

# CREDIT RISK MANAGEMENT ON FINANCIAL PERFORMANCE OF BANKS IN UASIN GISHU, KENYA

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**Abstract:** The purpose of study was to analyze the effects of credit risk management and financial performance of banks in Kenya. The study was guided by the following specific objectives; to determine the effects of liquidity on financial performance of commercial banks in Kenya. The study was based on modern portfolio, capital asset pricing and liquidity preference theories. The study adopted descriptive research design. The target population of interest was 21 commercial banks categorized into 14 local and 7 foreign banks. They were categorized into small, medium and large banks. The study adopted a census survey because the study's target population is small. Data collection instrument was questionnaire. The questionnaire was administered to all respondents of commercial banks in Kenya. Piloting was done to check reliability and validity of data collection instruments. Data was coded, edited to bring meaning. Multiple regression was used to test the significance of one variable to the others. Data collected was analyzed using SPSS version 24. The findings will be significant especially to decision makers, the Government, regulators and researchers which will be helpful in refining and validating findings especially when a significant number of experiences are collected and studied.

**Keywords:** Financial Performance, Liquidity.

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## 1. INTRODUCTION

Kenyan banks are inevitably exposed to credit risk because they grant credit facilities as they accept the deposits. Credit risk is the possibility of losing the outstanding loan partially or totally, due to credit events (default risk) (BCBS, 2001). Deyganto, (2020) states that banks are constantly face many risks. Among these, the credit risk considered the most important factor that influence the profitability. Credit risk management is the process of managing an institution's activities which create credit risk exposures, in a manner that significantly reduces the likelihood that such activities will impact negatively on a bank's earnings and capital (Kargi, 2011). The sound credit risk management boosts the profitability but poor credit risk management reduces the profitability and survival of banks (Ahmadyan, 2018). Credit risk is the exposure faced by banks when a borrower (customer) defaults in honouring debt obligations on due date or at maturity (Coyle, 2000). Kargi (2011) indicated that credit creation is the main income generating activity for the banks. As a result adequate management on loan processing is critical for the growth and survival of the banks otherwise the credit activity may lead to financial distress. Angela et al., (2022) investigated the impact of credit risk on financial performance of commercial banks in Ghana and the findings revealed that financial credit risks affect the financial performance of commercial banks. CBK supervision annual report 2013 indicated that the ratio of non-performing loans to gross loans increased from 4.7 percent in December 2012 to 5.2 percent in December 2013. Later the ratio increased from 5.2 per cent in December 2013 to 5.6 per

cent in December 2014 and CBK will be monitoring closely institutions that were experiencing deteriorating asset quality. The report also indicated that there will also a decrease in sector's capital adequacy, which is measured by the ratio of total capital to total risk weighted assets in the same year. The increasing level of nonperforming loan in banks books, poor loan processing, undue interference in the loan granting process, inadequate or absence of loan collaterals among other things are linked with poor and ineffective credit risk management that negatively impact on banks performance (Dereje et al., 2022). It is therefore crucial to analyse whether the credit risk indicators are affecting the financial performance of the banks in the study attempting to make a modest contribution to literature on credit risk.

Angela et al., (2022) investigated the impact of credit risk on financial performance of commercial banks in Ghana and the findings revealed that financial credit risks affect the financial performance of commercial banks. Credit risk being the possibility of a borrower failing to fulfil its obligations under negotiated terms (see, for example, Ogilo, 2012) indicates that credit risk is the costliest risk in commercial banking and has a tremendous effect relative to other threats faced by commercial banks, because it directly impedes its soundness. Between 2017 and 2019, many difficulties have befallen the financial sector in Ghana. These instabilities within the sector led to the revocation of licenses of several financial institutions (Baidoo & Akoto, 2019). Notable among the many factors that contributed to the poor performance and collapse of banks that led to the revocation of licenses of several financial institutions are non-performing loans and weak corporate governance (Baidoo et al., 2020; Bank of Ghana, 2018). Umoh (1994) attributes high rates of loan defaults in commercial banks' books to weak credit processing, external intervention in the credit process, and insufficient and/or lack of collateral, among others. The failure of commercial banks to track their credit risk impacts on their financial performance (Boahene et al. 2012).

