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DOES INFORMATION ASYMMETRY AFFECT THE LOAN PORTFOLIO PERFORMANCE OF COMMERCIAL BANKS? THE KENYAN EXPERIENCE

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Abstract

Information asymmetry is sometimes inherent in the application of bank lending policies, which could have far reaching implications on loan performance. This study's specific objective was to examine the effect of information asymmetry on the loan portfolio performance of commercial banks in Kenya. Underpinned by the asymmetric information theory, and guided by the descriptive research design the study had a target population of 172 staff drawn from the 40 local and 3 foreign banks operating in Kenya. The population was stratified into three classes: branch managers, credit managers and credit officers. Simple random sampling was employed to choose participants from every stratum to obtain 120 respondents. A structured survey was utilized to obtain information from participants. Before beginning the main investigation, a pilot study was undertaken. Descriptive data analysis involved frequency tables, computation of averages and variations. Inferential data analysis involved regression and ANOVA analysis. The study found that information asymmetry has a significant and positive effect on the loan portfolio performance of commercial banks in Nairobi County. It can be concluded that information asymmetry affects bank loan performance in Kenyan economy. The finding can inform *stakeholders to make appropriate lending policies that prevent the occurrence of non-performing loans. This is very useful to credit managers in commercial banks since it allows them to examine the effect of their lending practices on loan profitability and utilize this information to make better financial decisions. The credit managers are therefore able to manage their bad loans in a better way. It is recommended that the bank managers should check credit reporting agency data as it provides an objective and cost-effective method for sharing data about borrowers' reputation and capacity to repay, thereby improving access to finance.*

Keywords: Information asymmetry, Interest rates, Credit Criteria, Financial Performance

INTRODUCTION

Banking institutions play a critical part in facilitating conversion of excess deposits into deficit deposits. Credit is used to allocate units with surpluses to units with shortfalls. Among the most important tasks carried out by Kenya's banking institutions and other financial entities is lending. Disbursed credit quantity in relation to bank assets is one clear way to gauge this. It is often known that a bank's loan portfolio which also happens to be their primary source of revenue which is its most valuable asset. Elevated rates of defaulted credit or delinquent loans (NPLs) among lending financial institutions hinder private investment, diminish the financial institution's capacity to settle its obligations on schedule, and restrict the quantity of bank credit that may be given to debtors (Warue, 2013). The frequency of defaulted credit or delinquent loans puts the banking industry at serious danger since it hinders banks' capacity to thrive and expand and, if uncontrolled, may result in bank collapses (Mwengei, 2013).

Given that defaulted credit or delinquent loans produce an asset-to-liability mismatch in maturity, an upsurge in loan delinquency rate causes a dip in bank profitability. This condition reduces profitability and intensifies problems with liquidity, which might lead to banks going bankrupt (Turan and Koskija, 2014). According to The Basel Committee 1 (2001) delinquent loans are those which remain un serviced or not cleared for at least 90 days. This definition has been adopted by CBK. A significant proportion of the credit portfolio is mismanaged, which raises the proportion of defaulted credit or delinquent loans.

The yearly findings from CBK (2012) highlighted continued high levels of defaulted credit or delinquent loans (NPLs) among lending financial institutions during the previous three years. The research states that between 2009 and 2012, the number of defaulted credit or delinquent loans declined. In 2009/2010, NPLs amounted to 61.5 billion (or 7.4%), in 2010/2011, it was 58.3 billion (or 5.4%), whereas in 2011/2012, it was 57.5 billion (or 4.5%). Even though the number of NPLs has somewhat decreased, the statistics are still high. Establishing an early warning system that can alert regulatory agencies to potential banking issues and routinely assessing credit quality are crucial for maintaining a robust financial system and lowering high default rates. Asset quality is continuously monitored by central banks and other regulatory bodies to make sure it complies with Basel II requirements and is sound. Financial institutions trying to lower the default rates on their loan portfolios are finding that debt collection is an increasingly crucial tactic.

