

Re-Thinking the Conceptual Understanding of Credit Risk Management and Portfolio Performance: A Holistic Conceptual Model

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Abstract Uganda has over the years consistently faced portfolio quality challenges which have led to a series of financial turmoil. Extant empirical literature associate portfolio performance with credit risk management and suggest the need to improve credit risk management towards enhanced portfolio performance. It assumes a linear relationship between credit risk management and portfolio performance. Building on to the body of knowledge, this paper provides deeper insights into the credit risk management process. It identifies the possible interrelationships at the different stages of credit risk management. The paper draws from findings of interviews conducted on purposively selected staff in the credit risk management function, including credit risk staff, Relationship Managers and Credit Officers across eight (8) commercial banks in Uganda. In addition, views of the staff of Bank of Uganda; the regulator as well as the Uganda Bankers Association, an umbrella organization of all commercial banks in Uganda were solicited. The paper recommends commercial banks to strengthen their credit risk management process by adopting the holistic conceptual model for understanding interrelations in credit risk management and portfolio performance. To this end, credit risk assessment should go beyond considering the initially identified risks and be conducted thoroughly with a possibility of identifying any further risks and subsequently handling them. Covenants initially set at loan approval should be adjustable depending on how effective they turn out. Similarly, the credit risk management function need to emphasize adjustment of the initial treatment mechanisms through loan restructuring and customer relationship management before sell of collateral and litigation which sometimes are costly to banks.

Keywords: commercial banks; credit risk management; portfolio performance, holistic conceptual model

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1. Introduction

Uganda has over the years consistently been faced with portfolio quality challenges which have led to financial turmoil in a continuous series. Reference can be made to the mergers and closures of some banks in the past years including; closure of National Bank of Commerce in 2012, Global trust Bank in 2014, International Credit Bank and Teefe Bank in early 1990s (New vision, 2018). On the other hand, some banks have been merged or acquired, such as Gold Trust Bank, Cooperative Bank to CERUDEB, Uganda Commercial Bank to Standard Bank of South Africa, International Allied Bank to Bank of Africa, Nile Bank to Barclays Bank of Uganda, Global Trust Bank to dfcu, National Bank of Commerce to Crane and recently Crane Bank to Development Finance Company of Uganda (dfcu) Bank in January 2017 [1]. Specifically, Crane bank who held second position out of twenty four banks by BOU ranking was a cause of

concern when some of her assets and liabilities were acquired by the sixth ranking bank in the banking industry at the time.

A snap short of the NPA sector performance indicates that up to June 2016, the Ugandan banking sector's portfolio quality deteriorated, as measured by the increasing ratio of non-performing loans to total bank credit (BOU Supervision Report June 2016). The aggregate industry NPL ratio increased to the highest recorded NPL ratio in the last 15 years, from 4 percent to 8.3% in June 2016(BOU supervision report, June 2016). Although the position improved to 6.2% as at December 2017, it was still above acceptable ranges as per BoU estimates. The profitability of the banking sector reduced in the year to June 2016 with banks' aggregate net profit after tax earnings reading USh.485.6 billion, down from USh.556.3 billion in the previous year to June 2015. Bank profitability increased in 2017 by more than double from Ush 302.1 billion for the year 2016 to Ush.672.9 billion for the year 2017 largely as a result of a reduction in provisions for bad debts. Watch loans grew by 56 percent

from US\$796.0 billion to US\$1,243.2 billion in 2015 and future projections indicated that commercial banks' portfolio quality would remain a concern to the banking sector stability in the short term as indicators showed that watch loans were still increasing [2,3,4,5].

A variety of empirical literature [1,6,7,8,9] associate portfolio performance with credit risk management and suggest the need to improve credit risk management towards enhanced portfolio performance. However the studies do not provide a detailed understanding of the credit risk management process and the possible interrelationships at the different stages.

2. Literature

2.1. Conceptual Framing of Credit Risk Management and Portfolio Performance

Portfolio performance in commercial banks is according to Chen and Pan [10] understood as the rate at which the bank is able to initiate new loan products and explore new opportunities within the existing base. Portfolio performance can be measured by percentage of Non-Performing Assets (NPA) and Level of provisions for bad loans. NPA ratio is determined by dividing NPA by total assets. On the other hand, provisions is the ratio of Loan Loss Provisions (LLPs) to Gross Non Performing Loans [11]. Portfolio performance has in many studies [12-17] been measured by NPA ratio and Loan Loss Provisions, Portfolio at risk and profitability ratios like Return on Equity (ROE) and Return on Assets (ROA).