The growth of credit risks in financial institutions globally and locally, and the rise of commercial economies have changed the role of credit risk management in the banking industry. According to Jamaat and Asgari (2010) banks are investing a lot of funds in credit risk management modeling. Skills in risk-focused supervision are continually being developed while exposing supervisors to relevant training (Kithinji 2010). By adopting this approach, the banking industry, and specifically the small banks are sensitized on the need to have formal and documented risk management frameworks (De Juan 1991). Good risk management is not only a defensive mechanism, but also an offensive weapon for commercial banks and this is heavily dependent on the quality of leadership and governance. Jorion (2009) notes that a recognized risk is less "risky" than the unidentified risk. Financial institutions are exposed to a variety of risks among them; interest rate risk, foreign exchange risk, political risk, market risk, liquidity risk, operational risk and credit risk (Yusuf 2003). In some instances, commercial banks and other financial institutions have approved decisions that are not vetted; there have been cases of loan defaults and nonperforming loans, massive extension of credit and directed lending. The Basel Committee (2000) suggests that liberalized loaning, bad management of credit portfolio, insufficient evaluation of changing economies create a lot of problems for financial institutions. It has been noted with a lot of concern that the more complex a risk type is the more specialized, concentrated and controlled its management must be (Seppala 2000). Risk management is defined as the process that a bank puts in place to control its financial exposures. The process of risk management comprises the fundamental steps of risk identification, risk analysis and assessment, risk audit monitoring, and risk treatment or control (Bikker and Metzmakers 2005). This shows that Credit risk is still considered the most significant risk that commercial banks face, (Bis. Org; 2014) thus supplying the foundation for new business models, new business processes and new ways of credit risk management. This for instance has led to the banking sector mispricing of credit and liquidity risk, inadequate liquidity buffers and excess credit growth. According to the Basel Accords (1999), a global regulation framework for financial institutions, credit risk is one of the three fundamental risks a bank or any other regulated financial institution has to face when operating in the markets (the two other risks being market risk and operational risk). As the 2008 financial crisis has shown us, a correct understanding of credit risk and the ability to manage it are fundamental in today's world. Concerning capital adequacy, on analyze the effect of credit risk on financial performance of development bank of Ethiopia. Based on previous studies the finding will consistent with findings of studies by Tenriola (2019); Ozili (2017; Miranda (2018); Sangmi and Nazir (2010); Datta & Mahmud (2018); Naceur (2003); Ajayi et al.(2019);Unuafe (2013); Tenriola (2019); Ozili (2017); Mirand (2018); Sangmi and Nazir (2010); Datta & Mahmud (2018); Naceur (2003); Damena, (2011), Ajayi et al.(2019); and Nguyen (2020) were found out that there is positive relationship between capital adequacy and profitability. This indicates that well capitalized financial institutions face lower costs of going to bankrupt, which reduces their cost of funding or that they have lower needs for external funding which results in higher profitability.

The worldwide credit crunch, which started in 2006 with sub-prime mortgages in the United States, has highlighted the fundamental importance of the credit decision. As the problems in these mortgages unfolded, it will demonstrated that unsound credit decisions had been made and lessons as to how to manage credit risk effectively had been either ignored or never learned. This shows that poor lending decisions, whether by a financial institution or a corporate, can lead to significant losses. Being able to manage this risk is a key requirement for any lending decision. It should also be well understood by industrial and commercial firms that, in the course of their normal business, provide trade credit. While financial institutions have faced difficulties over the years for a multitude of reasons, the major causes of serious banking problems continue to be directly related to lax credit standards for borrowers, poor risk management or lack of attention to changes in economic environment. The goal of credit risk management is to maximize a bank's risk-adjusted rate of return by maintaining credit risk exposure within acceptable parameters. Banks need to manage the credit risk inherent in the entire portfolio as well as the risk in individual credits or transactions. Banks should also consider the relationships between credit and other risks. The effective management of credit risk is a critical component of a comprehensive approach to risk management and essential to the long term success of any banking organization. Since exposure to credit risk continues to be the leading source of problems in banks world-wide, banks and their supervisors should be able to draw useful lessons from past experiences. Banks should now have a keen awareness of the need to identify, measure, monitor and control credit risk as well as to determine that they hold adequate capital against these risks and that they are adequately compensated for risks incurred. The Basel Committee is issuing this document in order to encourage banking supervisors globally to promote sound practices for managing credit risk. Although the principles contained in this paper are most clearly applicable to the business of lending, they should be applied to all activities where credit risk is present. Efficiency measurement is one aspect of investigating a firm's performance. Efficiency can be measured in three ways; maximization of output, minimization of cost, and maximization of profits. In general, efficiency is divided into two components (Kumbhakar and Lovell, 2003). A firm is regarded as technically efficient if it is able to obtain maximum outputs from given inputs or minimize inputs used in producing given outputs.