The work of financial institutions in lending credit to borrowers is exposed to risk of default, claim Karani and Waweru (2009). Kenyan lenders often provide loans to people who have failed in the past because they lack basic credit data. By using information asymmetry, these borrowers get many loans from different financial institutions; nonetheless, they eventually fall behind on their payments. Credit reporting organizations get information about borrowers from financial institutions and other lenders; this information is then shared with other credit rating entities. This process is known as credit information exchange (Oloo, 2003). It is now simpler for lending institutions to keenly observe the repayment habits of loan consumers, according to 2009 Bank Supervision Annual Report CBK. Through credit information exchange, credit reference bureaus (CRB) may provide credit reports to banks. Numerous details about the borrower are included in these reports, such as name, credit facilities, bankruptcy, past-due payments, credit history, and current enquiries from possible lenders. The Banking Act of Kenya permits any prospective lender with a valid cause to get this report, which is intended to assess the borrower's creditworthiness (Mulei, 2003).

The 1980s and 1990s saw a significant influx of assets into Kenya's banking system, which led to several institutions undergoing modifications. This situation came up as a result of some people taking out loans from many institutions in order to pay off their obligations. These guidelines were developed in an environment marked by information asymmetry, which was mainly caused by the lack of channels for credit information exchange. A situation known as information asymmetry occurs when the management or entrepreneur knows more about the firm and the dangers involved than the lender (Mngei, 2013). CBK (2008) maintains that implementation of credit data exchange is expected to help the banking industry and financial institutions, as well as borrowers and the overall economy. This national achievement enhances the industry's risk mitigation measures, which positively influences the economy. This implies that banks will have the capacity to precisely evaluate risk and acquire comprehensive credit data, resulting in a reduction in defaulted credit or delinquent loans within their portfolios.

Toome (2009) argues that when the moral hazard theory is used in credit lending situations, the borrower/customer has power over the finances of the credit organization. In certain cases, the borrower may spend the funds in other uses disregarding the bank's percentage part. Banks make an effort to monitor its customers, just as any other principal and their representatives do. Nonetheless, monitoring entails certain guarantee of providing relevant required data. According to the moral hazard model, borrower information circulation between lenders should reduce loan delinquency and inherent cost of credit hence boosting lending since CRBs encourage rivalry by decreasing information costs which debtors are subjected to.

In marketplaces where credit would not normally be extended, lending may become possible under extreme conditions. These models suggest that banks improve when they choose to communicate, increasing customer welfare and earnings at the same time. Guy (2011) found that the only factor that provides credit bureaus disciplinary action is the distribution of negative information. When credit information regarding past failures is made public, social stigma is feared. Credit information sharing may have a lessening influence on discipline and minimize the consequences of adverse selection when white information, or data on borrower attributes, is shared. The fair compensation for revealing black-and-white data is thus determined by the significance of ethical threats and adverse selection difficulties in the financial space.

The nation's economic development is impacted by the expansion of banking. In addition to facilitating the flow of money from government agencies with surpluses to those with deficits, banks are a significant provider of credit that support fiscal and economic policy. Profit and asset quality are the two key measures used to evaluate the success of a bank. NPA is the biggest threat among the lending financial institutions. Non-performing assets (NPAs) are defaulted and or unrecoverable loans for which the borrower has not complied with the repayment obligations. The NPAs in the debt inventory affect operational effectiveness, which undermines bank earnings, finances, and viability (Michael, Vasanti & Selvaraju, 2006).

According to Kaaya and Pastori's (2013), commercial banks contribution in Tanzania's economic growth and expansion of financial services and acting as intermediaries cannot be ignored. The country's commercial banks' performance and credit risks were the main subjects of the investigation. Financial facilities may be used by both individual and institutional investors to investigate and broaden profitable investment options. Over time, sound banking practices guarantee the financial stability of any nation. The health of the financial industry primarily depends on robust support systems. Financial intermediary failures may impede development processes, and banks are more exposed to credit risks and counter-party risks for a variety of different financial instruments, including bonds, acceptances, trade credit, futures, swaps, and exchanges. Extensions of guarantees, settlements of transactions, equity, alternatives, and duties.