Non-performing Assets (NPA) also interchangeably called Non Performing Loans (NPLs) according to Afriyie & Akotey [18]; Hitchcock [19] and Saba & Azeem [20] are loans ninety days or more past due or no longer accruing interest. Although scholars like Ahmed et. al; [21] seem to agree with the condition of 90 days for a loan to be considered NPA. Alexander [22] contends that in some countries a shorter delay of more than 30 days or more than 60 days is also defined as NPA. In the Ugandan context, NPA is considered as loans 90 days or more past due [2].

Portfolio performance has in several studies elsewhere [12,13,15,16,23] been linked with a variety of factors which include credit risk management, interest rates and market conditions. Other factors include; firm/institutional level risk such as knowledge and skills, credit management, diversification, risk perceptions and ethics while country-level factors include; loan pricing, forex rates, increase in Gross Domestic Product among others [15,24].

Credit risk management involves objectively assuring uncertainty in order to achieve business goals [25]. Management of commercial banks have to provide appropriate framework for effective risk management encompassing understanding internal and external environments, setting objectives, risk analysis, risk treatment, control activities, information and communication as well as monitoring [26,27]. Haneef et al. [28] also has a similar view of the meaning of credit risk management. Credit risk management helps to reduce lenders' risk adjusted pricing rate of return by keeping the risk within

acceptable parameters. The significance of credit risk management is further re-ecored by Kisel'áková & Kisel'ák [27]; Al-Tamimi. [29]; Arinaitwe [26]; Ciby [30]; Eaton et al. [31] and Kattel [32].

Risk identification according to Chapman [33] and Bessis [34] is considered as a first step in the risk management process. The output of risk identification is a risk register which is communicated to relevant stakeholders for further handling [26,35]. According to Geitangi [36], credit risk identification involves checking of credit application and business proposals to identify credit risks' exposure to the bank, analyze the character of the clients such as credit history of loan applicants to a great extent.

In terms of the credit risk identification process, [37,38], the major components of this stage include; contextualization by category, communication and documentation. Kattel [39] and Muganwa [40] posit that risk identification majorly entails trends analysis, SWOT and PESTEL, interview, expert judgment, stress testing among others. Smith et al. [41]; Lester [42] and PMI [35] provide characterization of a good risk identification procedure. It encompasses extensive information gathering methods, documentation, adequate research and risk categorization as very fundamental. This partly coincides with the findings of Kasap & Kaymak [43] who add that there are techniques and tools that can be used in identifying risks for example; document reviews, checklist analysis, interviews, surveys, Delphi and the Nominal Group Technique (NGT). Lastly the author emphasizes the development of a risk list as the primary output to risk identification stage.

Credit risk assessment, the second stage in credit risk management has been defined as a process of computing credit worthiness of a business with an objective of looking at the borrower and lending facility being proposed and assigning a credit rating [44]. The process involves prioritizing, measuring and ranking the risk according to the magnitude and frequency of occurrence with a central aim of determining the probability of occurrence of the risk as well as potential impact in case of occurrence [45]. In view of JoEttá [46], credit risk assessment contains evaluation of the qualitative and quantitative parameters of the borrower and, establishing the net worth of clients within a framework of the risk factor analysis adopted by the bank to determine the degree of severity posed by the risk in question [47]. The quantitative assessment of credit risk involves examining financials and cash projections while the qualitative focuses on examining customers' character and credit history [48].

Kimoi et al. [49] provides a framework for assessing credit risks, emphasizing the need to engage key team members involved in underwriting the loans to continue identifying related and sub credit risks for the different classes and sectors. Secondly the author identifies the need to prioritize risks based on evaluation of financial impact by determining and advising credit risk tolerances, establishing a credit risk matrix, modeling as well as stress testing and loss forecasting. Lastly the framework provides for developing a reporting system for effective credit risk monitoring and management. Hennie [50] and Haselkorn et al. [51] identify the need to diversify stakeholders' perception for an effective risk control phase.

Effective credit risk control also requires the methods used to quantify credit to be transparent, accurate and robust. According to Otieno & Nyagol [52], effective credit risk control requires an internal control framework characterized by an independent lending unit with clear and consistent review processes.

Credit risk control is considered the final stage of the credit risk management process [53]. It is argued that risk control gives protection to an exposure, which the bank continues to hold. Risk control or mitigation is about using the physical standards, tools, training staff, techniques to either prevent, reduce or eliminate the perceived consequences or threat of risks [26,35]. According to Lagat, Mugo & Otuya [48], risk control or mitigation entails established systems and procedures that are employed to minimize credit risk exposures. Risk control is intended to monitor and treat events that have or will lead to credit loss [54].