Regional and national governments play a key role in promoting the adoption of e-commerce technology in order to keep up with the evolving trends of the information age. In line with these, they are ever in search of ways to utilize this technology to improve efficiency and effectiveness in the management of credit risk. According to Bleim (2001) most of systematic banking crisis arise because of enormous portfolios of bad loans. Dionne (2005) emphasizes on the importance to evaluate whether risk of a particular loan is risk of the whole portfolio. An effective Credit Risk Management (CRM) government thus requires well defined procedures and methods, for instance, technology to effectively protect loans from credit risk. For most banks, loans are the largest and most obvious source of credit risk; however, other sources of credit risk exist throughout the activities of a bank, including in the banking book and in the trading book, and both on and off the balance sheet. Banks are increasingly facing credit risk in various financial instruments other than loans, including acceptances, interbank transactions, trade financing, foreign exchange transactions, financial futures, swaps, bonds, equities, options, and in the extension of commitments and guarantees, and the settlement of transactions. The banking sector in Kenya is governed by various Acts such as The Companies Act, the Banking Act, the Central Bank of Kenya Act and various other prudential guidelines that have been issued by the Central Bank of Kenya (CBK) over the years. The Kenyan commercial banks have come together under an umbrella body referred to as the Kenya Bankers Association (KBA), which serves as a lobby body for the members' interests and addresses issues affecting the registered commercial banks in the country (CBK, 2018). As at December 31, 2018, the Kenyan banking sector comprised of the Central Bank of Kenya (CBK), as the regulatory authority, 43 banking institutions (42 commercial banks and 1 mortgage finance company), 9 representative offices of foreign banks, 13 Microfinance Banks (MFBs), 3 Credit Reference Bureaus (CRBs), 19 Money Remittance Providers (MRPs), 8 non-operating bank holding companies and 70 foreign exchange (forex) bureaus. Out of the 43 bank institutions, 40 were privately owned while the Kenya Government had majority ownership in 3 institutions (CBK, 2018). The CBK is normally responsible for formulating and implementing the monetary policy adopted by the Kenyan government and ensuring there is liquidity, solvency and proper functioning of the financial system in the country. The banking sector in Kenya was liberalized in 1995 which led to the removal of exchange controls. Since then the Kenyan banks have realized tremendous growth and have expanded to the East African region. The financial services industry in Kenya is being impacted by the everchanging consumer needs, innovative financial products, technological advancement and the use of multiple delivery channels. To remain competitive in the new landscape, banks have continued to introduce new products, expand the existing ones, and add new delivery channels. Banks strive to enhance access to customers as

well as differentiating their products and services by use of alternative delivery channels such as e-banking and m-banking. The Central Bank of Kenya which governs banks classifies commercial banks based on their assets. Tier 1 banks are large banks that have hundreds of billions in assets and are not likely to collapse financially. They are the top banks in Kenya. Tier 2 banks are medium-sized banks while tier 3 consists of small banks. The second-tier banks continue to wrestle out large banks in the control of market shares, with the share of deposits increasing particularly for medium banks and declining for large banks. The government of Kenya, like most governments, has also launched several initiatives regarding CRM. The Central Bank of Kenya (CBK) has the regulatory authority over commercial banks, micro-finance institutions and forex bureaus. As at December 2016, Kenya had 43 licensed commercial banks and one Mortgage Company; CBK, 2016. Out of the total 44 institutions, 28 are locally owned and 16 are foreign owned. Since 2005, commercial banks have embarked upon upgrading their risk management and control systems (CBK, 2010). This will after the issuance of the Risk Management Guidelines (RMG) in 2005 and the adoption of the Risk Based Supervision approach to supervising financial institutions in 2005. Despite these approaches in credit risk management it is not clear to what extent it has impacted on profitability.

Morris (1987) presents one of the earliest studies on the relationship between non-performing loans and credit risk management. They reported that banks with greater risk appetite tend to record higher losses in terms of non-performing loans and provisions. For instance a study by Haneef et al (2012) concluded that non-performing loans are increasing due to inadequate risk management which threatens the profitability of banks. The adoption of CRM would only be successful through the experience of the giant commercial banks in credit risk management policies adoption and implementation and their joint efforts with the government (Ochola 2010). However, such efforts can be hurt by unenlightened government policies, politics and other constraints faced by government organizations such as lack of resources, bureaucratic regulations and legislative requirements. This opens up the experience of government leaders in CRM that can also be researched. Present day economy focus is about the customer on one hand and service provision on the other and of critical interest is for the services to be provided efficiently with a good understanding of the customer and service offering entities (Cabinet Office 2004). Initiatives that lead to the launch of effectiveness of CRM on profitability particularly through the development of a sound credit policy that would help improve prudential oversight of asset quality, establish a set of minimum standards and apply a common language and methodology (assessment of risk, pricing, documentation, securities, authorization and ethics) for measurement and reporting of nonperforming assets, loan classification and provisioning pose both significant achievements and challenges. Effective and operational credit policy sets out the bank's lending philosophy and specific procedures and means of monitoring the lending activity. For instance, the guiding principle in credit appraisal should ensure that only those borrowers that require credit and are able to meet repayment obligation can access credit; (CBK Annual Supervision Report CBK 2000).