In a report published in 2020, Mafumbo looked into the financial affairs, lending policies, and administration of Uganda's commercial banks. The study discovered that credit policy has a less significant impact on commercial banks' financial health than asset adequacy and handling credit risk, and that fiscal productivity is critical for commercial banking institutions in addressing their current challenges. Credit management, the fundamental difficulty faced by banks in the financial industry, has the potential to negatively impact the whole economy if left unchecked.

Economic development and stability are significantly impacted by the large rate of defaulted credit or delinquent loans among lending financial institutions. The CBK’s bank supervision annual report of April 2009 said that from its 2008 assessment of Ksh 58.3 billion, defaulted credit or delinquent loans (NPLs) had grown by 7.8% by March 31, 2009. Since the 1980s, banking problems have led to significant bank failures in Kenya (Kithinji & Waweru, 2007; Ngugi, 2001). A high number of defaulted credit or delinquent loans, under-capitalization, and poor corporate governance all contributed to these bank collapses. Despite a rise in the frequency of commercial bank failures in the 1990s, NBFIs suffered most.

Large-scale insider loans, often given to politicians, are the primary cause of the failure of several of Kenya's largest local banks, including the trade, continental, and pan-African banks. One of the oldest and most difficult issues that banks confront is credit risk (Karumba & Wafula, 2012). This is due to the fact that loan term defaults jeopardize a bank's capital. Default rates cause an increase in the proportion of defaulted credit or delinquent loans on their loan portfolio. The Bank Supervisory Annual Report (2006), reported a decline in the net primary savings (NPLS) value from Kshs. 2005 saw a decrease from 68.6 billion to $56.4 billion. Market intelligence (2004) states that the industry average debt ratio was 24% in 2004 compared to 25% in 2003. By the end of 2001, Kenya had Kshs in defaulted credit or delinquent loans (NPLs), according to Oloo (2003). 107.4 billion.

According to the 2001 Bank Supervisory Report, Kenya's non-performing loan rate at the end of 2000 was thirty-three percent greater than that of similar African nations. For example, South Africa (31%), Nigeria (11%), and Zimbabwe (24%), have the lowest economic rates in Africa. According to Karanu and Waweru (2009), Kenya has been facing financial challenges since 1986, resulting in closure of big financial institutions such as Daima Bank in 2003 when it was compelled to take on legal management due to poor credit portfolio management, inability to fulfill core capital requirements, and other issues. The issue of defaulted credit or delinquent loans among lending financial institutions has been acknowledged by the Kenyan government. For instance, the Finance Minister suggested creating an authority with judicial powers to manage problematic loans in his June 2003 budget address (Oloo 2003). Moreover, in-duplum rule, which states that interest on defaulted credit or delinquent loans (NPLs) ceases to accrue when the principle amount borrowed equals interest, was put into effect by the government in 2007.

The aforementioned regulation aimed to avert any further increase in defaulted credit or delinquent loans. In addition, the legislative body passed the Finance Act of 2006, which mandated the exchange of data on defaulted credit or delinquent loans to decrease number of cases of non-performance (CBK, 2007). Oloo (2001) linked the external environment in which Kenyan financial institutions functioned to the rise of defaulted credit or delinquent loans in the country.

In an effort to reduce the number of bank failures, Kenya introduced the CRB in 2007. The Credit Reference Bureau Regulations, which require credit reference agencies to share information about past-due loans, were developed in reaction to the 2006 amendments to the Banking Act. Although a significant number of borrowers have good credit histories, they still have difficulty obtaining financing because lenders find it difficult to fairly evaluate their creditworthiness because of the inherent difficulties that come with information asymmetry. Some past-due borrowers are aware that banks do not have their credit information, thus they capitalize on information asymmetry to access bank credit which later becomes defaulted.