2.2. Conceptual Framework for Credit Risk Management and Portfolio Performance

An analysis of the above conceptual perspectives about credit risk management and portfolio performance can be summarized in a conceptual framework presented in Figure 1.

The conceptual framework presents a linear relationship between credit risk management and portfolio performance. Within credit risk management, the framework assumes a linear sequential process. Portfolio performance is measured by the ratio of non-performing assets and provisions for bad loans. The framework assumes that increase in NPA/L deteriorates portfolio performance. To this end, credit risk management strives

to mitigate potential adverse effects in commercial banks' business by striking a balance between risk and return hence minimizing probability of negative consequences on credit default. Credit risk management takes on three dimensions; risk identification, risk assessment, and risk control. This is the normal process of credit risk management in contemporary organizations in view of the literature.

3. Methodology

The paper draws from findings of interviews conducted on staff employed in the credit risk function including, Credit Risk Staff, Relationship Managers and Credit Officers. The respondents were purposively sampled from eight (8) commercial banks in Uganda based on their portfolio performance for the previous four years [2014 – 2017]. The eight (8) commercial banks include all banks (5) which had an NPA of 5% and above across the period under study and all banks (3) which had an NPA of less than 5% across the same period. The interviews extended to the staff of Bank of Uganda particularly those engaged in supervision and monitoring of commercial banks' performance. In addition, the staff of Uganda Bankers' Association, an umbrella organization of all commercial banks, were engaged. The interviews focused on credit risk management practices and associated challenges drawing from experiences of these vital stakeholders in the credit risk management function at operations and strategic management levels. Emerging data was analyzed qualitatively using content analysis. The analysis generated emerging themes and patterns which leverages the findings in this paper.

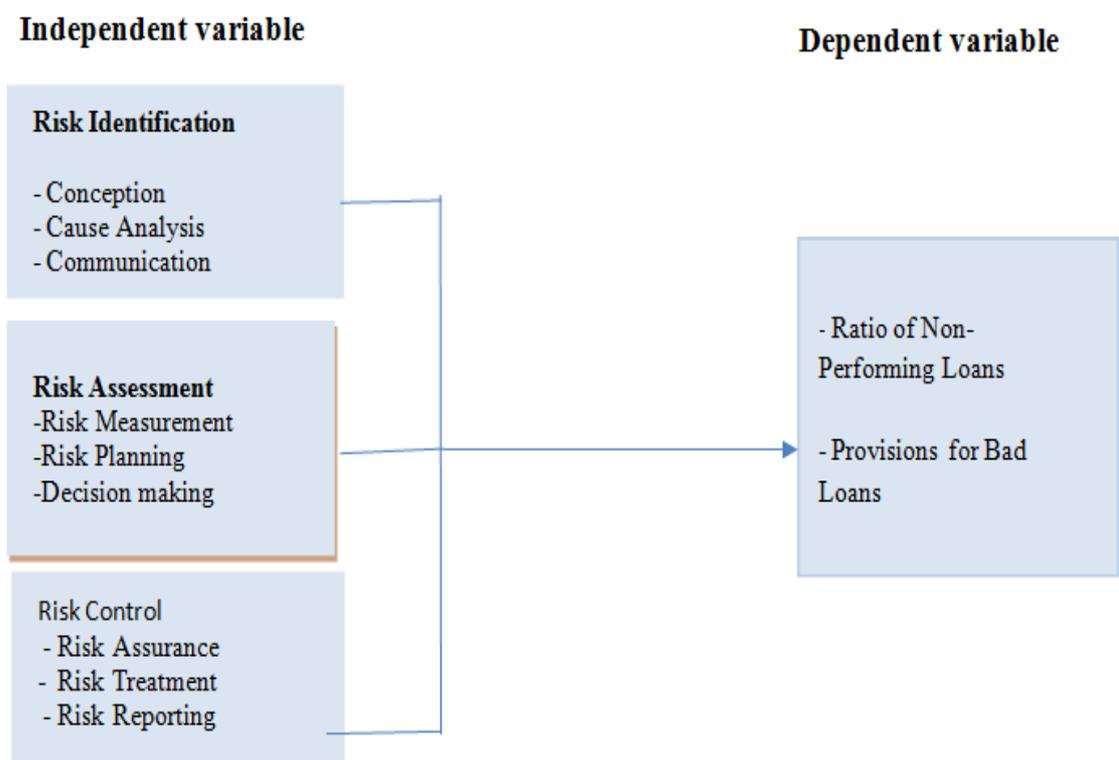


Figure 1. Conceptualization of the study based on credit risk management and portfolio performance (Source: Developed by Researcher from Literature by [26,29,30,31,38,40])

4. Findings

Credit risk management in the studied commercial banks involved three key sequential stages. They were; credit risk identification, credit risk assessment and credit risk control. The analysis in this section provides deeper insights into the stages, practices and interrelationships.