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Credit risk management is the practice of mitigating losses by understanding the adequacy of a bank's capital and loan loss reserves at any given time a process that has long been a challenge for financial institutions (Saunders & Cornett, 2007). Experiences elsewhere in the world suggest that the key risk in a bank has been credit risk. Credit risk management means the process of risk identification, measurement, monitoring and control (NBE, 2010). Banks need to manage credit risk

inherent in the entire portfolio as well as the risk in individual credits or transactions. Additionally, banks should be aware that credit risk does not exist in isolation from other risks, but is closely intertwined with those risks (NBE 2007). Effective credit risk management is the process of managing and institution's activities which create credit risk exposures, in a manner that significantly reduces the likelihood that such activities will impact negatively on a bank's earnings and capital. Credit risk is not confined to a bank's loan portfolio, but can also exist in its other assets and activities. Likewise, such risk can exist in both a bank's on-balance sheet and its off balance sheet accounts (NBE, 2013).

Profitability is an indicator of banks' capacity to carry risk and/or increase their capital base. It indicates banks' competitiveness and measures the quality of management. Profitability is one of the key concepts in our research. This is due to the fact that the topic of this research is about effectiveness of credit risk management on profitability of commercial banks. Clear explanation to the profitability of commercial banks is crucial for readers to understand the research procedure and meanings. Profitability of banks is measured by return on assets (Flamini et al., 2009 Oladele et al., 2012), return on equity (Saona, 2011) or the net interest margin (Naceur & Goaid, 2008; Naceur & Omran 2011; Sufian & Habibullah, 2009).

The main purpose of a bank existence is to accept deposits as well as to grant credit facilities, therefore inevitably exposed to credit risk. Credit risk is the most significant risk faced by banks and the success of their business depends on accurate measurement and efficient management of this risk to a greater extent than any other risks (Gieseche, 2004). Coyle (2000) defines credit risk as losses from the refusal or inability of credit customers to pay what is owed in full and on time. Credit risk is the exposure faced by banks when a borrower (customer) defaults in honouring debt obligations on due date or at maturity. This risk interchangeably called counterparty risk is capable of putting the bank in distress if not adequately managed. Credit risk is the potential that a contractual party will fail to meet its obligations in accordance with the agreed terms. Credit management is one of the most important functions in a business enterprise. It is critical for purposes of stability, profitability and growth of a firm. Despite great efforts made by commercial banks, credit risk is still a challenge due to increasing marginal losses that arise when borrowers default. While financial institutions have faced difficulties over the years for a multitude of reasons, the major causes of serious banking problems such as unenlightened government policies, politics and other constraints faced by government organizations such as lack of resources, bureaucratic regulations and legislative requirements continue to be directly related to lax credit standards for borrowers due to poor management. The goal of credit risk management is to maximize a bank's risk-adjusted rate of return by maintaining credit risk exposure within acceptable parameters. Banks need to manage the credit risk inherent in the entire portfolio as well as the risk in individual credits or transactions. However, there have been complaints about inability to meet obligations, inadequate controls, frauds and high rate of defaulters among others. CBK supervision annual report 2013 indicated that the ratio of non-performing loans to gross loans increased from 4.7 percent in December 2012 to 5.2 percent in December 2013. Later the ratio increased from 5.2 per cent in December 2013 to 5.6 per cent in December 2014. Therefore, the study seeks to determine the effects of liquidity on financial performance of commercial banks in Uasin Gishu County, Kenya.

## 2. EFFECT OF LIQUIDITY ON FINANCIAL PERFORMANCE OF COMMERCIAL BANKS

Organizations today are rational and conservative about their limited resources, which tend towards archiving an organization's goals. Organization goals are narrowed down to profit maximization the concept of a balanced scorecard in improving the overall performance within the confines of a business. Because liquidity management substantially impairs profitability, enterprises have chosen sophisticated and stringent programs. Mehta (2018) highlighted that the financial institution's liquidity management stance might affect the financial performance and economy. Therefore, liquidity is a vital element of the institution's success as it substantially affects profitability and self-sustainability. Financial institutions' inability to deal promptly with their clients' short-term requirements led to poor liquidity management.

Liquidity refers to a firm's capacity to repay its short-term obligations, which plays a critical role in smoothing out all of its activities (Yameen et al., 2019). Liquidity ratios are never used literally but rather as part of an organization's liquidity governance support structure. Looking at liquidity, liquidity is calculated using the current and acid-test ratio methods (Janjua et al. 2016). The cash ratio and current ratio are the most often used indicators of a company's liquidity situation (Yameen et al., 2019). In general, a high current ratio indicates that an enterprise's ability to repay its medium-term commitments is strong, while a low quick ratio indicates a low connection between current liabilities and current assets. Additionally, working capital may relate to liquidity (Ben-Caleb, 2013). Liquidity control mainly determines the quantity of benefit gained and the value of shareholders' money (Ben-Caleb, 2008). Because a company must maintain liquidity to continue to exist, failure to do so leads to high credit risk ratings from short-term creditors, a decline in the market's value

of trustworthiness, and ultimately liquidation (Sari & Septiano 2020). Thus, to meet short-term maturing obligations without jeopardizing performance, a prudent and prudent financial management strategy is to maintain adequate liquidity (Ben-Caleb, 2013).