In an effort to steer clear of riskier customers, banks are increasingly giving preference to less hazardous loans, such as government instruments like Treasury bills and Treasury bonds. In 2015, there was a 55% increase in defaulted credit or delinquent loans to Sh15 billion from Sh6 billion, according to a report provided by Equity Bank on March 15, 2017. Additionally, loan loss provisions increased to Sh5 billion from Sh1 billion in the same year. Banks saw a slowdown in the construction, commerce, and logistics sectors' use of loans and return on investment. The study therefore assessed whether information asymmetry has any effect on loan portfolio performance of commercial Banks in Kenya.

REVIEWED LITERATURE

This study used theoretical framework to explain credit data sharing and its connection to nonperforming loans. The framework came from the theory of information asymmetry. In the negative selection model, information sharing reduces debt problems, decreases interest rates, and widens the pool of possible borrowers. It may potentially lead to an increase in lending. Due to the interchange of credit information, banks that hold local monopolies may find it more difficult to differentiate between hazardous and safe loans in certain circumstances. Nevertheless, the decrease in these very hazardous loans cannot be made up for by increasing lending for safe loans. In a credit market that is competitive, lending activity usually increases.

Banks that exchange information are more competitive, but more competitive banks are less able to offer higher interest rates to their consumers.

When lenders share information about their borrowers, it may have an impact on the amount of loans provided and lessen the number of bad decisions (Grajzl & Laptieva, 2011). Distribution data so improves banking information about loan applicants, hence reducing adverse selection. Sharing data increases the pool of applicants and reduces negative selection when each bank has confidential information about local credit applications but not about non-local prospects (Jappelli & Pagano, 2005). Wangai, Bosire and Gathogo (2012) used this theory in their study on how defaulted credit or delinquent loans affect the financial performance of microfinance banks in Kenya. Credit registries were established as a consequence of the knowledge asymmetry between lenders and borrowers decreasing, allowing lenders to lend money to safe borrowers who had previously been excluded from the market and boosting total lending.

In the credit markets, moral hazard occurs when borrowers have a choice between many projects and a rise in interest rates leads them to invest in one that gives the bank a lower return than the one they may have invested in (Mehrteab, 2005). Furthermore, moral hazard happens when an individual or group behaves more carelessly than normal due to a failure to completely embrace accountability for the outcomes of their actions. Therefore, some of the culpability for the results of these activities rests with the other party (Jappelli and Pagano, 2000). A moral hazard problem arises when one side of an economic activity takes activities that the other side also believes are bad (Tumay, 2009). Information communication may reduce moral hazards by making borrowers more motivated to perform their contractual commitments (Artigas, 2004). The combination of default information helps to lessen moral hazard concerns when borrower characteristics are made public, however its efficacy is diminished (Jappelli & Pagano, 2000).

Lower moral risks, according to Galindo and Micco (2010), include information exchange and imposing debtor discipline. The strength of the incentives is based on data from credit bureaus on prior behaviour. Lenders may lessen their moral hazard and motivate borrowers to work on projects more by sharing information (Brown & Zehnder, 2007). Thus, lenders trading blacklists of noncompliant borrowers may be a helpful instrument for moral hazard mitigation, lowering interest rates on the loan market, and imposing discipline (McIntosh & Wydick, 2007). Wangai, Bosire and Gathogo (2012) used this hypothesis in their analysis of how defaulted credit or delinquent loans affected the financial performance of microfinance banks in Nakuru, Kenya.

From empirical works, information asymmetry describes the condition in which relevant information is not known to all parties involved in an undertaking (Ekumah & Essel, 2003). Richard (2011) conducted a study on factors that cause non– performing loans in commercial banks in Tanzania and strategies to resolve them. Data was obtained from 48 bank officers from 14 commercial banks that provide corporate loans and had been in operations for at least five years. Bank officers participated were those involved in lending activities for at least five years. Findings suggested that the use of funds for purposes different from agreed ones was a major factor that causes NPLs. Creating an environment to make banks seen as problem solvers and trusted advisor to borrowers was cited as the main strategy towards solving NPLs problems. These findings imply that close monitoring of borrowers is critical to lending business.