Credit risk identification was found to be undertaken as the first stage of credit risk management. This is done with a major objective of understanding the customer and the environment around them in relation to the business operations. The risk identification process involves three key practices: risk conception, root cause analysis and communication. Credit risk conception was considered the first stage of credit risk identification whose major objective is to understand the customer and their business by way of establishing their names, legal mandates of trading, location, their business transactions and drawing loops together with an aim of creating a clear picture for the bank staff understanding. It involves scrutinizing available information using tools like the SWOT analysis and PESTEL. It also involves scrutinizing sector risks related to changes in the economic environment as well as determining individual borrower and related party root causes of risks. The general purpose is to identify potential causes of risks. For most banks, it involves undertaking and describing credit risks and their causes. It is worth noting that effectiveness of this process depends on a mix of tools both qualitative and quantitative. Risk communication is the last aspect of credit risk identification which was reported as a common practice across the studied commercial banks. It was observed that failure to share anticipated risks is as good as not identifying them.

Credit risk assessment is the second stage of credit risk management which follows risk identification. The main purpose of credit risk assessment is to measure, plan and approve credit risks. Risk assessment starts with risk measurement which is intended to determine the magnitude of risks and prioritize their handling in consideration of severity of their impact and resource availability. Credit risk measurement thoroughly establishes applicant’s previous credit performance. In addition, applicant’s documentation is often thoroughly scrutinized, and their repayment character as well as capacity to pay assessed. During measurement, scoring is often done as a way of estimating credit risk. A mix of

qualitative and quantitative tools was reported to be used. The quantitative measurement considers the capacity to repay based on the strength of the financial position reflected by cash inflows visavis outflows, status of assets, liabilities and customer’s equity. The qualitative measurement is usually done to ascertain customer repayment character based on credit history, payment of creditors and staff as well as financial discipline. This is done through scrutiny of available customer’s documentation to ascertain its correctness, completeness and clarity. Many banks were found to employ the 5Cs of credit as a qualitative tool. A credit risk scoring matrix was reported to be used by all banks to score the magnitude of risks which are then graded to determine level of risk in terms of frequency of occurrence and severity.

Credit risk planning follows measurement. It was generally observed to be done across all banks, with an ultimate objective of ensuring that the most severe and priority risks are provided for in terms of budget and other resource allocations. Risk planning scopes most possible future risks and often provides appropriate covenants for risk mitigation. It further draws appropriate activities or events that could be undertaken to enhance repayment. The risk planning process was observed to consider all identified risks and plan for their mitigation in view of their magnitude. Four major categories of risk mitigants were found to be often considered during risk planning. They are; risk avoidance, risk acceptance, risk retention and risk transfer. These are quite often planned for depending on the magnitude of possible risk. For example retention or acceptances are often allocated to very low risks. Acceptance or retention means that the bank goes ahead to approve the facility. In contrast, transfer is often employed for medium risks which means that banks approve the facility but share the risk with a third party. Avoidance is often applied to high risks. Notably, allocation of risk mitigants is always followed by covenants to minimize chances of occurrence. Finally risk planning across all banks involved resource allocation in terms of responsible persons to handle the risk mitigation process, budget, and further establishment of the methods that will be applied to handle the risk. Credit risk assessment ends with approval which is a form of judgment that informs of a risk being worth considering for credit.