The recent trends on the global financial scene have had significant impact on the banking industry worldwide with one major need being that for effective liquidity management in banking institutions. Liquidity is generally referred to as the ability to generate adequate cash to pay off financial obligations but in banking it mainly refers to the ability to honour maturing deposits (Adalsteinsson, 2014). According to Choudhry (2011) liquidity management refers to the funding of deficits and investment of surpluses, managing and growing the balance sheet, as well as ensuring that the bank operates within regulatory and stipulated limits. Ideal bank-management is an uninterrupted endeavour of assuring that a balance exists between liquidity, profitability and risk (Banks, 2014). Banks indeed require liquidity since such a large proportion of their liabilities are payable on demand (deposits) but typically the more liquid an asset is, the less it yields. Hence, the decision to choose a particular combination of assets over another, taking into consideration the liability size of a bank, would have a massive effect on bank liquidity management, profitability and risk (Choudhry, 2012). In managing its assets and liabilities in the wake of uncertainties in cash flows, cost of funds and return on investments, a bank must ascertain its trade-off between risk, return and liquidity (Landskroner and Paroush, 2011). Indeed, studies in other countries across the globe have attributed bank failures to poor liquidity management. This is so because scholars argue that one of the major contributors of the Global Financial crisis of 2007-2008 will poor liquidity management (Adalsteinsson, 2014). This will largely as a result of the collapse of Lehman Brothers, a leading Investment Bank which ended up spreading across the globe through the contagion effect.

According to Dang (2011) adequate level of liquidity is positively related with bank performance. The most common ratio to measure performance are customer deposit to total assets and total loan to customer deposits. The bank assets include among others current assets, fixed assets, credit portfolio and other investments. Loan of a bank is the major that generates the major share of income. Quality of loan portfolio determines the performance of banks. The highest risk facing a bank is the losses derived from delinquent loans (Dang, 2011). It is the major concern of all banks to keep the amount of defaulters' low level. Hence nonperforming loans to total loans shows that the good health of the portfolio of a bank. Deterioration of asset quality relates to increase in credit risk which reduces the expected profits.

Liquidity risk is considered as one of the serious concern and challenge for the modern era banks. A bank having good asset quality, strong earnings and sufficient capital may fail if it is not maintaining adequate liquidity (Yameen et al., 2019). Liquidity held by commercial banks depicts their ability to fund increases in assets and meet obligations as they fall due. Liquidity is one of the important financial stability indicators since liquidity shortfall in one bank can cause systemic crisis in the banking sector due to their interconnected operations. Arising from the placement of Dubai Bank Ltd in liquidation and Imperial Bank Ltd in receivership, CBK closely monitored the banking sector particularly on liquidity and credit risks. Banks that faced liquidity challenges that were not able to access liquidity in the market used the liquidity facilities available at the CBK such as intraday liquidity facility, rediscount of government securities, open market operations and lender of last resort window. The liquidity challenges were primarily caused by liquidity segmentation in the inter-bank market. (Duttweiler, 2009). It is therefore of paramount importance for a bank to particularly take into account the relationship that exists between liquidity risk and credit risk, since the latter triggers liquidity risk in both direct and indirect ways. "During the recent financial crisis that erupted in mid-2007, credit default swap spreads increased by several hundred basis points, accompanied by a liquidity shortage in the U.S. financial sector" (Hertrich, 2015). Hence, the 2007-2009 period has not only proved the significance of liquidity to investors, it has also emphasised the need to understand the relationship that exists between credit markets and liquidity.

The average liquidity ratio as at December 2015 stood at 38.1 per cent as compared to 37.7 per cent registered in December 2014. The increase in the ratio is mainly attributed to a higher growth in total liquid assets compared to the growth in total short-term liabilities. Total liquid assets grew by 13 per cent while total short-term liabilities grew by 12 per cent. The banking sector's average liquidity in the twelve months to December 2015 will be above the statutory minimum requirement of 20 per cent. With prudent management of credit the cash out flows in terms of credit risk will be less than cash inflows from repayments of loans (Sari & Septiano 2020). Due to the nature of banking operations and how they are hinged upon liquidity, this makes liquidity risk inevitable. Thus, banks can not eliminate liquidity risk, but they can rather find ways to manage this risk in order to reduce its impact (Adalsteinsson, 2014). The Asian Development Bank (2008) in its technical

assistance report outlined the major principles to be incorporated in the complete ALM process. It stressed the need for bank boards to clearly bring out the risk tolerance of the bank and subject the balance sheet to constant analysis

