of life (Larsen 2014; S. Robinson, 2013; Scheonfeld, 2013). Groves, Feverherm, and Gu (2015) underscored the limitations of ethnographic design including limited cultural literacy, an inability to communicate with persons from different cultural backgrounds, and limited behavioral flexibility to adapt to culturally unfamiliar contexts.

The qualitative research designs of ethnography and phenomenology differ from case study design because they do avoid specification of theoretical propositions at the outset of inquiry and these methods do not define cases (Yin, 2014). The case study design is most appropriate for reviewing archival documents and literature, intensive or in-depth interviews and member checking of data and data saturation with participants, logical link and triangulation between relevant data and propositions, and the criteria for analysis and interpreting the findings.

The thematic or data saturation and theoretical saturation were contentious issues with diverse opinion, resolved to define data saturation as a marker of sampling adequacy (O'Reilly & Parker, 2012). Francis et al. (2010) suggested principles of data saturation in theory-based or conceptual categories interview studies including specifying a minimum sample size and additional interviews to be conducted without new ideas emerging or stopping criterion. The failure to reach data saturation affected scope of study, poor research quality, and limited validity to replicate the study (Fusch & Ness, 2015). To ensure data saturation, I specified a sample and interviewed 12 participants, and analyzed data until no any new information or theme appeared to improve the case study within the PAT's conceptual boundary or delimitation. The maker for sampling adequacy and sample size in qualitative research was justified by emergence of data saturation point whereas any additional participant's interview did not add new data.

## **Population and Sampling**

A. Acharya, Prakash, Saxena, and Nigam (2013) defined a sample as a subset or representative of larger population. Researchers classified sampling techniques into probability and nonprobability (A. Acharya et al., 2013). The probability sampling technique, a process of selecting a random sample of representatives or participants from a population by using a sampling protocol, is appropriate for quantitative studies rather than qualitative research (M. Marshall, 1996). The sampling protocol contained most appropriate and consistent eligibility criteria for sampling of participants who belong to a particular topic to be dominant in the sample (Restificar, Korkontzelos, & Ananiadou, 2013). I did not use the probability sampling techniques in this case study because I did

not give equal chances to all bank staff (entire population) nor extrapolated probabilities of statistical generalizations.

In this proposed doctoral study, I used a nonprobability census sampling to narrow down a sample population of experienced bankers of a commercial bank in Dar es Salaam, Tanzania to a census sample of at least 12 participants for personal, in-depth, and open-ended interviews on hedging to mitigate fluctuating exchange rate risks. Daniel (2012) recommended use of census sample for a study focusing on data in a geographical location to enhance credibility and rigor of research. Lu et al. (2015) established a census sample of 5,306 of tree seedlings of woody plants of 104 species out of a population of 187,000 live individual plants of 238 species to study seedling survival dynamics in a 25ha subtropical mountain forest plot in central China. The conclusion based on data from a census sample indicated that both density dependence and habitat preference are important mechanisms to maintain species coexistence in the subtropical mountain forest (Lu et al., 2015). O'Dor et al. (2012) noted that the census research technique is valuable in holistic ecosystem management by deploying past, current, and new information on marine habitat. The list of employees in the department of treasury was a sample population from which a small census sample was selected in accordance with census sampling criterion to overcome any inherent bias.

I used the director of treasury and capital markets of the bank as a gatekeeper, who availed to me a list of bank's employees in his directorate and their contact information for census sampling of potential participants. I confirmed appointments with selected participants for personal, in-depth, semistructured, open-ended interviews for

this case study. The gatekeepers in research represented and protected interests of individuals, clusters, and organizations and facilitated researchers to obtain informed consents from participants (Gallo et al., 2012). McAreavey and Das (2013) supported the reliance of gatekeepers to approve and regulate access to prospective organizational participants. Researchers deployed institutional gatekeepers to mediate research participants to sign informed consent as a central practice in the ethical research framework (Health, Charles, Crow, & Wiles, 2007). Broadhead and Rist (1976) noted the number of methods in which a gatekeeper influence research activity including limiting conditions of entry and access to data and respondents, defining the problem area of study, and retaining prerogatives with regard to publication.

Kelley and Maxwell (2012) noted that the sample size design or planning depends on the type of research question. Lenth (2013) argued that sample size determination is a critical but difficult step in planning a statistical study. Yin (2014) noted that for a qualitative case study, participants are not sampling units to represent any larger population because the case studies aim to expand and generalize theories or theoretical propositions and not populations or universes. The sample size of case study is determined by the nature of study and it should be small enough to enable researchers to conduct in-depth interviews until reaching a data saturation point or redundancy of response (Yin, 2014). Guest (2006) asserted that sample size is determined at data saturation point where no new information or theme is observed. Moustakas (1994) also argued the justification for the saturation point is for the researcher to leave no question unanswered, no new, no repetitive or invariant theme including essence of a

phenomenon. Qualitative researchers determined the sample size of study at the end of data gathering process after achieving the counter-productive theoretical saturation whereas no new data or code seem to emerge or add value to story, defined themes, or conceptual categories and properties which are integrated into the conceptual framework (Cruz, 2014; Rubin & Rubin, 2012). Mohamed et al. (2014) affirmed that the sample size is determined by reaching a saturation point, where no new themes are identified. I asked the same open-ended interview questions to at all 12 participants with hedging and trading experience from the directorate of the treasury and capital markets of the bank and determined the optimal size of sample at the point when 12 participants delivered repetitive responses.

I explored a commercial bank that is a naturally bounded case study unit that stands out as paradigmatic to draw attention to various aspects or source of themes including research questions. The contextually bounded cases requires detailed description of all relevant elements (Hyett et al., 2014). The case study approach helped in exploring such a system by interviewing bank leaders, managers, treasurers who work together for common business goal as well as capable to consistently address the research questions (Green, 2012). The research participants explored the hedging strategies and their effects on the bank performance.

#### **Ethical Research**

Collins and Cooper (2014) recommended researcher's responsibility to build a safe and trustworthy environment and IRB to enforce federal guidelines for research ethics. Researchers used informed consent to inform the prospective participants

regarding all the research procedures for ethical research (Jacob & Furgerson, 2012). Pietkiewicz and Smith (2014) recommended informed consent as a confirmation of ethical compliance and understanding of research by participants before signature. Fisher (2012 noted the informed consent indicates the commitment and capability of research participant. The acquisition of informed consent from participants and commitments of avoidance of harm, privacy, confidentiality, and ethical research ensured protections of participants (Tyldum, 2012; Yin, 2014). Nguyen (2015) encouraged participants to withdraw from the study based on any ethical concerns. The qualitative researchers paid little attention to the ethical challenges (Damianakis & Woodford, 2012). I asked each prospective participant to retrieve or download a softcopy of informed consent and to read and understand research procedures, ask questions on its contents, and reply to my email with the words "I consent" as an engagement permission before interview. Eight of the 12 participants consented through e-mails, two through mobile phones, and two through physical visit. Those who did not consent by e-mail claimed that they did not download the attached informed consent due to computer connectivity problems. The informed consent is a clear evidence of research participant's appreciation and understanding of facts, implications and future consequences of research, and participation willingness or right to withdrawal at any point in time from the proposed study. The informed consent is executed in accordance with the IRB guidelines aiming at compliance with ethics code or principles of ideal character, conduct, morality, policies, norms, procedures, guidelines, and practices by the researcher for unbiased high quality research results.

Marshall and Rossman (2015) identified the ethical concerns throughout any piece of research including political issues, trust between researcher, participants, and readers, and compliance with the appropriate research procedures. Kriz, Gummesson, and Quazi (2014) also emphasized the importance of interpersonal trust in a research study. Lunnay, Borlagdan, McNaughton, and Ward (2015) discussed some core principles of traditional human research ethics including respect, integrity, and beneficence and found that privacy and confidentiality as contemporary risks associated with research using social media. Lack of trust in confidentiality led to reluctance in disclosing all relevant information that could have grave consequences (Wallace, 2015). Locke, Alcorn, and O'Neill (2013) noted the importance of a neat separation between researcher and researched and confidentiality or anonymity in research to improve the collaborative action-based research and ownership of findings and dissemination.

Hiriscau, Stingelin-Giles, Stadler, Schmeck, and Reiter-Theil (2014) identified relevant international and European guidelines and codes of ethics that cover health, behavioral and social science research and found that none of documents offers concrete support in resolving practical research ethics problems regarding confidentiality. The Belmont Report includes ethical considerations such as privacy, anonymity, beneficence or confidentiality of private information as human subjects, dignity, integrity, respect, justice, and vulnerability in designing of research, data analysis and presentation (Adams & Miles, 2013; Zucker, 2015). I complied with confidentiality rules in favor of research participants on confidential case study research data or information with high confidentiality standards to mitigate any liability to both researcher and participant. The

participants, bank leaders, were informed about confidential treatment of data before dissemination. The banks handled foreign exchange needs of most importers, exporters, and retailers in the flexible exchange rate systems that created risks to businesses with supply chains, markets, and finances situated in different countries (Dai & Xu, 2014; Raihan, 2013; Sangeeta & Kanika, 2014). The protection of participants' privacy and confidentiality in accordance with principles of research ethics were essential to improve legitimacy and voice within research domains (Gleaney et al., 2012; Glenn, 2012).

I complied with the ethical principles including privacy, anonymity, and beneficence with all 12 participants and address all the ethical concerns in the process of data collection, data organization, data analysis, and publication of case study. The participants were informed of importance of ethical practice before indicating their informed consent including avoidance of harm or liability, anonymity of data and maintenance of confidentiality and the management of reciprocity in research (Gubrium, Hill, & Flicker, 2014; Yin, 2014). The answers or responses from participants were treated with high confidentiality to ensure that neither researcher nor any participant is exposed to legal liability. The protection of names of participants and organization is essential and each was given special codes. For example, I identified participants by P1, P2, P3, and so on indicating the first interviewed participant, second interviewed participant, and third interviewed participant, and so on. I protected privacy and confidentiality of participants' names and data from them throughout this study.

Lunnay et al. (2015) noted the potential risks intrinsic to the use of social media in research against the ethical principles and conduct and discourage use of this innovative

method such as Facebook as a communication tool in qualitative studies. Marshall and Rossman (2015) suggested the nonfinancial strategy to incentivize participants in research including participant's understanding of freedom to participate or not without prejudice and protection of identities of participants and organization. Resnik (2015) supported appropriate financial incentives including payments for time, risk, pain, discomfort, inconvenience of research procedures, travel costs, recruitment, and population characteristics considerations. Resnik (2015) argued that such financial incentives raised ethical concerns about level of payment or compensation, undue inducement, exploitation, and biased enrolment. Participation in research could not be enhanced by incentives (Molyneux, Mulupi, Mbaabu, & Marsh, 2012). I did not incentivize or motivate research participants to participate in this research study. The ethics is a foundation and reason for best practice in research to obtain necessary approval from the participants and IRB.

My role was to comply with all the requirements for the authorization by IRB. The review process is challenging and may raise concerns (Marshall & Rossman, 2015). I participated, passed the exam, and certified by the National Institute of Health of the United States of America for the online training course that presents the tenets an ethical considerations pertaining to working with human participants (Appendix E). The certificate is an indication of compliance with the ethical considerations and principles including data confidentiality, anonymity, and nondisclosure agreements to ensure legal defensibility of participants in the proposed doctoral study. Anonymity serves to protect the real case of business entity and its participants like the treasurer, managers, and

informed employees who were interviewed. The IRB issued an approval notification with reference number 07-15-16-0413347 stipulating the requirements and specifications to a case study researcher for data collection process. The IRB's authorization to conduct research will enable me to start the data collection process.

#### **Data Collection Instrument and Process**

In this study, I was the primary data collection instrument. Lincoln and Guba (1985) introduced the concept of human being as the main research instrument to stress the uniqueness of researchers' role in the process of scientific inquiry especially in the context of qualitative research. Toledo-Pereyra (2012) suggested the qualities of a good researcher including dedicated interest, motivation, inquisitiveness, commitment, sacrifice, excelling, knowledge, recognition, scholarly approach, integration, and intention to do best research work as the principal data collection instrument. Researchers used four techniques of data collection indicated interviews, direct observation, locale participation, and review or analysis of existing documents (Marshall and Rossman, 2015). Data collection is a fundamental role of researcher (Kyvik, 2013). Yin (2014) advocated for interview as most useful method of data collection in case study because it helps researchers to reveal or bring out their experiences and perceptions. During the face-to-face dialogue partners or participants realized neural synchronization, direct interactions, and successful communication (Jiang et al., 2012). Pezalla et al. (2012) discussed the interviewer characteristics and confirmed that the researcher is the instrument in semistructured or unstructured qualitative interviews, a unique researcher characteristic with potential to influence the collection of empirical materials.