Further, Muli (2017) in a study titled effect of information asymmetry on cost of borrowing among micro-finance clients in Kenya showed that borrower credit history and soft information are significant influencers of borrowing cost among microfinance borrowers in Kenya. Favorable borrower credit history and soft information had a favorable effect of reducing the borrower cost of borrowing among microfinance borrowers in Kenya.

The current view of credit bureaus and credit information sharing is primarily as a debt collection tool. The primary benefit is that it is a mechanism to identify and avoid serial defaulters, pressurize clients to meet their loan obligations, and improve the repayment culture. Therefore, credit reference bureaus are typical voluntary mechanisms. They are information brokers, which operate on the principle of reciprocity, collecting, filing and distributing the information supplied voluntarily by their members. The timeliness and truthfulness of the data reported by lenders to credit bureaus is enforced invariably by threatening deviants that they will be excluded from access to the common data base (Asongu, Nwachukwu & Tchamyou, 2016).

Similarly, Kisengese (2014) conducted a study on the impact of credit information sharing on the level of non-performing loans of 43 commercial banks in Kenya. The findings show that all banks had challenges of non-performing loans. Sharing of customer credit information affected the non-performing loans as it helped the banks to decline loaning chronic defaulters. This includes all credit history from other credit suppliers (positive information) would increase credit approval by commercial banks, while low default rate would result from lending to borrowers based solely on all credit supplier's positive information which would increase credit approval by commercial banks and that the lender will investigate the borrower's past payment experience, review a credit bureau report, and consider his educational background and experience in business. In addition, character will be looked into as part of bank's credit control policy. Lenders start by evaluating the prospective borrower's capacity to repay a loan. The lender merely has to confirm this information with the employer or through other documents such as group certificates, or computer-generated pay slips that show the number of hours worked, year to date income earned and other information that the lender requires.

Moreover, Kisengese (2014) further states that banks need to gather adequate information about potential customers to be able to calibrate the credit risk exposure. The information gathered can guide the bank in assessing the probability of borrower default and price the loan accordingly. Much of this information is gathered during loan documentation. Lenders also need to consider the credit history of the prospective borrowers. This information may be taken from credit reporting bureaus that provides credit record which shows the applicant's past loans record. Credit history with no adverse entries allows the borrower a fairly free hand at the choice of lender and product available from the entire lending community. If a borrower has a clean credit history, then this credit profile is the most preferred borrower type and implies a low risk of any future default or loss for the lender. An adverse credit history is an area which catches many borrowers out. Consequently, banks should go beyond information provided by the borrower and seek additional information from third parties like credit rating agencies and credit reference bureaus

METHODOLOGY

The study applied a descriptive research design on 120 employees of selected commercial banks in Nairobi, Kenya. Primary data was obtained using closed ended questionnaire and was complemented with secondary data on financial performance for the years 2010-2020. The response rate was 95 since the required information was obtained from 114 out of 120 respondents. Descriptive and inferential data analysis was done through a partial regression analysis in the form of the following models: $Y= \beta0+ \beta_1X_1 +\varepsilon$ to estimate the linear relationship between information asymmetry and loan performance.

The population of this study was the 44 commercial banks in Kenya. The target population of the study narrowed down to 35 branches of Equity Bank, Kenya Commercial Bank, Absa (K) Ltd and Cooperative Bank of Kenya in Nairobi County because it has both small and big customers compared to other counties. The four banks were chosen because they have a significant market share and they play a key role in Kenya's financial sector and provide reliable data for analysis. They were also chosen because they are the financial institutions being affected more by information asymmetry.

Stratified proportionate random sampling technique was used to select the sample.

Stratification aims to reduce standard error by providing some control over variance. The study grouped the population into three strata that is; Branch managers, credit managers and credit officers. From each stratum the study used simple random sampling to select one hundred and four respondents who formed the sample size.