Financial performance is a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues (Will K. 2022). The term is also used as a general measure of a firm's overall financial health over a given period. It is the process of measuring the results of a firm's policies and operations in monetary terms (Mwangi, 2016). It identifies the financial strengths and weaknesses of a firm by establishing relationships between the items of the financial position and income statement. The term is also used as a general measure of a firm's overall financial health over a given period of time, and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation (Will K. 2022). There are many different ways to measure firms' performance, but all measures should be taken in aggregation. Line items such as revenue from operations, operating income or cash flow from operations can be used, as well as total unit sales (Njeru, 2012). Quantitative measures of firm performance include profitability measures such as gross margin, net margin for example return on sales, return on equity, economic value added, return on equity less cost of equity and return on capital employed. Other measures of performance include cash flow measures such as free cash flow over sales and growth measures for example historical revenue growth. Ideally, forward-looking measures such as expected profitability, cash flow and growth should be used to measure a firm's performance (Kiaritha, 2015).

Financial Performance is one of the most important objectives of financial management because one goal of financial management is to maximize the owner's wealth (McMahon, 2005). Thus, financial performance is very important in determining the success or failure of a business. At the establishment stage, a business may not be profitable because of investment and expenses for establishing the business. When the business becomes mature, profits have to be produced. Due to the importance of performance, Edmister (2007) among other researchers have suggested that small firms need to concentrate on financial performance. Jen (2003) found performance to be a significant determinant of a small firm's credit risk. Thomas and Evanson (2007) stress the aim of a business is not only the generation of sales, but also generation of profits. Profit is especially important because it is necessary for the survival of a business. Low performance contributes to under-capitalization problems because it leads to retained earnings and therefore to a reliance on external capital (Davidson & Dutia, 2001). Argile's and Slof (2003) provided empirical evidence on the relationship between the use of financial reports and financial performance based on a sample of Catalan farmers. The study found that the financial performance of respondents using the reports for decision-making purposes was significantly better than those who did not use the reports Kraus et al. (2006), who examined strategic planning and performance in Austrian smaller enterprises, found that planning formalization has a positive and highly significant impact on the probability of belonging to a group of growth firms, whereas other aspects of strategic planning (time horizon, strategic instruments, and control) did not contribute to performance.

Banks, as the critical part of financial system, play an important role in contributing to a country's economic development. If the banking industry does not perform well, the effect to the economy could be huge and broad. Studies on performance of banking institutions are plenty. Results of these studies strongly suggest that bank profitability determinants vary across countries and also among regions of the world (Doliente, 2003). In accordance with the study of Grier (2007), profitability ratios are often used in a high esteem as the indicators of credit analysis in banks, since profitability is associated with the results of management performance. Bank performance indicates bank's capacity to generate sustainable profits. Banks protect the profitability against unexpected losses, as it strengthens its capital position and improves future profitability through the investment of retained earnings. A bank that persistently makes a loss will ultimately deplete its capital base, which in turn puts equity and debt holders at risk. In order to create shareholder value, bank's return on equity (ROE) needs to be greater than its cost of equity. Return on equity, ROE, and return on assets, ROA, are the most commonly used ratios, and the quality level of ROE is between 15% and 30%, for ROA is at least 1%. Wong et al., (2008) indicated that the efficiency of banks can be measured by using the ROE which illustrates to what extent banks use reinvested income to generate future profits. According to Riksbank's Financial Stability Report (2002), the measurement of connecting profit to shareholder's equity is normally used to define the profitability in the banks. Jensen Investment Management (2008) mentioned that ROE provides a very useful gauge of profit generating efficiency because it measures how much earnings a company can get on the equity capital.

Further it is argued that the selection of particular risk tools tends to be associated with the firm's calculative culture the measurable attitudes that senior decision makers display towards the use of risk management models (Onyekwelu 2018).

While some risk functions focus on extensive risk measurement and risk-based performance management, others focus instead on qualitative discourse and the mobilization of expert opinions about emerging risk issues (Mikes and Kaplan, 2014).

Kaaya and Pastory (2013) showed that credit risk indicators negatively affected on the bank performance. Ogboi (2021), concluded that bank's financial performance had been affected by sound credit risk management and capital adequacy. Effective risk management is critical to any bank for achieving financial soundness. The indicator of Nonperforming loans had positive impact on banks profitability as measured by return on equity (ROE) and return on assets (ROA) According to the introduction of DuPont model, return on Equity (ROE) value the overall profitability of the fixed income per dollar of equity (Saunders & Marcia, 2011). ROE value the overall profitability of fixed income per shilling of equity. The shareholders of banks prefer higher ROE (Onyekwelu 2018). However, increasing ROE demonstrates increasing risk for instance when total equity capital decreases relative to net income, ROE will have an increasing under the constant net income. A large drop in equity capital may result in violation of minimum regulatory capital requirement and therefore increase the risk of insolvency of the bank (Saunders & Marcia, 2011). ROA here determines the net income produced per shilling of assets. EM measures the dollar value assets funded with each shilling of equity capital (Saunders & Marcia, 2011, p. 24). The higher EM ratio indicates the more leverage (or debt) that is used by banks to fund its assets. (Saunders & Marcia, 2011). High EM ratio and ROA ratio have positive influence on ROE ratios (Saunders & Marcia, 2011). However, whenever there is a high ROE; it should be of concern to the bank's manager. For example, increasing EM generates increasing ROE ratio while the leverage of bank has also enhanced, which causes solvency risk (Saunders & Marcia, 2011).