The overriding principles for data collection include developing multiples sources of data, maintaining a chain of evidence, creating a database, separate storage area for the data in the final analysis from the field data (Yin, 2014). I conducted the field test before the date of the case study interview to observe and discuss the study's objectives and purpose with the gatekeeper and few sampled participants to improve their understanding of the case study and identified an annual report as key document with data for the study. Researchers conducted the field test to figure out what to do once get out in the field and create friendly and interactive environment with participants (Doody & Norman, 2013; Marshall & Rossman, 2015; Yin, 2014). The field test helped researcher to improve interview guide and checklist of relevant secondary documents such as annual reports.

I conducted semistructured open-ended interviews to explore bank leaders' experience in hedging strategies to mitigate risks of fluctuating exchange rates. The data collection process was appropriate in qualitative studies in which researcher collected and interpreted participant's responses as data in line with the study problem and purpose (Anyan, 2013; Kemparaj & Chavan, 2013; Merrian, 2014). C. Marshall, Dalyot, and Galloway (2014) suggested use of interview protocol with interview guide questions in line with the conceptual frame. The interview protocol comprised of purpose of study that determined the type of interviewing tools, such as structured, unstructured, or semistructured, instruments for semistructured interviewing, and allowed for an efficient, systematic and iterative gathering of data with important interview questions and follow up questions that elicit rich data from participants and efficient data analysis (Galletta, 2013). The interview protocol includes the research objectives, procedures of interview

process, and interview questions for consistent administration of interview in qualitative research (Bolderston, 2012; Doody & Noonan, 2013). I complied with the interview protocol to collect data by interviewing all participants to enhance case study's validity and reliability. I recorded all the interviews by using my cellular phone and computer software of audacity and written in the journal, transcribed, member checked, and uploaded data in the NVivo 11 software for analysis. Through recording I captured live words on the experience and perceptions of participants and reduced researcher's biases.

Marshall and Rossman (2015) recommended member checking to share, check and confirm accuracy of data and interpretations with legitimate participants. The member checking, verifying, testing, probing, and confirming the collected data were essential initiatives to reduce the volume of data gathering along a congruent increase in analysis (Chang, 2014; Harvey, 2014). The weaknesses of member checking including unclear strategy on how to reconcile competing interpretations by participants and researchers, and changes in participants' experiential understanding of experience over time (Chang, 2014). I used member checking to engage each participant to confirm and validate accuracy of interview contents, emerging themes, and draft findings or generalizations.

A researcher uses triangulation to ensure validity by using multiple data sources such as primary and secondary sources to bear on or validate the same point (Marshall & Rossman, 2015). Matteucci (2013) triangulated photo elicitation technique to obtain researcher-found tourist images with in-depth interviews and participants' observations to acquire intimate information on aspects of tourism experiences of intangible heritage.

Triangulation strategy helped researcher to conduct thorough studying and expanding knowledge of audience and researcher and minimize errors to make inferences from data (Donaldson et al., 2012). Fielding (2012) suggested triangulation for convergent validation of data and information obtained from mixed methods research studies.

Marshall and Rossman (2015) suggested the triangulated reflective questions including h how do the participants know what they know, how do I know what I know, and how do the audience make sense of what I give them. The multiple sources of evidence confirmed reliability and validity of study (Hyett et al., 2014; Campbell, Quincy, Osserman, & Pedersen, 2013). I applied the triangulation strategy of using multiple data sources including those generated by different research methods, designs, and theories for enhancing reliability and confirm validity of data for robust case study. I corroborated the study results with other researchers on hedging strategies to mitigate risks of fluctuating exchange rates.

Researchers collected qualitative case study data through in-depth interviewing of participants (Boblin, Ireland, Kirkpatrick, & Robertson, 2013; Hancock & Algozzine, 2011; Rowley, 2012). Rubin and Rubin (2012) recommended the use of open-ended interview questions by active listening, follow-up questions, and member checking whereas participants discuss and validate their responses. In this case study, I collected data through in-depth interviewing of participants by using interview question and at least two follow up questions. By using an interview protocol, I consistently collected data from research participants. Crosschecking data from multiple sources during and after the

interview was critical for multidimensional approach in data profiling, validation, coding, and analysis.

## **Data Collection Techniques**

In this case study, the qualitative data was used to address the research questions. The data collection technique included semistructured open ended in-depth interviews (D'Angelo & Brunstein, 2014; V. Pathak et al., 2013). Researchers found that the collection of data and writing in different ways were ways of learning and knowing and methods of discovery and analysis of new perspectives and relationship (Proitz, 2015; Stelter, 2015). Yin (2014) suggested a case study put no excuse for omission of any data including thorough review of documentary evidence. In this case study, I presented to participants the data collection techniques including interview questions, tape recorder, journal note, and informed consent forms before commencing the actual personal indepth interviews for data collection and analysis on the case of hedging exchange rate risks.

The essential source of case study evidence focused on actions (Yin, 2014). The sources of case study data were bank leaders who traded and hedged risk exposures associated with exchange rate fluctuations in the financial markets. The bank leaders who were interviewed reside in Dar es Salaam city consisting of administrative headquarters for all 50 commercial and 2 development banks in Tanzania. The bank leaders included director of treasury and capital markets, managers, treasurers or other bank employees who possess relevant knowledge and experience of hedging.

The data collection techniques have advantages and disadvantages. The interview provides for in-depth exploration and validation of data through interview and follow up questions to elicit more participant's responses (Kemparaj & Chavan, 2013; Yin, 2014). The qualitative researchers gather information by using existing documents such as journals that contributes to methodological discussion, participant observation, direct observation, and photographic artifacts (Hyett et al., 2014; Stake, 1995). A written document that reports an academic research is subjected to peer review to limit biases of authors that compromise the validity and mislead readers or other researchers (A. Singh, 2014). The leaders of a public listed bank provided archival documents artifacts, and websites that provide reliable and valid information about strategies to hedge risk exposures of fluctuating exchange rate in the financial market in Tanzania. To increase confidence in data intepretations, minimize misrepresentation, avoidmisunderstanding, and methodological triangulation, I complemented interviews with documentary records.

Researchers recorded research participants by using an audio recorder (Negron, 2012). Kulkarni, Dalal, and Kulkarni (2014) conducted audio-video recording to enhance reliability, transparency, and improvement in quality of informed consent process and society's faith in clinical research in India. Smartphones facilitated faster communication and rapid access to information for researchers (Hogan & Kerin, 2012). During interviews, I recorded all the participants by using my computer installed with audacity and smartphones. The recording devices store and play back recorded interviews verbatim. I used the smartphone and audacity files as a backup into the digital device. The use of member checking initiative provided for member validation of data

interpretation or transcript review. In the member checking process, the participants were engaged to review, and verify the interview transcripts and preliminary interpretation of such data by researchers (Chang, 2014; Harvey; 2014). Each participant confirmed the transcript or made any correction, and clarified understanding and insights against recorded session or notes to improve accuracy and reliability of data (Allen, 2014; Shimpuku & Norr, 2012). In the member checking phase, I asked participants to confirm meanings to obtain right responses during interviews. To enhance data reliability and validity, I used an interview protocol to provide consistence in the interviews with all participants.

## **Data Organization Technique**

Moustakas (1994) noted that data organization begins when the researcher commences studying or analyzing the transcribed interviews and secondary data by using analytical methods and procedures. The data analysis plan before starting data collection avoided problems of collecting too little or too much primary and secondary data from single or multiple sources for the case study (Yin, 2014). Kapoulas and Mitic (2012) highlighted some challenges in the qualitative research including contextually embedded findings, vague standards for data analysis, presentation of voluminous amounts of qualitative data and theoretical criteria for judging the quality of studies. Big data helped researchers to discover more relevant research questions than finding solutions to complex social problems (MacPhail, 2015). The basic methods and procedures to organize collection and recording of data for the study included developing of organizational identities, naming of saving locations and backup files for easy retrieval

and grouping, specifying of time to remove identity or for anonymity of personal data in files, articulating strategies to ensure security and privacy, and translation of data in the study language or terms (Marshall & Rossman, 2015). I complied with these basic rules for organizing or managing the data for this case study.

During field work, both the interviews and secondary data in documents or archival records, artifacts, and the bank's websites were obtained, organized, and analyzed. Marshall and Rossman (2015) indicated that researchers organize field notes or data by writing them down or voice them into a tape recorder for analysis. The organization of data included making detailed notes during the process, reviewing the audio recorded responses against the detailed interview notes to ensure the accuracy, and member checking throughout the research process by engaging participants to review results to confirm the accuracy and comprehensiveness of data and findings (Leggette, Black, McKim, Prince, & Lawrence, 2013). To ensure accuracy each participant member checked the transcript of data via phone conversations.

I used the NVivo 11 software as a technological tool to organize participants' responses or interview data, analyze the transcribed data, and identify prominent themes in responses to the interview questions. The transcribed interviews from the participants were uploaded into the NVivo 11 software for analysis of qualitative data into unique, recurring or group thematic elements and ideas from the interviews, document analysis, and field notes. The Atlas.ti was not used in this study. Researchers applied the Atlas.ti software to analyze data based on focus group discussions (Arendt, Paez, & Strohbehn, 2013; Shapira-Lishchinsky, 2012). The Atlas.ti software was so complex to quantify

qualitative information and data on text-based student assignments study found it to be complex (Scales, 2012). In the NVivo 11 software, the data was organized by type (reflections, notes, or photos), numbering or coding of each participant (P) by consecutive or chronological identification number (1, 2, 3 ...) such as P1, P2, P3, and so forth to protect the anonymity and ensure confidentiality of participants in the study. Campbell, Quincy, Osserman, and Pedersen (2013) suggested the construction of simple and reliable coding schemes for the qualitative data transcripts. I coded the qualitative data to develop and refine codes and data interpretations. The findings or interpreted responses answered the overarching research question on hedging strategies to mitigate risks of fluctuating exchange rate risks.

The availability of organized data necessitates the creation of a database in the computer application or spreadsheets like NVivo 11 software files for maintaining a chain of evidence, and help in drafting of initial case descriptions in accordance with the chronology of actions for future thematic analysis and interpretations. The well-organized data in retrievable form will make them easily available or accessible for another researcher to reanalyze (Marshall, & Rossman, 2015). I maintained the collected raw data, secondary data, tables, figures, and graphs in hard format in locked fireproof container or storage cabinet for a minimum of five years. The organized and accessible database in NVivo 11 software is kept electronically in encrypted files in laptop and external drive, and automatic cloud computing system for data backup that can be accessible by a password under my control. Nobody else is allowed to access the data except for future audits or research. The disposal of data will take place after five years of

doctoral study completion. This will involve disposing of all files from all the storage areas including hard and soft data or electronic files that can be erased from storage facilities, shred any hard copy of data, and destroy audiotapes or video recordings beyond repair to protect the anonymity of participants and the case to be studied.

### **Data Analysis Technique**

In the case study design, researchers might concurrently execute data collection, data organization, and data analysis to identify themes (Hyett et al., 2014). Hyett et al. (2014) noted that the case study findings include detailed descriptions of context of "being there" and insights into interpretations and methodological decisions throughout the data collection and analysis process through constant comparison of case or unit of analysis with research issues. Cruz (2014) noted that both the primary in-depth interviews with participants and secondary data from literature were triangulated to apprehend their similarities, differences, and scope or extension of theoretical sampling. Marshall and Rossman (2015) recommended triangulation by using qualitative data sources for discovery of multiple perspectives, methods, theories, or researchers for robust validity, accuracy, truth of case study. The case study facilitated collection, transcription and interpretation of raw data and secondary data through triangulation technique (Shimpuku & Norr, 2012). I triangulated the data through iterative process and techniques of bringing more than one source of data to bear on a single point or theme on hedging transactions and strategies to mitigate fluctuating exchange rate risks.