Data collected was edited, coded and classified into different components to facilitate a better and efficient analysis. In analyzing the quantitative data, the study used descriptive and inferential statistics. Descriptive data analysis involved frequency tables, computation of mean and standard deviation. Inferential data analysis involved correlation, regression and ANOVA analysis. Regression model was used to establish the relationship between the independent variables and the dependent variable. Simple average of secondary data variables into single data points before analyzing with primary data. Data was analyzed using SPSS version 26.0.

RESULTS

The purpose of this study was to determine the effect of information asymmetry on the loan portfolio performance of commercial banks in Nairobi County. The R^2 = 0.390 and the R= 0.625, according to Table 1. This demonstrates that other variables accounts for 61% of the variations in loan portfolio performance, leaving information asymmetry to explain just 39.0% of the variations.

Table 1. Model Summary of Information asymmetry and Loan Portfolio Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.625[a]	.390	.385	.537

Secondly, the Table 2 shows that the F-value was 71.688 with a p-value of 0.000, both of which signal significance at the 0.05 level, suggesting that the model is adequate for the data. The model is crucial for forecasting the loan portfolio's performance. The study refutes the hypothesis that that the performance of loan portfolios is not statistically affected by information asymmetry. Consequently, it can be said that information asymmetry and loan portfolio performance are statistically significantly correlated.

Table 2. ANOVA for Information asymmetry and Loan Portfolio Performance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	20.645	1	20.645	71.688	.000
	Residual	32.254	113	.285		
	Total	**52.899**	**114**			

Thirdly, Table 3 displays a positive beta coefficient of 0.569 as shown in the coefficient matrix with a p = 0.00, along with a constant of 0.874 and a p = 0.000. Thus, it can be said that information asymmetry plays a major role in the model. As a result, based on information asymmetry, the model can provide the data needed to anticipate loan portfolio performance. Regression analysis indicates that for every unit rise in information asymmetry, loan portfolio performance will increase by 0.569 units, and that in the absence of information asymmetry, bank performance would increase by 0.874 units. This result is in line with Guy's (2011) research, which demonstrated that lending occurs in marketplaces where credit would not normally be extended thanks to information sharing. In fact, knowledge of previous defaulters causes people to fear social shame, underscoring the significance of moral hazards and adverse selection in financial markets.

Table 3. Regression Coefficients for the effect of Information asymmetry and Loan Portfolio Performance

Coefficients

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	.874	.184		4.755	.000
	Information asymmetry	.569	.067	.625	8.467	.000

a. Dependent Variable: Financial Performance

Furthermore, as shown by Michael, Vasanthi, et al. (2006), a growth in the portfolio of defaulted credit or delinquent loans might arise from a failure to capitalize on data about potential borrowers gathered from various sources. This oversight might have a negative impact on financial institutions' operational efficacy, profitability, liquidity, and solvency. Thus, information asymmetry is one of the primary causes of the high percentage of defaulted credit or delinquent loans. This view supported by Mwengei's (2013) research, which highlights how information asymmetry puts the banking sector at risk from defaulted credit or delinquent loans, hence impeding the sector's capacity to develop and survive. Finally, this study's findings corroborate Mullei's (2003) claim that access to credit data obtained from credit bureaus on borrowers' names, credit histories, bankruptcies, payment patterns, and most current credit checks is necessary for managing defaulted credit or delinquent loans and credit risk.

CONCLUSION AND POLICY PRESCRIPTION

On information asymmetry, credit bureau data provides a stable and reasonably priced means of exchanging information about the creditworthiness and repayment capacity of borrowers, improving credit availability, decreasing instances of repeated borrowing, excessive debt, and loan defaults, and giving financial institutions access to databases containing relevant information about their customers' borrowing patterns. It's also feasible to draw the conclusion that credit standards significantly affect how well Kenyan commercial banks perform with their loan portfolios.