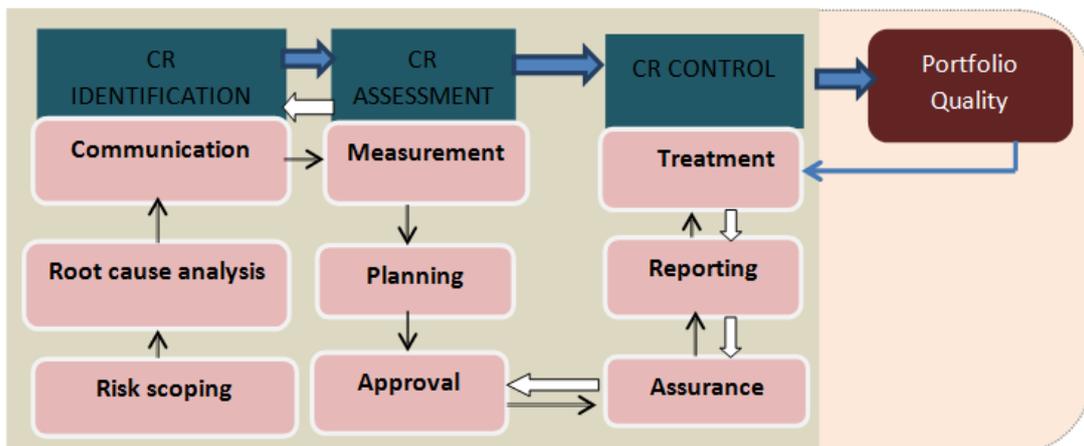


Figure 2. A holistic conceptual model for understanding interrelations in CRM and portfolio

Notably during risk assessment, new risks which may have been omitted during identification may unveil and feed back into the risk identification process. The risks may be unveiled through further customer engagements, informal consultations, trends analysis among others. This means credit risk identification does not only end at the formal identification stage but continues even at the stage of risk assessment and links back to the risk identification process. The new identified risks are then subjected to assessment and further handling.

It is further important to note that approval of a loan facility or credit risk is often subject to terms and conditions intended to mitigate credit risks. However, after approval and disbursement, in some cases the terms and conditions or covenants earlier set are not complied with. For example a borrower may banks below the agreed cash flows, pays facilities in arrears, does not transact axillary business with the bank, among others. Consequently, such behavior prompts review of the covenants earlier approved and the new covenants undergo monitoring and review again as a means of risk assurance.

Risk control was considered the last stage of the CRM process. The general view was that risk control is the process of responding to risk by providing assurance mechanisms including risk monitoring and review as well as reporting. The ultimate objective of risk control is to minimize risk-based impact. Credit risk response is the first aspect of credit risk control, which was universally observed to be practiced across commercial Banks. It involves customer engagements to strategize, reschedule, recall facilities, syndication, partnering with insurers or guarantors to share risks, returns and consequences. Credit risk assurance was considered the second aspect of credit risk control. It involves credit reviews and monitoring. The risk control process ends with reporting of credit risk to relevant stakeholders for management decision making. The risks are then treated depending on portfolio performance. Risk treatment at this stage involves actioning the mitigants proposed at approval stage. Such include collateral disposal, recovering from guarantors, insurance accordingly and litigation procedure to recover the outstanding credit value. This also reflects the feedback loop which portfolio performance bears to the credit risk management process.

5. Conclusion

Uganda has over the years consistently faced portfolio quality challenges which have led to a series of financial turmoil. A variety of empirical literature associate portfolio performance with credit risk management and suggest the need to improve credit risk management towards enhanced portfolio performance. Extant literature conceptualizes a linear relationship between credit risk management and portfolio performance. Credit risk management has been considered to be a linear process involving three sequential stages; risk identification, risk assessment, and risk control. Building on to this body of knowledge, the paper provides deeper insights into the credit risk management process. It identifies the possible interrelationships at the different stages of credit risk

management. The paper underscores a feedback loop where portfolio performance may cause adjustments in the initial credit risk treatment and assurance mechanisms as well as the loan conditions initially approved with the loan facility. During assessment of the risks, new risks which may have been omitted during identification may unveil and feedback into the risk identification process. During risk assurance (monitoring and review), in some cases the terms and conditions or covenants earlier set are not complied with which prompts review of the covenants earlier approved and such new covenants undergo detailed monitoring and review again as a means of risk assurance. Overall, the paper provides a holistic conceptual model for understanding interrelations in credit risk management and portfolio performance.

6. Implications

Commercial banks need to strengthen their credit risk management process by adopting the holistic conceptual model for understanding the relationships and interrelations in credit risk management and portfolio performance. With this model, the credit risk function will be prompted to always have a backward reflection and adjustment of practices or mechanisms undertaken along the credit risk management process. Risk assessment should go beyond considering the initially identified risks and be conducted thoroughly with a possibility of identifying any further risks. Covenants initially set at loan approval should be adjustable depending on how effective they turn out basing on data from risk monitoring, review as well as overall portfolio performance. Similarly, the credit risk management function needs to emphasize adjustment of the initial treatment mechanisms through more frequent loan monitoring, loan restructuring, relationship management and after sales financial literacy.

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