The logical and sequential process for data analysis involves multiple steps of logical reasoning. Yin (2014) noted that high quality case study links accurate data to

propositions inductively by using five specific analytic techniques of pattern matching, explanation building, time series analysis, logic models, and cross-case analysis and addressing of rival explanations. Yin recommended some analytical steps to make sense from the collected case study data including reading of transcribed notes to gain general meaning of data, coding and interpretation of data into manageable themes in line with the research question and purpose of case study. Marshall and Rossman (2015) recommended that data analysis should be guided by literature, participants' member checked interview transcripts, software programs for data analysis typically relying on codes, and identified, peer debriefed, clear, and consistent patterns of phenomena in a systematic process. I adapted a logical and sequential data collection, transcription, and analysis process involving breaking data into parts or holistically to draw meaningful patterns and true or valid conclusion on the hedging strategies to mitigate risks of fluctuating exchange rates in Tanzania.

The conceptual plan and software for this doctoral study are essential for the cultivation of scholarly orientation and fast-tracking execution of high quality qualitative research (Alvesson & Sandberg, 2013). Sotriadou (2014) proposed application of NVivo 11 software to analyze data derived from interviews to add value to studies on social research. Hoover and Koerber (2011) recommended uploading the interview responses into the NVivo 11 software to determine common themes. Lin (2011) recommended digital mind mapping multisensory tools or software applications to guide future idea generation, facilitate real-time collaborative thinking, and information storage, retrieval, and management systems. Mind mapping facilitated critical visual or pictorial thinking

process to help brainstorming, organizing, integrating, and retaining information (D'Antoni, Zipp, Olson, & Cahill, 2010). Mind mapping is a tool for taking or capturing important words, ideas, insights, thoughts, information, and knowledge from several sources in a bright manner (Edwards & Cooper, 2010). Tattersall, Powell, Stroud, and Pringle (2011) also, recommended mind mapping as a tool to transcribe and analyze qualitative audio-recorded interview responses. I applied NVivo 11 software for data coding, mind-mapping, and identifying themes in the data transcription to explore what hedging strategies the bank leaders used to mitigate the fluctuating exchange rates risks exposures in Tanzania.

In the data analysis, I focused on primary themes and correlate them with literature. The common data analysis approach in qualitative study included rigorous thematic analysis and mapping of themes into thematic map and their interrelationships by using all the facts and data obtained from interview, websites, corporate publications, and other documents (Petty, Thomson, & Stew, 2012). Marshall and Rossman (2015) suggested sufficiency of qualitative data analysis by data deduction, defining critical categories or underlying themes, statements about relationships between themes, and integrating themes into an elegant and credible interpretation to bring meaning and insights to interviews during and after data collection. Rodriguez (2014) proposed systematic and objective analysis of literature and comparison of keywords or contents and interpretation of underlying context to bring out conclusion and recommendations for supporting bank leaders to hedge to mitigate the risks of fluctuating exchange rates.

In the qualitative studies, findings should be accessible to a wider audience of users; translated into the language of intervention and implementation to enhance the generalizability of study results (Sandelowski & Leeman, 2012). Generalization in a case study is based on ideal-type mechanisms and reasonable expectations about similar patterns of rational action and interaction in similar contexts (Bengtsson & Hertting, 2014). Bengtsson and Hertting noted that researchers asserted generalization in the form of conceptualizing types of situations and distilling rational meanings within settings. Yin (2014) recommended theoretical and analytical generalizations rather than statistical generalization because case study participants are too few to represent any larger population. Yin trained researchers to apply analytical mechanisms of "how" and "why" notions and theoretical propositions to arrive at a theoretical generalization for an empirical case study setting.

# **Reliability and Validity**

The reliability and validity of data are essential issues any qualitative study.

Researchers have a responsibility to ensure validity and reliability in research findings

(De Massis & Kotlar, 2014). While reliability reflected the degree of consistency of research method or procedure, validity indicated the study's accuracy of measuring what the researcher set out or intends to measure (Marshall & Rossman, 2015). The reliability and validity tests help other researchers to repeat the research inquiry and achieve similar findings and conclusions by assuming consistent procedures, techniques, operations, and data (Street & Ward, 2012). Yin (2014) noted reliability involves demonstrating the replication of same case over again by using case study protocol to document the

procedures followed in the earlier case and development of case study database for similar findings and conclusions. In the following sections, I discussed reliability and validity aspects related to this study.

### **Reliability**

The reliability refers to the extent to which data collection method yields consistent findings in study replications. Elsayed (2012) proposed a specific plan and time duration for testing of reliability and reliable results. The criteria for judging the reliability and quality of qualitative case study research include dependability, credibility, transferability, and confirmability instruments (Lincoln & Guba, 1985; Yilmaz, 2013). The reliability of the findings of this case study is realized by consistency in executing this case study based on credibility, transferability, dependability and confirmability.

Credibility. Cosenza, Solomon, and Kwon (2015) related credibility to believability as determinant of usability of information for decision making and suggested that credibility perceptions influence on behavioral intentions and trust. C. Luo, Luo, Schatzberg, and Sia (2013) suggested the credibility of source of information influenced the recommendation credibility and adoption. Z. Huang and Benyoucef (2014) used a heuristic evaluation to indicate a close correlation between usability and credibility and found high usability associated with higher credibility, and vice versa. Venkatesh, Brown, and Bala (2013) recommended credibility to establish trustworthiness or plausibility of research outcomes. The inconsistencies in presentation of reviews diminish the credibility of study findings, and adherence to predetermined and specified eligibility criteria in systematic reviews of literature and reporting guidelines to contribute robust

evidence-based practice into the healthcare and nursing journals (McCrae, Blackstock, & Purssell, 2015). I conformed and abode by the credibility criterion to enhance the study credibility based on the credible sources of data and information from primary and literature sources, usability, adoption, and outcomes of study.

Marshall and Rossman (2015) advocated for member checking to improve credibility by giving summaries to participants to check whether the researcher got the data right without any distortion or misunderstanding. Uscinski and Butler (2013) defined facts as unambiguous and not subject to interpretation and suggested that facts checking mitigate the spread of harmful misinformation and enhance evaluation of veracity of dubious information. R. Robinson, Solnet, and Breakey (2014) recommended the member checking process to enhance credibility via engaging research participants to validate and ensure accuracy of data of transcribed interviews or data prior to thematic analysis. I engaged participants to member check or verify the transcribed interviews prior to final analysis. Through the member checking process, participants were engaged to identify and communicate to the researcher any inconsistency or conflicting facts in the transcribed interviews to address any credibility concerns. The participants were experts in hedging and they were credible source of useful data for this case study.

Houghton, Casey, Shaw, and Murphy (2013) recommended multiple sources of data for completeness of data to triangulate explanations of phenomena and enhance credibility of research study. Multiple sources of data are primary for a single case study that lacks detailed, quality, credible, and sufficient data for publication (Hallberg, 2013). Yin (2014) supported credibility of single case study by deploying the data triangulation

technique. Ayeh, Au, and Law (2013) defined credibility as a two-dimensional construct of source's expertise regarding validity and truth of participants, and trustworthiness components based on reliability and degree of confidence in the source's intent to communicate valid and true assertions. Metzger, Hartsell and Flanagin (2015) used a five-point Likert-scale and found that the credibility of a source of information depends on levels of accuracy, bias, trustworthiness, and content delivered by such a source. The case study researcher is set to find out and avoid common human errors, unwanted bias, and procedural flaw that threaten credibility (Amato et al., 2015; Yin, 2014). I triangulated multisource data and information from credible sources to enhance credibility and reliability of this case study.

Peer debriefing to obtain clarity of intepretation and analysis from knowledgeable associates and colleagues (Marshall & Rossman, 2015). Kessler, Cheng, and Mullan (2015) suggested debriefing as a post-event reflective activity in teams to improve future performance through group reflection on the shared experience. Effective debriefing with educators or trainers through reflection, analysis, and diagnosis was important to learn and ensure standardization of practice (Paige, Arora, Fernandez, & Seymour, 2015). Gardner (2013) recommended debriefing as a lynchpin in the process of learning, a post-experience analytic process, and a discussion and analysis of an experience. Debriefing is a process of evaluating, discussing, and integrating lessons learned into one's cognition and consciousness for exploring what went well, identifying what could be done, and making sense of what happened during an event or experience to change, improve and do better next time (Gardner, 2013). I requested a debriefing meeting on the preliminary case

study research findings with my chair to provide opinions with truth and unbiased disclosure to improve the study credibility.

**Transferability**. Foster and Urguhart (2012) referred to transferability as the degree to which research results or findings apply to or assist other entities with similar challenges. Kirkeby (2011) suggested transferability of knowledge between research and practice. Venkatesh et al. (2013) described transferability as the degree in which the research is transferrable to other contexts given similar modalities or conditions. The approaches to help determine transferability include (a) thick description of original context of research (Lincoln & Guba, 1985), (b) noting comparable specifics or details of research method (Merriam, 2014), (c) comprehensive account of situations and methods of research works (Silverman, 2013), (d) providing appropriate descriptions to facilitate educated assessments of research outcomes to specific context (R. Robinson et. al., 2014), (e) description of samples of raw data and presentation of direct quotes from the participants for alternate interpretation (Zadvinskis, Chipps, & Yen, 2014), and (f) use of excerpts from observational field notes to generate themes (Chan et al., 2015). Simons (2014) noted the value of direct replication or reproducibility as the cornestorne and an exclusive way to verify the reliability of a scientifc research study using same procedures with adequate statistical power. Yin (2014) suggested undertaking a number of case replications, both literal and theoretical, to examine whether the findings replicated. In this case study, I employed similar approaches to facilitate or support transferability including provision of comprehensive or rich descriptions of research assumptions, contexts, settings, method and design, data collection, analysis, and findings that allow

comparison of similarities between different research sites. The replication efforts included consistently executing appropriate research method and design to improve reliability of results of this case study research. Transferability is important because this case study is not designed for generalizability of findings and conclusions.

**Dependability**. Yin (2014) recommended use of case study protocol and database to establish study dependability, consistency, integrity and reliability. Lishner (2014) recommended strategies to improve integrity and dependability of research findings including conducting and promoting direct replication studies, ensuring data sharing when requested by fellow scientists, and adopting and promoting a truth seeking mindset during the research endeavor. The dependability criterion accounted for effects of changes in the context, conditions, and assumptions and findings of case study research; and it emphasized the consistency and repeatability of research process to ensure similar results or findings by using protocol (Elo, et al., 2014; Petty, Thomson, & Stew, 2012). Marshall and Rossman (2015) noted that an audit trail provides for a transparent way of showing research design, logic, evidence, and traceability about data collection, organization or management, and representation and interpretation of findings to convince fellow researchers and readers. In this case study, I complied with case study protocol (Appendix F) and created a database to account for dependability as an important aspect of reliability by involving audit trails, member checking of data interpretation, reflexivity, transcript review, field test, and triangulation. The case study protocol comprises of introduction, purpose, data collection procedures, outline of case

study report contents, interview questions, data analysis techniques and tools, and study reliability and validity methods.

Confirmability. The confirmability involves evidences to find out whether research procedures, data, and product of study is true or false. Venkatesh, Brown, & Bala (2013) defined confirmability as the degree to which research outcomes are confirmable or verifiable by other researchers. Lincoln and Guba (1985) noted that confirmability is achieved through triangulation, reflexivity, external audits of suitability or soundness of evidence or data, analysis, and conclusions for high quality research work. Confirmability is realized by evidence that points to something that shows itself (Moustakas, 1994). Confirmability provides for checking any existence of bias by researcher and whether collected data support the findings (Seidman, 2013). Hernandez and Preston (2013) found that the confirmation bias holds because people selectively seek evidence consistent with their prior beliefs and expectations or conduct biased search and shallow analysis of data and information, and that could be overcome by cognitive resources to assert truth or false.

Yilmaz (2013) noted confirmability occurs upon confirming research findings. The confirmability auditor such as an external researcher, was engaged to assess research procedures, rationale for research method, data interpretation, precision and suitability, and confirm congruence between data and outcomes, analysis, and conclusion of study (Houghton et al., 2013). Kemparaj and Chavan (2013) and Berger (2013) recommended an audit trail throughout the study for keeping track of development of each decision and understanding of study. The audit trail includes chronological records of documentary

evidences for source triangulation including recorded interviews, transcriptions, observation, files or database table of sequence of activities or communications by the researcher in the entire research chain. Pritchard and Whiting (2012) suggested conducting a pilot to generate methodological, ethical, and practical insights for novel research works. I checked and rechecked the data accuracy by comparing notes with recorded interviews and submit my doctoral study to confirmability auditors throughout the research process including doctoral study committee and IRB. The independent confirmability auditors review the data, procedures, findings and conclusions of case study and communicate the report to the Walden University.