Almazari (2012,) introduces that DuPont model will created in the early 1990s but is still widely used for financial analysis due to the elegance of ROA being affected by a profitability measure and efficiency measure. DuPont method will developed in 1918 by an engineer at DuPont who noticed that the product of two common computed ratios, net profit margin and total assets turnover, equals return on assets (ROA). In the 1970s, the concentration in financial analysis shifted from return on asset (ROA) to return on equity (ROE) Almazari (2012). Based on this fact, we consider using the model for seeking the appropriate indicators of profitability of commercial banks in Kenya. According to Saunders & Marcia (2011) and Rudra (2009), ROE model for financial institutions based on DuPont system will be adopted. ROE is firstly decomposed into ROA and equity multiplier (assets/equity). ROA is decomposed further into net profit margin and total asset turnover. The profit margin allows the financial analysts to measure the income statement. And total assets turnover provides financial analysts a measure to evaluate the "assets" in the balance sheet. Equity multiplier presents the evaluation of the "liabilities and owners' equity" (Alimazari, 2012). Analysts can project the level of financial structure of financial institutions based on this system (Alimazari, 2012). Therefore, DuPont tool can provide financial analysts an efficient evaluation by decomposing the most frequently used measure of profitability, ROE to identify the strengths and weaknesses of the banks' performance (Saunders & Marcia, 2011). Based on DuPont system, we prefer to choose ROE and ROA as the key indicators of performance., ROA, which is the ratio of net income to total assets, measure how profitable and efficient a bank's management is, based on the total assets (Guru et.al, 1999). Therefore, higher value of PM and AU ratios generate higher ROA and ROE. PM measures the capacity of a bank on the expense controlling (Saunders & Marcia, 2011). And expense control and bank's profit have positive relationship. AU values the bank's capacity to generate income from assets (Saunders & Marcia, 2011). However, high PM and AU value also demonstrate potential risks. For instance, PM will have an improvement when a bank reduces its expense of salaries and profits (Saunders & Marcia, 2011). On the other hand, if the reduction of expense is due to the loss of high skilled employees, the raise of PM and ROA might evolve an underlying "labor quality" problem (Saunders & Marcia, 2011).

### 3. METHOD

The study adopted a descriptive research design with a target population of all financial managers comprising of 46 respondents within commercial banks, Kenya. The study adopted census since the target population was small. Data collection instrument was structured questionnaire. The Secondary data collection instruments was bank journals, commercial banks budgeted statements and financial statements. Piloting was done for validity and reliability of the data collection instrument. The data was reduced, organized, coded, edited, classified using a table and analysed to bring out the meaning under each of the factors. It was then be coded, entered and analysed descriptively using IBM Statistical Package for Social Sciences (SPSS 23). Pearson correlation analysis was used to test the relationship between variables in the study hypotheses. ANOVA multiple linear regression analysis was adopted computed to determine the statistical relationship between the independent variable and the dependent on.



#### 4. DISCUSSIONS

The objective of the study was to determine the effects of liquidity on financial performance of commercial banks in Uasin Gishu County, Kenya. The respondents were requested to indicate their level of agreement on statements relating to the effects of liquidity on financial performance of commercial banks in Uasin Gishu County, Kenya. A 5 point Likert scale was used where 1 symbolized strongly disagree, 2 symbolized disagree, 3 symbolized neutral, 4 symbolized agree and 5 symbolized strongly agree. The results were as presented in Table 4.1

From the results, the respondents agreed that Debts due can be paid within the next 12 months.

This is supported by a mean of 3.931 (std. dv = 0.941). In addition, as shown by a mean of 4.862 (std. dv = 0.876), the respondents agreed that the banks credit risk strategy reflects the banks tolerance for risk. Further, the respondents agreed that the bank has adequate cash and equivalents to meet demand any time. This is shown by a mean of 3.831 (std. dv = 0.944). The respondents also agreed that organization goals are narrowed down to profit maximization—the concept of a balanced scorecard in improving the overall performance within the confines of a business. This is shown by a mean of 3.986 (std. dv = 0.935). With a mean of 3.683 (std. dv = 0.854), the respondents agreed that good liquidity management enhances financial performance.