Reflexivity refers to generation of insights in the reflective journal, memo or diary by researchers through critical and intelectual thinking through the qualitative research data. The reflective memo, journal, and diary are invaluable instruments for generating insights that move the analysis from the easy or simple to creative form (Marshall & Rossman, 2015). Bouch (2012) noted that use of reflection journal for keeping track of data, emerging understanding, reflective writing to examine critical thinking, application of knowledge learned, and reveal misconceptions. Probst and Berenson (2014) described the value of reflexivity or reflective actions in qualitative research. The three routes of analysis included data on reflective journals, trends and patterns, and reflections on the nature of knowledge development in the study (Tribe, Xiao, & Chambers, 2012). Thus, I used a reflective journal (Appendix G) to write the date, descriptions and reflections, and promote reflective thinking and learning in line with the rubric to minimize negative perceptions.

I adapted the relevant data saturation strategies to make this qualitative case study reliable because reliability of research findings depends on the consistency in executing research design, instruments, techniques, and words. Walker (2012) suggested a data saturation tool to ensure collection of adequate and quality data to support a qualitative research study. Thematic analysis in interview-based study is a useful, accessible, flexible, and popular method of qualitative data analysis to explore themes (Braun & Clarke, 2012). Bowen (2008) noted that determining data or theoretical saturation point as a challenge to qualitative researcher.

## Validity

Both the internal validity and external validity are not applicable to this case study design. Yins (2013) advocated for triangulation to measure and strengthen validity of the case study. The case study indicated no any external validity issue because it is not designed to be generalized (Dyrvig, Kidholm, Gerke, & Vondeling, 2014). I ensured validity by triangulation and analysis of data and findings that reflect theoretical proposition or statements and rival explanations. Throughout the case study process, I adhered to the doctoral rubric that articulates the general requirements for reliability and validity of research work and the guidance by the Walden University Research Reviewers (URR). My chair guided and served as an external researcher to monitor reliability and validity of my research study.

#### **Transition Summary**

This section consists of research project, whose subsections include purpose statement, roles of researcher and participants, research methods and design, population

and sampling, ethical considerations for the research, data collection instruments and techniques, data analysis, and validity elements.

I used qualitative research method, single case study design, and the census sampling method to engage participants for exploring effective hedging strategies to mitigate risks of fluctuating exchange rates. The ethical considerations for both researcher's and participants' perspectives enhance the data collection, organization, and analysis techniques, and validity and reliability of the study. The description of reliability, internal and external validities of instruments represents essential process for the study. In section 3 I presented the findings and applications of study outcomes to the professional practice, the implications and recommendations for improved social change and areas for study, and a conclusion including study's contribution to the knowledge of hedging strategies to mitigate risks of fluctuating exchange rates in the banking industry.

Section 3: Application to Professional Practice and Implications for Change
In this section, I provide an overview of the study, presentation of findings,
application of profession practice, implication for social change, recommendations for
action, recommendations for further research, reflections, and conclusion. The content of
this section manifests the consistency between the literature and the research findings
based on the analysis of primary case study data gathered through in-depth personal
interviews, observations, and a review of documents from a publicly listed commercial

## **Overview of Study**

bank of Tanzania.

The purpose of this qualitative single case study was to explore what strategies Tanzanian bank leaders use to mitigate risks of fluctuating exchange rates. I used the PAT as a framework for developing the emergent themes. Data collected from in-depth interviews with 12 bank officials with experience in hedging formed the basis of my theme development. I triangulated interview data with documentary records and observations. After my preliminary analysis, I performed member checking; I requested participants to review my preliminary interpretation of the themes. I used NVivo 11.0 software to organize the narrative segments collected from interviews and document reviews. Four main themes emerged from the 214 significant statements, including (a) training and skills development, (b) management of hedging strategies and contracts, (c) corporate governance, and (d) corporate benefits.

## **Presentation of Findings**

The overarching research question was this: What hedging strategies do Tanzanian bank leaders use to mitigate the risks of fluctuating exchange rates? I conducted a qualitative case study involving case study design for gathering of data and triangulated the collected data with observations and documentary evidence from annual reports. I used the conceptual framework of PAT developed by Fama (1980). I applied a census sampling approach to identify 12 bankers who hedged. The eligibility criteria for the study participants were as follows: (a) knowledge and experience in hedging and familiarity with the case and data, and (b) availability and allocation of sufficient time to respond to interview questions I posed in the meeting room of the bank located in Dar es Salaam, Tanzania. I gained access to the research participants through coordination by the director of treasury and capital markets of the bank. I sent an invitation letter (Appendix B) with the informed consent form to each potential participant via e-mail for review, and they each confirmed participation through reply with words "I consent." I conducted in-depth interviews with 12 experienced hedgers-cum-traders of the bank in the directorate of treasury and capital market. The interviewed bank officials included one woman and 11 men (Table 1). I protected the identity of participants by replacing their actual names with alphanumerical values such as P1, P2, to P12 with a legend kept in the locker. I supplemented the case study interview data by annual reports, refereed journals, and websites for tying together the overarching research question and the conceptual framework of the PAT. Table 1 includes the demographic data of the research participants.

Table 1

Participant Demographics

Group by	Item	% of total	Participant $(N = 12)$
Gender	Male	92%	11
	Female	8%	1
Leadership status	Director/ Managers	32%	4
	Principal Officers	60%	7
	System administrator	8%	1

The PAT framework was appropriate for understanding the banking business and hedging of fluctuating exchange rate risks that I studied in this research. The PAT constructs include (a) separation of roles of ownership and management of business assets and liabilities, (b) risk management between management and owners of the bank, and (3) management of funds or capital in accordance with the risk threshold while maximizing returns (Fama, 1980). I transcribed the data collected from 12 interview questions and uploaded the transcripts into NVivo 11 software for analysis. In the course of data analysis, I auto-coded the data transcripts and identified themes by sentence and sentiments. I used the results to compile the content of this section. I found that the conceptual framework of PAT, literature, and research findings aligned by the constructs. Table 2 includes the interview questions and related themes.

Table 2  $\label{eq:linear_eq} \textit{Interview Questions and Primary Themes } (N=12)$ 

Interview question	Primary theme	
1. What hedging strategies does your bank leader use to mitigate risks of fluctuating exchange rate?	Management of Hedging strategies and contracts	
	Training and skills development	
2. What hedging strategies have you seen used by other bank leaders to mitigate risks of fluctuating exchange rate?	Management of Hedging strategies and contracts Training and skills development	
3. What guidance do you receive from the board of directors on hedging to mitigate risks of fluctuating exchange rate to improve bank's performance?	Management of Hedging strategies and contracts Corporate governance	
4. What benefits do the shareholders, board of directors, and management earn by undertaking effective hedging strategies to mitigate risks of fluctuating exchange rates?	Management of hedging strategies and contracts Training and skills development Corporate governance Corporate benefits	
5. What influences hedging strategies to mitigate risks of fluctuating exchange rate?	Training and skills development Corporate governance Corporate benefits	
6. What estimated exposure or cost is covered by effective hedging strategies to mitigate risks of fluctuating exchange rates?	Management of Hedging strategies and contracts Corporate governance	
7. What performance contract or agreement exists between the shareholder or board and management for undertaking effective hedging strategies to mitigate risks of fluctuating exchange rate?	Management of Hedging strategies and contracts Corporate governance Corporate benefits	
8. What compensation or reward do you claim for the earned benefits of undertaking effective hedging strategies to mitigate risks of fluctuating exchange rate?	Management of Hedging strategies and contracts Corporate benefits	
9. What special knowledge or skill do you need for undertaking effective hedging strategies to mitigate risks of fluctuating exchange rates?	Management of Hedging strategies and contracts Training and skills development	
10. What else, if anything, would you like to add or ask on our conversation about success factors and strategies related to hedging to mitigate risks of fluctuating exchange rates in your bank?	Management of Hedging strategies and contracts Corporate governance Corporate benefits	

# **Theme 1: Training and Skills Development**

Training, experience, and skills development emerged as a significant theme for hedging of fluctuating exchange rate risks. The training sessions beyond academic hard skill training facilitates acquisition and development of soft managerial skills (Ngang, Chan, & Vetriveilmany, 2015). Theoretical, practical, and industrial training and experience improved acquistion of employable skills (Boahin & Hofman, 2013). Boer and Engers (2013) supported agents with legal knowledge to enhance business policy coordination, monitoring, and compliance in the legal domain. Shareholders recommended training programs to nonexecutive board members for their effective participation, motivation and commitment, collective decision making, and high quality relationship to enhance good governance in the company (Guerrero, Lapalme, & Segun, 2015). Participants' perceptions on training and skills development in the current study were consistent with the literature. All the participants (n = 12) recommended training, knowledge, and skills development for effective risks management such as hedging and prudential initiatives in the banking business. The subthemes under this theme included (a) training, (b) experience and skills, and (c) technology.

**Training**. N. Ahmad, Amer, Qutaifan, and Alhilali (2013) supported training to improve users regarding sense of participation, bridging the knowledge gaps, and keeping up with the new technology. Gong and Janssen (2012) demonstrated the necessity of applying sophisticated and legal knowledge and logic in business decision making.

Ravesh and Reshef (2016) pointed out that utilization of innovative technology raises the skill premium in developing countries. Training helps hedgers to learn and master their

work. All the participants (n = 12) confirmed they had a combination of required knowledge, skills, and experience in hedging by OTC and derivative investments through staff rotation scheme in the entire chain of hedging, trading, or dealing transactions. Participant P2 described that hedgers obtained knowledge and skills through training offered by the accredited institution of ACI that provides professional hedging courses, examinations, and certification based on a standard syllabus on the code of conduct and ethics, derivatives pricing, and hedging simulation practices. Participant P4 explained that hedging derivatives involve losing money; hence hedgers need knowledge and skills for conducting smart calculations and forecasts on hedging costs and benefits. Participant P2 argued that before hedging one has to foresee the market direction, conduct events and technical analysis, and then devise a hedging strategy to mitigate the market risk of currencies. Participant P11 noted that in derivative market hedgers should be well trained on commodity trading in the trading platform and logistics.

Boer and Engers (2013) confirmed that legal knowledge is essential to make, influence, guide, enforce, interpret, and deliver actions and operational services in businesses in compliance with applicable laws, regulations, guidelines, and circulars. Ordóñez-López (2015) supported the acquisition and application of legal knowledge and skills to perform satisfactorily and gauge the value of derivative contracts entered into and identify any loopholes or irregularities in the business conduct. Participant P5 confirmed that there are numerous regulatory restrictions in the financial hedging market; thus, management and regulators need knowledge and skill to assess and recommend appropriate hedging instruments. Participant P7 and P11 supported hedgers to have

technical and fundamental knowledge of financial systems, treasury products, and risks of geopolitical, economic events, and other global issues and drivers of changes in exchange rates that expose banks to market risks.

**Experience and skills.** Kegans, McCamey, and Hammond (2012) defined experience as overall length of time in an occupation or workforce. Diamong (2016) noted that skill-mix and experience had an impact on workers' wages and Beaudry, Green, and Sand (2016) argued that workers with different skills adapt changes in demand by shifting across tasks. Iversen, Malchow-Møller, and Sørensen (2016) related higher pays to workers with both theoretical and practical skills and wage-work experience. Esen (2016) supported work experience for both professionals and management in the organization. Erichsen (2016) insisted on learning to transform experiences in cumulative and cyclical developments. All the participants (n = 12)encouraged job rotation in the bank's front, middle, and backward offices to acquire necessary skills and experience and code of conduct in hedging, trading, and other bank transactions. Participant P4 noted that competent hedgers require multiple knowledge and skills on derivative products and legal ethics for high compliance status. Participant P11 argued that competent hedgers are scarce in the financial market because it takes time to develop the competence and capability required to predict and forecast future trend based on macroeconomic, operational, accounting, and other microeconomic analysis. Participant P7 confirmed that hedging requires frontier knowledge and skills for high risk taking and offsetting by high returns and hedgers receive high pay to retain them, similar to certified public accountants holders.

**Technology.** Technology influences the bank management team to retain and attract a diversity of potential customers and investors (Chai, Tan, & Goh, 2016). Attracting and retaining frontier technological skills is critical for the competitiveness, survival, and success of business (Opp, 2012). Paluch and Wunderlich (2016) recommended adoption of digital technology like ICT for undertaking services in critical time-sensitive settings. Boer and Engers (2013) noted that ICT increased capacity of business and social organizations to manage changes and improve their efficiency. Herrera (2015) supported the innovative institutional drivers such as business policies, strategies, models, values, leadership, and culture to guide management to engage stakeholders, improve competitive advantages, and corporate performance. Gong and Janssen (2012) noted that policy makers, executors, and evaluators of the policy implementation acknowledge the importance of ICT in daily operations and legislative processes. Kim and Lee (2016) found that continuous learning and innovation through research and development efforts across technological regimes have the greatest effect on firm survival. All the participants (n = 12) demonstrated reasonable awareness and capabilities to utilize digital technologies such as Thomson Reuters and Bloomberg Terminals to access, analyze, and communicate banking transactions data in the financial market. Participant P10 stated that Reuter's technological system helps the hedger to establish where the market is. Participant P11 emphasized that any transaction through the Thomson Reuters platform, such as an agreement to buy or sell certain amount at a specified future, is regarded as a contract. Participants P5 and P8 confirmed to have knowledge and experience of using the ICT-based systems of Reuters and Bloomberg

terminals or platforms for interbank hedging, trading, and linking to the BOT and other local and international banks.

The findings indicated that the bank's management team was well trained and applied knowledge, experience, and technology to make decisions for improving business benefits for both shareholders and management team. Knowledge of the trend of foreign currency demand helped the management team to determine the future exchange rates for hedging. Although the hedging program has not eliminated the risks, the management team managed and hedged the risk of fluctuating exchange rate risk exposures by foreign OTC and derivative contracts. The bank's management team entered into contracts with third parties that affected the shareholders. The basic managerial function of the bank includes taking and hedging risks for growth opportunities and return on capital. The management team also monitors and hedges financial risks exposure to changes in exchange rates of the foreign currency such as USD through a risk management program.

## Theme 2: Management of Hedging Strategies and Contracts

Management of hedging strategies and contracts signifies another theme of this study, involving OTC contracts and derivative investments. A contract is an agreement that gives rise to a binding legal relationship such as obligations, rights, and functions to attain legal contracting effect within the provision of the contract law (Kolvart, Poola, & Rull, 2014). Gamba and Triantis (2014) noted that hedging is a risk management tool and decisions of managers to use derivatives contracts reflect structure of managerial incentives, contractual terms, and regulatory controls designed to prevent managerial and financial agency problems. Purnanandam and Weagley (2016) supported the hedging

products that avoid financial costs to influence choice of hedging contracts. Fiuza de Braganca and Daglish (2016) related OTC contracts to bilateral arrangements whose fair value is determined when they are closed out. Asche, Misund, and Sikveland (2013) found that spot, forward, and long term contracts such as futures and options determine trading and prices changes in the EU market. The long term derivative contracts are subject to cash margin requirements and presumably less risky to third party than short term OTC contract with fluctuating prices or rates (Lee, Lin, & Pasari, 2014). All participants (n = 12) demonstrated understanding of the management of hedging strategies and contracts to mitigate risks of the fluctuating exchange rates for the success of the bank because they take risks in local currency (TZS) that is exposed to fluctuations in foreign exchange rates. Four subthemes emerged from this theme includes: (a) spot contracts, (b) swap contracts, (c) forward contracts, and (d) derivative investments such as futures and options.

Swap contracts. The swaps from fixed and floating exchange rates help most of the fair value hedging, driven by investor's demand rather than risk management consideration (Disatnik et al., 2014). Forward swaps such as putable or callable swap derivatives, are widely traded derivatives (Mereney, 2016). Ajupov (2013) supported swap contracts to improve credit rating and raise relatively cheap foreign investment funds. Guiaglia and Yang (2016) confirmed that more widespread access to credit markets increase firm's investment efficiency and sustain the rapid growth of the economy in China. Filipovic, Gourier, and Mancini (2015) confirmed that hedging by swap contract is easier than hedging by other volatility derivatives. Gamba and Triantis

(2014) argued that the fair value of swap reflects credit charge, optimal hedging policy, and optimal liquidity. Swap leads to high leverage, diversification, risk aversion, tax benefits, and welfare of entrepreneurs (H. Wang, Yang, & Zhang, 2015). Ten participants (*n* = 10) indicated that the bank applies swap for short term transactions for sizable amount of funds with the BOT and small scale swap contracts with counterpart banks. Participant P2 noted that the bank's management team uses the swap contracts for mitigating risks of fluctuating exchange rate, minimizing borrowing costs, balancing positions, and obtaining premium as swap points (cost to the USD holder and premium to TZS holder). Participant P11 also confirmed that in swap hedger looks at the positions of the bank and its counterpart with foreign currency or TZS and derivative transaction requires one party to guarantee a fixed value for the total asset holdings of an entity over a certain period of time. Participant P11 further described:

The currency swap contract is OTC derivative for hedging to minimize borrowing costs in foreign currencies and exchange rate risks.... The regulator, BOT however stopped the short term swap contracts below duration of one week to avoid interference with spot contract transactions that lasts within 4 banking days.

**Spot contracts.** The spot contracts take place during selling and buying transactions. Lee et al. (2014) confirmed that spot transaction is a procurement strategy and spot market prices reflect demand and supply forces with most significant influence on the optimal decision regarding volume of transaction and highest profitability. J. Xu, Feng, Jiang, and Wang (2015) noted that spot contract reflects realizable demand transactions without uncertainties or costs related to market illiquidity and that spot

and Daglish (2016) indicated that spot contracts affect the hedge market for mitigating risks to optimize profits. H. Wang, Moustier, and Loc (2014) argued that spot market coordination generally refers to incentives of selling and purchasing transactions through fixing and publicizing prices or exchange rates. Participants P6 and P10 noted that spot contract to buy currency is settled in two days for completing the transaction. Participants P8 explained that spot contracts for buying or selling apply for short term to cover exchange rate risks and balance positions between the bank and counterparty at the same value date because they do not have limitations. Participant P11 argued that bank has always to seek for a counterpart and if the bank sells to another bank it has to buy same amount and same value date from another bank. The spot trading has high volatility because is exposed to market liquidity problems. The management team coordinated spot contracts to sell or buy foreign exchanges for bank's clients.

**Forward contract.** Fiuza de Braganca and Daglish (2016) recommended portfolios of forward contracts of different maturities in OTC markets to guarantee competitive spot prices by way of mitigating risks of higher spot prices above marginal costs. Ahmadi, Charwand, and Aghaei (2013) analyzed the portfolio of forward contracts within a medium-term period to determine demand and optimal selling prices to clients. The forward contract is useful for cash flow hedging that constituted 0.4% of the book assets or liabilities in energy industry, 4.2% assets or liabilities in chemical industry, and 4.5% of assets and liabilities in consumer nondurables industry (Disatnik et al., 2014). All participants (n = 12) demonstrated understanding of the forward contracts. Participant

P3 confirmed that the forwards contracts are unstructured or unstandardized OTC facilities like spot and swap contracts that are executed at the time of expiry without any cost to the bank. Participant P1 argued that forward contract is useful in cash flow hedging with the objective of reducing exchange rate fluctuation risk from forecasted net exposures of revenues derived from and payments made in foreign currencies such as USD. Participant P5 observed that management team is forward contracted to deliver or buy at the maturity date of the forward interbank contract through the Thomson Reuters platform that connects all the banks in the IFEM in Tanzania.

**Derivatives contracts.** Ranneu and Barneto (2014) indicated futures contracts and their respective option contracts as long term contract derivatives used to cope with demand uncertainty that transfers market risks to clearing houses. M. Luo, Li, Wan, Qu, and Ji (2015) noted that the buyer purchases call options from the supplier for assurance of a fixed supply in the future when the actual demand becomes known. The derivatives investments require smart contracts as such intelligent computer program agent to make decision and perform business transaction when certain minimal preconditions are met (Karim, Cowan, & Alencar, 2014). All the participants (n = 12) confirmed that the futures and option market do not exist in the local financial market because of lacking clearing house infrastructure and the price tag based on underlying assets and exchange or clearing house for future deals. Participant P7 added that financial market is still at the nascent stage for complex derivatives such as futures and options because it is difficult to find the counterparty and too restrictive regulations that limit hedging transactions in foreign currencies. Participants P5 and P12 noted the futures and options contracts are

complex derivative instruments with cost element ranging between 0.05% and 2.5% of the value because they can be traded without any underlying assets. Option contract is a flexible agreement between two parties to facilitate the right to buy (call) or sell (put) a specific underlying item at a preset price or strike price prior to the expiration date of a specified period of time. Participant P11 argued that option contract provides rights to buy or sell an underlying security at a preagreed price at given date, who sells will be obliged to sell and buyer will have right to exercise it. Participant P8 noted that option on futures contract provides for a specified futures contract; if the option is on the long side of the contract the holder would buy and if it is a short option contract an investor would sell that underlying asset on future date at specified price.

The findings augur well with the literature on managerial decision on hedging. The management team applies OTC and derivatives contracts to set competitive prices or rates in the markets. The management decisions on applying the hedging strategies to mitigate fluctuating exchange rate risks have positive results including generating profits for creation of shareholders' wealth. Participant P2 indicated that although the hedging market is still at nascent stage of development, hedging tools help bank to manage risks and control the financial position between the local and foreign currencies and to reduce or eliminate exposure to loss. Participant P3 argued that hedging is one way of sharing risk between bank and customer and counterparties and is exercised for commercial reasons such as to offset loss but its effectiveness depends on the existing structure, policy and environment.

## **Theme 3: Corporate Governance**

Corporate governance is another theme of this research study. Strong corporate governance depends on the strength of reputations of directors, transparency and independence of the board, and relationship with stakeholders (Levit & Malenko, 2016). A sound corporate governance system created conducive environment to sustain efficient growth in corporate sector (Marina, 2012). The shareholders or stockholders exercised good governance and control of corporate affairs through their board of directors (Raelin & Bondy, 2013). Mulyadi and Anwar (2015) argued that corporate governance has significant impact on management of earnings, taxation, and board compensation. Guiaglia and Yang (2016) confirmed that weak corporate governance structures mislead managers or controlling shareholders to overinvest their free cash flow. The market induced corporate governance mechanisms such as board size, independent director and duality on performance to mitigate agency costs (Ibrahim & Samad, 2011). All participants (n = 12) demonstrated understanding of the corporate governance of the bank regarding mitigation of exposure of the fluctuating exchange rates risks. Four subthemes emerged from this theme: (a) regulatory compliance, (b) board leadership, (c) business policies, and (d) management strategies.

Regulatory compliance. Gong and Janssen (2012) noted compliance with everchanging regulations, business environment, and frontier technologies to satisfy customers. Klomp and DeHaan (2012) found that impacts of bank regulation and supervision are most significant on riskier banks and increasing regulatory constraints prevent banks from efficient allocation of resources. Ayadi, Ben Naceur, Casu, and

Quinn (2015) found that regulatory constraints impact on risk management, resource allocation, bank performance, and financial stability and the ultimate regulatory costs such as lower saving rates and higher lending rates are borne by bank customers. All the participants (n = 12) indicated that the central BOT is responsible for regulating, promoting and protecting the interest of the economy and society, depositors, safety and efficiency of the banking system through licensing and rigorous supervision of the financial institutions, bueaux de changes, and micro finance institutions. Participant 8 argued that BOT determines exposure of each bank as an acceptable limit based on the category of trustworthiness on the bank's size of the position, account size, profitability, and the period of holding a position to a point of payback. Participant P5 noted that BOT through its supervision directorate regulates the approved exposure limits or positions of each bank, for example, USD 4.0 million as minimum limit for Standard Chartered and USD 8.0 million for CRDB bank. The breach of the approved limits or position will subject the bank to penalties. Participant P1 also confirmed that BOT reviews and approves the hedging policy, plans, contracts, limits, strategies, and transactions to ensure appropriate hedging of fluctuating exchange rate risk including shifting of identified risks to the source or customer. Participant P8 recommended that BOT should reduce the statutory minimum reserve ratio by a significant percentage to keep liquidity into the bank for hedging and lending to restart the money multiplier on a growth trajectory. Participant P3 narrated:

BOT formulates and implements the monetary policy, regulatory limits, and net open position (NOP) limits that banks and bureaux de changes must comply with.