**Table 4.1: Effects of liquidity on financial performance of commercial banks**

	Mean	Std. Deviation
Debts due can be paid within the next 12 months	3.931	0.941
The banks credit risk strategy reflects the banks tolerance for risk	4.862	0.876
The bank has adequate cash and equivalents to meet demand any time	3.831	0.944
Organization goals are narrowed down to profit maximization—the concept of a balanced scorecard in improving the overall performance within the confines of a business	3.986	0.935
Good liquidity management enhances financial performance	3.683	0.854
<b>Aggregate</b>	<b>3.982</b>	<b>0.876</b>

#### 4.1 Inferential Statistics

##### 4.1.1 Correlation Analysis

The study used Pearson correlation analysis to determine the strength of association between independent variables (liquidity, capital structure, management efficiency and loan defaulters) and the dependent variable (Financial Performance of Commercial Banks) dependent variable. Pearson correlation coefficient range between zero and one, where by the strength of association increase with increase in the value of the correlation coefficients. The current study employed Taylor (2018) correlation coefficient ratings where by 0.80 to 1.00 depicts a very strong relationship, 0.60 to 0.79 depicts strong, 0.40 to 0.59 depicts moderate, 0.20 to 0.39 depicts weak.

**Table 4.2: Correlation Coefficients**

		Financial Performance	Liquidity
Financial Performance	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	60	
liquidity	Pearson Correlation	.862**	1
	Sig. (2-tailed)	.002	
	N	60	60

From the results, there was a very strong relationship between liquidity and Financial Performance of Commercial Banks in Uasin Gishu County, Kenya ( $r = .862$ ,  $p$  value = 0.002). The relationship was significant since the  $p$  value 0.002 was less than 0.05 (significant level).

#### 4.1.2 Regression Analysis

Multivariate regression analysis was used to assess the relationship between independent variables (E-recruitment, E-training, E-compensation, and E-appraisal) and the dependent variable (Financial Performance of Commercial Banks in Uasin Gishu County, Kenya)

**Table 4.3: Model Summary**

Model	R	R Square	Adjusted R	Std. Error of the Square Estimate
1	.974	.852	.867	.10341

a. Predictors: (Constant), liquidity,

The model summary was used to explain the variation in the dependent variable that could be explained by the independent variables. The r-squared for the relationship between the independent variables and the dependent variable was 0.852. This implied that 85.2% of the variation in the dependent variable (Financial Performance of Commercial Banks in Uasin Gishu County, Kenya) could be explained by independent variables (liquidity).

**Table 4.4: Analysis of Variance**

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	1 3.027 6.512	1	.022 .031	58.35	.000 <sup>b</sup>
Residual		59			
Total	29.539	60			

a. Dependent Variable: Financial Performance of Commercial Banks in Uasin Gishu County, Kenya

b. Predictors: (Constant), liquidity

The ANOVA was used to determine whether the model was a good fit for the data. F calculated was 58.35. The p value was 0.000. Therefore, the model can be used to predict the influence of liquidity, capital structure, management efficiency and loan defaulters on Financial Performance of Commercial Banks in Uasin Gishu County, Kenya.

**Table 4.5: Regression Coefficients**

Model		Unstandardized Coefficient s	Standardized Coefficients	t	Sig.	
		B	Std. Error	Beta		
1	(Constant)	0.432	0.036		5.903	0.000
	Liquidity	0.621	0.093	0.395	3.751	0.004

**a Dependent Variable:** Financial Performance of Commercial Banks in Uasin Gishu County, Kenya

The regression model was as follows:

$$Y = 0.432 + 0.621X_1 + \varepsilon$$

According to the results, liquidity has a significant effect on Financial Performance of Commercial Banks in Uasin Gishu County, Kenya ( $\beta_1=0.621$ , p value= 0.004). The relationship was considered significant since the p value 0.004 was less than the significant level of 0.05.

## 5. CONCLUSIONS AND RECOMMENDATIONS

The objective of the study was to determine the effects of liquidity on financial performance of commercial banks in Uasin Gishu County, Kenya. The findings revealed that debts due can be paid within the next 12 months and that the banks credit risk strategy reflects the banks tolerance for risk. Further, the findings indicated that the bank has adequate cash and equivalents to meet demand any time and that organization goals are narrowed down to profit maximization—the concept

of a balanced scorecard in improving the overall performance within the confines of a business. The findings further showed that Good liquidity management enhances financial performance.

Based on the findings, the study concluded that liquidity has a significant effect on Financial Performance of Commercial Banks in Uasin Gishu County, Kenya ( $\beta_1=0.621$ ,  $p$  value= 0.004). The relationship was considered significant since the  $p$  value 0.004 was less than the significant level of 0.05. The study came up with the following recommendations: the management of commercial banks should have adequate cash and equivalents to meet demand any time by narrowing down to profit maximization in improving the overall performance within the confines of a business.

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