For instance, the NOP set by BOT for banks has registered a declining trends overtime: 20% (2011), 10% (2012), 7.5 (2013), 5.5% (2015) and 7.5% (2016) of the core capital for improved or high stability of financial market because holding of too much funds in foreign currencies impacts on the money market forces.

**Board leadership**. Salleh and Othman (2016) explained that good corporate governance through appropriate board size, meetings, and duality attributes deter corporate fraud and facilitate realization of zero fraud corporate governance policy. Hazarika, Karpoff, and Nahata (2012) noted that board of directors is directly responsible to hire, monitor, discipline, and fire the CEO for manipulating corporate earnings and imposes costs to shareholders. Ibrahim and Samad (2011) recommended board with independent directors to bring in expertise, experience, contracts, counsel and monitor the company and thus reducing the agency conflict with shareholders. Zona (2014) noted that board background diversity and optimal board structure reduce agency costs and support leadership development. Guerrero et al. (2015) supported well trained and experienced board chairs for authentic leadership to foster motivation, commitment, and participation of nonexecutive board members through financial remuneration and high quality relationship and fit between chairs and CEO for and chairs-CEOs relationship quality. The board of directors makes correct decisions to safeguard the interest of the principal through the lawful and efficient administration and operations of the bank in compliance with the laws, regulations, and guidelines including the Companies Act umber 12 of 2002 (Cap, 212) of the United Republic of Tanzania (CRDB Bank, 2016). The board provides overall risk management policies, strategies, and effective oversight to ensure compliance

with legal and regulatory framework, and approve internal control systems through policies, strategies, principles, and operational procedures for the financial institutions and bureaux de changes affairs. Participants P5 noted that board requires the bank management team to execute prudent and correct decisions regarding hedging to safeguard shareholders' money. Participant P3 described that board issues guidance or policy on structural frameworks indicating who will do what at what time, decision making process, authorized trading limit, stop loss limits, and dealership and regulatory limits regarding hedging on the annual basis. Participant P7 also narrated that board approves the general policies, implementation strategies, monitoring and evaluation reporting framework and the corporate direction where the bank is looking at on yearly basis.

Business policies. Born and Pfeifer (2014) indicated that risk management policy and shocks matters because of extraordinary large policy uncertainties like government spending or wealth shocks. Disatnik et al., 2014) noted that cost-efficiency of the corporate policies on liquidity, fair value, and cash flow financing is realized through hedging. Gong and Janssen (2012) suggested that policy makers and policy executors must think, understand, describe the flexibility and agility dynamics, and intertwine policy making and execution for successful business strategies, legislations, and regulations. Karim et al. (2014) defined business policies as a combination of rules, models, properties, and strategies to guide competitive business security, operations, and practices. All the participants (n = 12) recommended the business policies for systematic

and predictable business performance. Participant P3 described the process of setting the internal risk management policy (IRMP):

The management team, a hedger or dealer recommends the policy or hedging strategy or measure to the directorate of treasury (DOT), who informs the top management (CEO) for onward submission of such report to the board of directors for approval in line with the IRMP. The IRMP indicates key performance indicators (KPIs) that are translated in daily targets that are included in the employment contract of each hedger or dealer.

Management strategies. Wiseman et al. (2012) pointed out the role of management to balance the competing interest of the various stakeholders and to assure going concern or survival of the business. Y. Zhang and Gimeno (2016) motivated managers to improve competitiveness and performance of the company through good corporate governance. The bank's management team undertakes intermediary activity of transferring risks to their sources and ensuring that all risks including lower saving rates and higher lending rates ultimately borne by clients (Ayadi et al., 2015). Kim and Sorensen (2016) supported the strategy of optimal contracts between the principal and agent for optimizing business performance. Ibrahim and Samad (2013) provided empirical evidence that the internal governance policy plays an important role as a monitoring device in restricting agency-related costs. The board approves risks management strategies to guide management's entire internal operations yearly including management of the derivatives hedging instruments. Participant P5 noted the role of board's audit and risk committee in reviewing risk management and internal control

system and making recommendations to the assets and liability management committee (ALMC) under chairmanship of the bank's CEO. Participant P7 noted that ALMC determines the strategy of hedging risks at the corporate level involving gap analysis, exposure and NOP limits of the foreign currencies. Participant P12 argued that NOP limits of how much percentage of the core capital can be exposed by buying without selling different foreign currencies and by buying and selling similar currency to cover or abolish the NOP. The compliance with applicable laws and regulations is high because the audit and risks management committee ensures independence between front and backward offices of the bank.

The findings on the corporate governance are supported by the respective body of literature. Fama (1980) indicated that the board of directors contains many differing factors of production whose marginal products are affected by the top decision makers. The principles of effective corporate governance focus on resolving principal-agent problems, improve the agency relationships, trust, and prudent decision-making by management team to meet shareholders interest (Fülöp, 2013). However, the trust is broken and the relationship fails if the agent acts in any other manner. Through good governance, the board of directors mitigates the moral hazards problem of taking excessive risks at the expense of the shareholders by hedging program in favor of the principals' interest and goals. Participant P5 noted that taking risks without hedging is bad governance because of the possibility of losing money and a proper finance manager will hedge even though risk is minimal. Participant P3 noted management deploys professional staff to implement activities for the interest of board and shareholders and

the board works for the shareholders. The regulator, BOT, provides guidance against speculation and inspects the conversion rates, review hedging strategies, transactions, and contracts to ensure that the bank is appropriately hedging the exchange rate risks.

## **Theme 4: Corporate Benefits**

Corporate and management benefits emerged as one of the themes in this study as human resources are critical factors in the banking business. Fama (1980) recommended rewarding of the shareholders and management team based on the profits and expected value of the marginal product respectively. Management hedged to absorb shocks to the value of assets and liabilities and cash flows associated with such assets (Disatnik et al., 2014). Bode, Singh, and Rogan (2016) supported rewarding and retention of employees as a critical aspect of human capital management to sustain corporate business. Melvin and Prins (2015) indicated that foreign investors demand foreign currency to repatriate dividends, reduce exposure to exchange rate risks, repay loans and rebalance portfolio. Wiseman et al. (2012) indicated that compensation design responds to business norms, values, beliefs, and culture. Purnanandam and Weagley (2016) supported manager's compensation for value-maximizing decision linked to the stock price; hence a bad decision will lower the stock price and reputational status of the bank. All the participants (n = 12) confirmed understanding of the corporate and management benefits that bank obtains from hedging instruments to mitigate both credit risk such as nonperforming loans by monitoring credit-worthiness of counterparties and market risks. The subthemes of this theme include: (a) corporate values, (b) managerial compensation and incentives,

and (c) pecuniary rewards including salaries and bonuses, dividends and fees, and fringe benefits.

**Corporate values.** Gamba and Triantis (2014) noted that hedging is a risk management tool to enhance corporate value by about 2%. Hazarika et al. (2012) identified the corporate benefits such as turnover or earnings, high stock price performance, and high quality of governance, transparency, and reputational status. Melvin and Prins (2015) argued that hedging helps to settle loss and reduce transaction and operational costs of business. All the participants (n = 12) indicated that management team of the bank apply appropriate hedging instruments to mitigate risks and generate benefits to the bank. Participant P1 argued that directorate of treasury contributes significantly to the bank revenues through hedging and trading transactions with local and international counterparties and correspondent banks that pay fees and commissions in convertible foreign currencies. Participants P9 noted that hedging is costly but managed within tolerance level and the management team undertakes hedging if benefits outweigh costs. Participant P7 described that main benefits of hedging include improvement of overall returns and profits, reducing exposures, improve earning per share, stock value, dividends, assured going concern of the bank, and harmony of interests between stakeholders and bank's management team.

Managerial incentives and compensation. Y. Zhang and Gimeno (2016) recommended the use of managerial incentives to motivate managers to undertake sound business actions to maximize profits. Peng and Roell (2014) noted that credible compensation scheme including long-run managerial incentives avoids financial crisis,

improves corporate governance, disclosure regulations, and better contracting environment. P. Xu (2013) argued that managerial equity-based compensation schemes determine incentives from internal funds. Participant P12 noted that the performance rewards like bonuses are based on risks taken by hedgers who use sophisticated derivatives to generate reasonable income or mitigate risks loss. Participant P1 explained that the hedgers and traders in the treasury directorate are highly compensated because they contribute significantly to the combination or overall corporate goals and individual performance targets. Participant P3 noted that hedgers have optimistic expectations regarding managerial compensation and incentives because the current board of directors understands international financial market dynamics. Participant P12 warned, however, that too many motivational incentives can bring chaos for short term rewards and the perfect motivational rewards are based on risks taken by bankers including dealer or trader and hedger. Participant P7 argued also that without taking risk the hedgers will not generate any money but they can easily or immediately be dismissed without any explanation or board approval if they generate loss over and above the preset limits.

Pecuniary rewards. Hayek, Thomas, Novicevic, and Montalvo (2016) found that level of human capital development influences pay based on social and institutional pressures at the level of management team and pay-for-performance compensation work at the general employee level. The participants demonstrated that they earn monetary compensation for their human capital services under employment contracts. Mariam (2012) noted that employer is pecuniary liable to his individual employee per terms and conditions stipulated in the employment contract. Wiseman et al. (2012) recommended

pecuniary rewards in highly competitive market environments. Eleven participants (n = 11) confirmed that the bank's management team pays packages of monetary benefits to its entire staff (salaries, bonuses, and allowances), board (fees and allowances) and dividends (shareholders). Participant P7 noted that the management of the bank also fires immediately without any explanation or board approval any hedger or trader who generated loss over and above the preset limits. Participant P2 confirmed that the management team controls all hedging transactions to avoid losses and to retain staff in the treasury directorate.

Salaries and bonuses. Hakenes and Schnabel (2014) confirmed that bonus schemes and contracts resolve agency problems, goes with bailout expectations, and attract imposition of caps by regulator. Benabou and Tirole (2016) found that managers with high skills are scarce, derive their private benefits from delegation and appropriate the rents they generate. Edehof, Rajan, and Reichelstein (2013) noted that management has discretion on features of bonus payment to staff as part of incentives and compensation payments for managers. Participant P2 noted that amount of bonus depends on the performance or profit of the bank based on the risk which it takes and bonus payments account for a range of 1% to 2% of total income earned each year. Participant P7 described that hedging is a high paying job and a bank retains hedgers because they take high risks and generate a significant amount of money; and each staff obtains a 1-month salary at the end of each year as taxable bonus ranging between TZS 10 million and 50 million. Participant P12 noted that the bank's management team is not transparent

on the bonus scheme and recommended use of discretionary approach to determine a separate compensation scheme based on the risk exposure each staff takes.

Dividends and fees. Manos, Murinde, and Green (2012) recommended pay of dividends out of earnings to mitigate free cash flow problems as the internally generated cash exceeds investment opportunities. Baker, Mendel, and Wurgier (2016) found that managers with strong cash earnings pay high dividends whereas retain sufficient funds for business operations in the future. Zuvekas and Cohen (2016) found that fee-for-service framework remains more dominant payment method to individual service providers than risk-based alternatives. Participants P3 confirmed that shareholders are paid dividends every year. Participant P11 also noted that shareholders obtain dividends and directors of the corporate board receive annual fees. Participant P7 explained the payment of dividends as based on the profits of the bank. The management team distributes some of the corporate profits or earnings as dividends to the shareholders thus putting those profits to better use.

Fringe benefits. The banking activities are undertaken by teamwork and the rewards are general to all including transport, housing and other allowances. Wiseman et al. (2012) recommended rewarding of management members to build up team effort. Njiland and Dijst (2015) supported fringe benefits to company workers regarding telework, work schedule flexibility, and monetary allowances. R. Ahmad and Scott (2015) recommended fringe benefits or indirect financial payments over and above salary including employee medical benefits, support and assistance program, paid annual leave, free accomodation, retirement pay and insurance to maximize productivity. Participant P6

noted that hedgers enjoy fringe benefits like uniforms, leave with pay, and bonuses to other staff because of team work. Participant P3 explained that the bank's reward system is based on the distribution of bank's profits through commission, dividends, fees, and fringe benefits.

The findings on benefits to both corporate and management viewed in the lens of PAT include dividends to shareholders, fees to board members, salaries and fringe payments to management team and professional staff. All the participants (n = 12) confirmed to benefit regarding dividends to shareholders, fees and allowances to board members, salaries to management and other staff. The benefits of hedging of fluctuating exchange rate risks include reduced costs and added value in the course of doing banking business. The compensation arrangement is based on growth in business performance and economic situation. However, the pecuniary benefits in the local market are too low and if the bank pays too much motivational payments can bring chaos for short term rewards.

## **Summary of Findings**

Four themes emerged, comprising (a) training and skills development, (b) management of hedging strategies and contracts, (c) corporate governance, and (d) corporate benefits. The first theme focuses on human capital resources a hedger requires to hedge effectively including training, experience and skills development, and embodied technology to facilitate hedging. The second theme includes analysis of the hedging strategies and contracts such as forward, spot, swap, futures, and options instruments. The hedging market is still nascent in Tanzania financial economy because the bank applies only OTC instruments and the clearing platform to support derivative investments

such as futures and options is not in place. The third theme on corporate governance identifies the oversight roles involved in hedging market mainly regulator, board of directors, management team, and hedgers. The laws, regulations, policies, and prudential measures are complied with by all the roles. The fourth theme captures the benefits of hedging exchange rates to the bank as corporate entity, shareholders, board of directors, management team and all other staff. The benefits are huge in terms of bank's profits, dividends, fees, salaries, bonus, allowances, and fringe benefits. I demonstrated alignment of findings in view of sentiments the interviewees issued in the course of the study as directly linked to the knowledge base in the discipline such as PAT constructs and literature. The emerged themes indicate the strategies the commercial bank used to undertake effective hedging of exchange rate risks to maximize profits.

## **Application of Professional Practice**

Developing hedging strategies to mitigate risks of fluctuating exchange rates in a commercial bank is essential for enhancing competitiveness in the banking industry. Benabou and Tirole (2016) confirmed that competitiveness reflects success into the market, based on reducing fixed costs and making profits to sustain business. The hedgers are high return wagers because they take high risks to improve business competitiveness by reducing or avoiding costs, preventing loss, and adding significant values from changes in the exchange rates. Kim and Sorensen (2016) advised firms to take large business risk to lower agency costs of debt for more borrowing. The management team of the bank hedges to manage costs and stabilize the values and profits. Levin, Nediak, and Topaloglu (2016) noted that profit structure highlights the

priorities of decision maker. The success in risk management means to divert the financial risks and generate positive impacts of the income to the bank. The general benefits include also containing of foreign exchange exposure against unknown rates and price fluctuations in the future financial markets. At the individual level, hedging strategies to mitigate risks of fluctuating exchange rates tied bonus more closely to the successfully managed risks.

The findings of this study supported the PAT and related literature. The PAT is concerned with resolving problems that can exist in agency relationships because of unaligned goals or different risks aversion levels. The PAT indicates various levels of risk between a principal and an agent. The board of directors and bank's management team (hedgers) optimized liquidity and returns on hedging strategies. The PAT also informs that although the separation of ownership and management of the bank is costly, it is an efficient form of economic organization. The shareholders borne the risks and the management took and hedged exchange rate risks to maximize benefits by optimizing liquidity and returns on hedging strategies. The board of directors represented the shareholders' interests. Wiseman et al. (2012) pointed out however the challenge for the agency theory is to derive the most efficient compensation package for maximizing agent's effort subject to the risk constraints of self-interested agents.

Agency loss problems often arise in the agency relationship when the management team does not make decisions that are in the best interest of the shareholders but provide some benefit to themselves at the shareholders' expense (Fama, 1980). The management team of the bank avoided all such conflicts of interest that harm the

relationship with the shareholders. The participants indicated that most amicable agency relationship in the bank occurs when shareholders through their board of directors hire management team that acts on their behalf. The shareholders sacrificed their short-term profitability on their income, incorporated the bank, and contributed upfront money for capital and technology for high prospective capital growth and higher earnings in the future. The bank's management team uses the capital and technology to undertake and expand business in the financial market for high returns.

## **Implications for Social Change**

This doctoral study has implications on the social changes of making better decisions regarding adaption of hedging strategies to mitigate risks of fluctuating exchange rates by a management team of a commercial bank. Boud and Brew (2013) noted that changes in one of the overlapping social elements bring about changes in features of the common practices including way of viewing, talking, and doing things. Orhan, Erdogan, and Durmaz (2014) recommended the management team to adapt visionary and missionary innovations to realize competitiveness and sustain their business objectives. Deokar and Sarnikar (2014) supported positive social change through enchanting mission, vision, and value statements based on corporate strategy. The management team of the bank recommended changes and innovations of the clearing platform to support derivatives investments in hedging strategies to mitigate risks of fluctuating exchange rates. The bank's well prepared and implemented vision and mission statements indicate unique characteristics and guiding lights along the right path,

influence organizational employees in their day-to-day activities, and facilitate the attainment of organizational goals.

Social change requires inclusive social innovative approaches for inclusive growth through changes in business practice and policies to improve lives and livelihoods (George, McGahan, & Prabhu, 2012). The participants confirmed that bank has a charter to meet the specific community needs and to provide services that are conducive to wellbalanced economic growth. Fama (1980) perceived changes of value of human capital such as managers based on futures wages and increase in organizational wealth to resolve any potential problems. The findings of this study fill the gap of knowledge base on hedging risks of fluctuating exchange rates and will help banks and clients or customers to effectively hedge to sustain their business earnings. Gong and Janssen (2012) noted that the knowledge base consists of existing research methodologies and findings as research foundations. Hedgers require frontier knowledge and skill to develop appropriate derivative instruments in accordance with the characteristics and trends of the financial market. The knowledge and skills include capability to calculate and forecast the future trend of exchange rates, changes in the cash flows and values whether gain or loss, and gain and loss exposure on the exchange rate risks. The participants noted that to hedge one has to foresee the direction of the market and then devise a hedging tool against identified risk. The viability of the modern corporation depends on the capability of the management team to separate ownership and control of the business efficiently from the risk bearers or shareholders. The findings of this study support the corporate governance and business management in the PAT constructs and literature.

#### **Recommendations for Action**

The findings of this study inform the recommendations for action by the bank's management team. The hedging market in Tanzania's financial economy is at a nascent stage of development. The hedging of fluctuating exchange rate risks exposure entails a certain degree of speculation regarding future expectations and level of obligations as a percentage of the core capital. The management team applies financial hedging against transaction risks to stabilize cash flows especially receivables in foreign currencies to settle financial obligations in the asset book and avoid losses. Hedging instruments help in generating financial resources for settlement obligations, functions, and rights and compensation of losses to maintain or balance preset financial position. The results of the financial position in presentation currency differs from the functional currency and are translated at the closing date at the end of the reporting period. The gains and losses resulting from changes in fair value of derivative instruments are accounted for in balance sheets. The fair value represents the difference in the value of the derivative instruments at the contractual rate and the value at current market rates, and generally reflects the estimated amounts that the bank would receive or pay to terminate the contracts at the reporting date based on broker quotes for the same or similar instruments. I recommend developing mechanisms and procedures to differentiate hedging from speculation in the financial market to safeguard the bank depositors and shareholders. Hedging transactions will improve risk management and hence high credit rating status. I recommend measures to discourage speculation in this nascent financial market because

of their adverse impacts such as fueling of inflation and crowding out of the resources from the productive sector of the economy.

The results of this study contribute to the development of the financial market economy in Tanzania, one of the least developed countries in the world. I plan to disseminate the findings of the study through workshop and conference presentations, scholarly journals and business journals local and international ones. I will also present the findings at the bankers' workshop which Tanzania Bankers Associations (TBA) conduct annually. I will disseminate the study findings to private sector development organizations including Tanzania Private Sector Foundation (TPSF), Confederation of Tanzania Industries (CTI), and Tanzania Chamber of Commerce, Industry, and Agriculture (TCCIA) through written materials because bankers subscribe membership to them. These private sector development organizations are very sensitive to financial issues in the economy.

### **Recommendation for Further Research**

Although the banking businesses have been studied or investigated, this study is the first to empirically investigate hedging of fluctuating exchange rate risks in the banking industry in Tanzania. This study contributes to knowledge base by identifying gaps in the existing literature and by generating new evidence to fill the gaps. The research studies do not indicate whether hedging of the risks of fluctuating exchange rates is speculating or not and how to develop the clearing platform to undertake futures and options derivatives investment in nascent Tanzania financial market. Some descriptions by participants trigger interest in further research. Participant P7 noted that

hedging is used for income generation purposes hence speculative in the local market, while arbitrage occurs between different markets differentials. Participant P1 indicated that a bank invests in derivative contracts for speculative or trading purposes. Participant P10 noted that speculation does not necessarily mean making high profits but realization of interest to be in-the-money within the acceptable range. Participant P2 argued that banker does not hedge for speculation and anyone who speculates is exposing to more risks. Participant P11 argued that since 2015 BOT ordered the banks to avoid speculative forward contracts because of too high volatility in exchange rates by quoting too high rates that created panic into the financial markets. Gamba and Triantis (2014) indicated that derivatives may be used for speculation rather than hedging and hence subject to agency problems such as hoarding of cash for inefficient expenditures. CRDB (2016) indicated that risk management does not address speculative risks for financial gains or loss. The need for further research on the limits and to resolve the paradox between speculation and hedging is indispensable.

The area for further research includes the analysis of the potentials of derivative investments in futures and options instruments in Tanzania's nascent financial market. The analysis of futures and options contracts will improve knowledge base and professional practices in managing and regulating business exposures in the corporate financial market economy. Y. Zhang and Gimeno (2016) recommended more research to explore the role of professionals such as accountants, investment bankers and regulators in the corporate governance systems. Boud and Brew (2013) supported generation of rich account of professional practice to address challenges, questions, and answers regarding

risky social phenomenon. The comprehensive understanding of derivative investments by the bank's regulator, board of directors, management team, and other staff is important to influence development of clearing platform for futures and options instruments in the local financial market.

Another area of future research includes the agency risks associated with agency relationships and problems in the conceptual framework of PAT. The studies confirm existence instead of seeking answer on fixing the agency conflict, problem, and risks. The PAT deals with the contrasting risk appetites and costs related to separation of ownership and control of business between the principal and agents (Fama, 1980). The agency problems include omission of dividends and overinvestment of the free cash flow at the expense of shareholders (Guariglia & Yang, 2016). Kim and Sorensen (2016) supported high inside ownership to reduce information asymmetry risks and formulation of more effective and disciplinary covenants to resolve agency costs. Manos et al. (2012) attributed information asymmetries and high costs of accessing capital to weak legal, technological, and regulatory frameworks in emerging markets. The agency problems emerge when contracted management team implements conflicting decision such as incurring risks by issuing nonperforming loans outside the comfort zone or risk tolerance of the bank and stakeholders' best interest. George et al. (2012) identified the agency relationship in resource-constrained settings whereas the shareholders seek profit while managers seek revenue growth, the motives that have direct consequences for business activity. It is important to resolve the persisting and ill-defined agency problems, conflicts, and risks to improve agency relationships for competitive corporate business.

The further research areas include covering similar overarching research question and interview questions on hedging of fluctuating exchange rate risks to multiple cases or banks to claim generalizations of findings to all banks in financial market of Tanzania.

### Reflections

Sanders, Oss, and McGeary (2016) noted that written reflections helps students to analyze assumptions related to encountered experiences and increase personal growth and self-efficacy. My doctoral study process at Walden University has been a rewarding journey through which I acquired research experience and comprehended knowledge on business theories, professional practices, challenges and strategies of hedging the fluctuating exchange rate risks in the commercial bank in Tanzania. The scholars, practitioners, and participants contributed to improve my knowledge, skills, work attitude, and professional practices to effect changes in the finance discipline regarding hedging strategies to mitigate fluctuating exchange rate risks. I realized that regulator (BOT), board of directors, and CEO and management team of the bank play significant roles in risk management for the competitive, profitable, and sustainable banking businesses.

In the course of doctoral study, I interviewed bankers who hedge and trade foreign currencies with their counterparties in the international foreign exchange market. I was familiar with the commercial bank having used it since 1993 as university student and with the study location (Bank Headquarters) in Dar es Salaam city where I am living and working for 23 years. I had no personal or professional relationships with any research participants before conducting this study. The research participants revealed

risks and hedging strategies to mitigate the risks of fluctuating exchange rates. I did not interfere or bias any participant who responded to my interview questions to broaden my understanding of the research process and comprehension of the hedging strategies to mitigate risks of fluctuating exchange rates. The Walden's academic staff involved in this doctoral study contributed significantly to its rigor, quality and new knowledge of business practices and experience.

During this doctoral study, I faced a big challenge of balancing time for work and for the doctoral study. I did not obtain any leave or financial support for the study. I had to design my own funding program by saving of my monthly salary and time for the doctoral study mainly after official working hours. For instance, I decided to undertake my doctoral studies very early in the morning before 0730 hours and continue after 1630 hours on every working days and full day during weekends and holidays. I had to forgo social and family commitments and relationship to successful pursue this doctoral study. I witness that my strong curiosity and comprehension of finance and banking businesses have greatly improved through this doctoral research.

## **Conclusion and Summary**

The purpose of this qualitative single case study was to explore what strategies

Tanzanian bank leaders use to mitigate risks of fluctuating exchange rates. The

management team has the responsibility of maintaining appropriate hedging strategies to

mitigate fluctuating exchange rate risks in financial markets. The findings of this study

provide support for the PAT and prior literature. The management team of the bank is

effectively hedging the risks of fluctuating exchange rate within the tolerance position as

set by the regulator and policies and strategies resolved by the board of directors. The hedging market in Tanzania is still at the nascent stage of development because only OTC products are transacted despite the importance of the derivatives investments that requires development of the nonexistent clearing platform. The choice of the hedging strategy depends on demand for the hedging products in the financial market. The government through central bank of Tanzania provides oversight for ensuring compliance with applicable laws and regulations on hedging strategies, contracts, and transactions in the financial economy. The professional practice of the management team of the bank includes innovating hedging strategies to mitigate risks of fluctuating exchange rate risks in the commercial bank in Tanzania.

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#### Appendix A: Interview Guide or Protocol

#### I. Introduction

Hello, Thank you for agreeing to participate in the interview involving my doctoral study on hedging of risks of fluctuating exchange rates in your bank. We agreed on this date and time, but I just want to confirm that this is still a good time for you. (If not, reschedule according to the participant's convenience). This interview will take approximately 30-60 minutes to complete and all details will be kept confidential and will not feature in this doctoral study. An audio recording of this interview is for the sole purpose of accurate transcription. The data collected is for the analysis only and the final document will have the results of analysis. Any participant interested in receiving a copy of final doctoral study can request for an electronic copy.

#### II. Acknowledge receipt of consent form

I received your informed consent and I want to thank you for your quick reply on my e-mail. Did you have any question or study or the consent form? (Answer questions, if any).

#### III. Review confidentiality procedures

We will be talking about you and your experience in hedging of risks of fluctuating exchange rates in your bank. I want to assure you that everything we discuss is confidential. I will not be sharing your personal information with anyone else. All your replies will be coded and will remain confidential.

With your permission, I will be recording our conversation. Once it is complete, I will transcribe it and send a copy to you. I would like for you to read it and verify that my

transcription and any comments you wish to share. Would that be agreeable with you? Let us begin.

#### IV. Interview questions

- 1. What hedging strategies does your bank leader use to mitigate risks of fluctuating exchange rate? (Objective is to assess whether the participants understand the hedging strategies in form of a statement).
- 2. What hedging strategies have you seen used by other bank leaders to mitigate risks of fluctuating exchange rate? (Objective is to establish whether the participants are aware of hedging strategies beyond what they apply. This will also help the participants to be creative and innovative).
- 3. What guidance do you receive from the board of directors on hedging to mitigate risks of fluctuating exchange rate to improve bank's performance? (Objective is to establish whether participants appreciate the role of the board in setting policy strategies to hedge exchange rate risks).
- 4. What benefits do the shareholders, board of directors, and management earn by undertaking effective hedging strategies to mitigate risks of fluctuating exchange rates? (Objective is to establish whether the participants understand the benefits of effective hedging strategies regarding dividends, fees, and remunerations).
- 5. What influences hedging strategies to mitigate risks of fluctuating exchange rate? (Objective is to establish whether the participants understand the factors that determine the hedging strategies the bank

- applies).
- 6. What estimated exposure or cost is covered by effective hedging strategies to mitigate risks of fluctuating exchange rates? (Objective is to establish whether the participant understands the magnitude of hedged risks and if they are hedged in cost effective approach including reduced exchange costs or loss).
- 7. What performance contract or agreement exists between the shareholder or board and management for undertaking effective hedging strategies to mitigate risks of fluctuating exchange rate? (Objective is to establish whether the participant has entered into any performance based contract/agreement with shareholders or board on hedging exchange rate risks).
- 8. What compensation or reward do you claim for the earned benefits of undertaking effective hedging strategies to mitigate risks of fluctuating exchange rate? (Objective is to establish whether participant claims or obtains any benefit from cost effective hedging strategies including changes in their remuneration package).
- 9. What special knowledge or skill do you need for undertaking effective hedging strategies to mitigate risks of fluctuating exchange rates?
  (Objective is to establish if the participants understand the required skills for designing and executing cost effective hedging strategies to mitigate exchange rate risks).
- 10. What else, if anything, would you like to add to our conversation about the

success factors and strategies related to hedging to mitigate risks of fluctuating exchange rates in your bank? (Objective is to allow participants to ask question or provide additional information on the interview questions).

# V. Closing

Record of final or closing remarks: Thank you so much for participating in my study. I will be transcribing our conversation and I will be sending you a copy for your review. I would appreciate it if you would return it quickly, along with your comments. I will be happy to send you the results of my study when it is finished.

#### Appendix B: Letter of Invitation

### **Letter of Invitation to Participate in Research Study**

The Participant:	
E-mail address:	
Dear Mr/Mrs/Ms	

I am excited about the possibility of your voluntary participation in my research study and inviting you to take part in answering interview questions on "*Hedging Exchange Rate Risks*" at your bank's head office in Dar es Salaam, Tanzania.

I have attached herewith the consent form for your review and confirming acceptance of your participation in this study by replying directly to my e-mail address (godwill.wanga@waldenu.edu) with the word "I consent". I confirm that the interview data will remain entirely confidential. I will not share any data with anyone outside of my supervising faculty or staff members of the Walden University.

Yours Sincerely

Godwill G. Wanga

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Appendix C: Request for an Organizational Permission

Dear Mr/ Mrs/Ms....

I am a doctoral student at the Walden University. I wish to register my interest in using the Bank as a case study on "*Hedging Exchange Rate Risks*". I will value your unique contribution that you may make and I am excited about the possibility of your participation in my study.

As part of this study, I request for a permission to meet some of your staff members to answer interview questions on my doctoral study. Individual's participation will be voluntary and I confirm that the data to be collected will remain entirely confidential. I will not share any data with anyone outside of my supervising faculty or staff members of the Walden University.

Yours Sincerely,

Godwill G. Wanga

#### Appendix D: Letter of Cooperation



CRDB BANK PLC

Godwill Wanga P.O. Box 2669 Dar Es Salaam.

P.O. Box 268, Dar es Salaam, Tanzania. Tel: +255 (0)22 211 7441-7 Fax: +255 (0)22 211 6714

Email: crdb@crdbbank.com Website: http/www.crdbbank.com

Head Office: Azikiwe Street,

30th June 2016

Dear Mr. Godwill Wanga,

#### RE: LETTER OF COOPERATION

Based on my review of your research proposal, I give permission for you to conduct the study entitled hedging exchange rate risks within the CRDB Bank Plc. As part of this study, I authorize you to interview bank officials, collect data and annual reports, conduct member checking, and share your findings with the participants in any form of report. Individuals' participation will be voluntary and at their own discretion. I also give permission for the interview to take place in any meeting rooms at the bank's head office.

We understand that our organization's responsibilities include permitting our bank officials to participate in the interview and provide copies of unclassified documents to facilitate your study. The Director of Treasury and capital markets will coordinate your research activity including providing contact information of bank employees who undertake hedging activities in the bank as potential participants. You will be required to forward letter of invitation to each potential participant via his or her email address for obtaining consent of participation and confirming time of interviews. We reserve the right to withdraw from the study at any time if our circumstances change.

I confirm that I am authorized to approve research in this setting and that this plan complies with the organization's policies. I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the student's supervising faculty/staff without permission from the Walden University IRB.

Sincerely

Alex Ngusaru,

Director of Treasury & Capital markets

ALEX S. NGUSARU DIRECTOR OF TREASURY CROB BANK PLC.

Mr. Martin Jonas Mmari (Board Chairman); Dr. Charles Kirnei (Managing Director); Mr. Ally Hussein Laay (Member); Mr. Juma Abdallah Abdulrahman (Member) Ms. Rose Felix Metta (Member); Mr. Adam Hassan Mayingu (Member); Mr. Bonifaca Charles Muhegi (Member) Mr. Bede Philip Lyimo (Member); Mr. Kai Kristoffersen (Member); Hon. Frederick Tiuway Surnaye (Member); Mr. Lawrence M. isebwa Mafuru (Member); Mr. John Baptist Rugambo (Secretary)

# Appendix E: NIH Certificate for Protecting Human Subject Research Participants



#### Appendix F: Case Study Protocol

### A. Case Study Introduction

- 1. Research Question
  - a. What hedging strategies do Tanzanian bank leaders use to mitigate the risks of fluctuating exchange rates?
- 2. Conceptual Framework
  - a. Principal-Agent Theory (Fama, 1980)

#### **B.** Protocol Purpose and Intended Use

- 1. Protocol to be used by the researcher to guide and inform all study processes including data collection, analysis, and findings and conclusions preparation efforts
- 2. Researcher will use the protocol to ensure dependability of case study methods, findings, and conclusions

#### C. Data Collection Procedures

- 1. Data to be collected from the review of documents and the conduct of semistructured interviews with participants with different access and experiences with the implementation of hedging strategies to mitigate risks of fluctuating exchange rates
- 2. Researcher will recruit participants from Tanzanian Banking service provider as a community partner.
- 3. Specific study site and contact persons at each site to be identified after letter of cooperation and letters of invitation are sent and responses received to finalize site and participants.
- 4. Expected preparation activities to take place prior to site visits to conduct Interviews
  - a. Collection and review of existing documents on the organization to be a case study to assess organizational perspectives regarding implementation of hedging strategies to mitigate risks of fluctuating exchange rates.
  - b. Preparation of letter of invitation and informed consent forms for each interviewee/ participant.
  - c. Review and finalization of interview questions in the interview guide or protocol.

#### 5. Data collection tools

- a. Digital audio recordings by using cellular phone and tape recorder for data backup.
- b. Researcher field notes to be produced if participants will not allow tape recording of the interview.

# **D.** Outline of Case Study Report Contents

- 1. Overview of study
- 2. Presentation of findings
- 3. Applications to professional practice
- 4. Implications for social change

- 5. Recommendations for action
- 6. Recommendations for further study
- 7. Reflections
- 8. Summary and study conclusions

### **E.** Case Study Interview Questions

- 1. What hedging strategies does your bank use to mitigate risks of fluctuating exchange rate?
- 2. What hedging strategies have you seen used by other bank leaders to mitigate risks of fluctuating exchange rate?
- 3. What guidance do you receive from the board of directors on hedging to mitigate risks of fluctuating exchange rate to improve performance of bank?
- 4. What benefits do the shareholders, board of directors, and management earn by undertaking effective hedging strategies to mitigate risks of fluctuating exchange rates?
- 5. What influences hedging strategies to mitigate risks of fluctuating exchange rate?
- 6. What estimated exposure or cost is covered by effective hedging strategies to mitigate risks of fluctuating exchange rates?
- 7. What performance contract or agreement exists between the shareholder and management for undertaking effective hedging strategies to mitigate risks of fluctuating exchange rate?
- 8. What compensation or reward do you claim for the earned benefits of undertaking effective hedging strategies to mitigate risks of fluctuating exchange rate?
- 9. What special knowledge or skill do you need for undertaking effective hedging strategies to mitigate risks of fluctuating exchange rates?
- 10. What else, if anything, would you like to add to our conversation about the success factors and strategies related to hedging to mitigate risks of fluctuating exchange rates in your bank?

#### F. Data Analysis Techniques and Tools

- 1. Coding of nodes or themes
- 2. Analysis tools
  - a. NVivo 11 Software
  - b. Microsoft Excel

## G. Study Reliability and Validity Methods

- 1. Dependability,
- 2. Credibility,
- 3. Transferability, and
- 4. Confirmability

# Appendix G: Interview Reflective Journal

Date of Entry:  Event:		