To ensure access to relevant customer information, banks engage in loan monitoring where they receive information used to detect defaulted credit or delinquent loans, and loan follow-up was the cause of defaulted credit or delinquent loans in a few cases. In the end, information asymmetry, interest rates, and credit criteria together statistically substantially impact loan portfolios; criteria for offering credit having most influence, followed by interest rates, and information asymmetry in third place.

The study recommends implementing credit assessment criteria because it significantly influence how well loan portfolios function in Kenya's banking sector. This is due to the fact that credit reporting bureaus provide precise information data about borrowers' creditworthiness and loan repayment capacities, hence expanding the availability of credit. Furthermore, fewer cases of multiple lending, excessive debt, and loan delinquencies have been linked to the establishment of these firms. These credit bureaus also provide financial corporations access to databases that include critical data about consumer borrowing habits. As a proactive step, commercial banks should provide sufficient resources to loan supervision in order to reduce non-performing assets, expedite the loan monitoring procedure, and reduce default.

REFERENCES

Artigas, C. T. (2004). A review of credit registers and their use for Basel II Madrid, Spain: Bank of Spain.

Brown, M., Jappelli, T., & Pagano, M. (2007). *Information sharing and credit: Firm-level evidence from transition countries.* Working Paper No. 178. Centre for Studies in Economics and Finance – University of Salerno.

CBK (2010). *Bank supervision annual report 2009.* Nairobi, Kenya: Central Bank of Kenya.

Galindo, A. & Micco, A. (2010). *Information sharing and access to finance of SMEs*: Cross Country Evidence from Survey Data. *Working Papers No. 2010/06,* Documentos De Trabajo, Venezuela.

Grajzl, P. & Laptieva, N. (2011). *Information sharing and the volume of private credit in transition: evidence from Ukrainian bank-level panel data.* A paper presented at the conference of the International Finance and Banking Society in Rome.

Guy, K. (2011), Defaulted credit or delinquent loans. *The central bank of Barbados Economic Review,* 37(1) June. The Research and Economic Analysis Department, Central Bank of Barbados Bridgetown Barbados.

Jappelli, T. & Pagano, M. (2002). Information sharing, lending and defaults: cross-country evidence. *Journal of Banking & Finance,* 26, 2017–2045

Karumba & Wafula (2012). *Collateral Lending: Are there Alternatives for the Kenyan Banking Industry*? Kenya Bankers Association.

KithinJi, A. & Waweru, N. M. (2007). Merger Restructuring and Financial Performance of Commercial Banks in Kenya. *Economic, Management and Financial Markets Journal,* 2 (4), 9-39

Mafumbo Patrick W. (2020). Credit Management, Credit Policy and Financial Performance of Commercial Banks in Uganda. *International Journal of Business and Management Review Vol.8, No.5, pp.68-99.*

Mehrteab, T. H. (2005). *Adverse Selection and Moral Hazard in Group-Based Lending: Evidence from Eritrea*. Unpublished Thesis. University of Groningen.

Mwengei, K. B. (2013). Assessing the Factors contributing to non –performance loans in Kenyan banks. *European Journal of Business and Management,* 5(32), 155-162

Ngugi, R. W. (2001). *An empirical analysis of interest rate spread in Kenya-* African Economic Research Consortium, Research Paper 106, AERC.

Oloo, M. (2007). *Banking Survey.* Nairobi, Kenya: think business limited 27(2), 7-11.

Tumay, M. (2009). Asymmetric Information and Adverse Selection in Insurance Markets: The Problem of Moral Hazard. *Yönetim ve Ekonomi,* 16(1), 107-114.

Turan, G. & Koskija, A. (2014). Nonperforming loans in Albania. *Academic Journal of Interdisciplinary Studies,* 3(3), 491 – 500.

Wangai, D. K., Bosire, N. & Gathogo, G. (2012). Impact of Defaulted credit or delinquent loans on Financial Performance of Microfinance Banks in Kenya: A Survey of Microfinance Banks in Nakuru Town. *International Journal of Science and Research, 3 (3), 11 – 13.*

Warue, B. J. (2013). The effects of bank specific and macroeconomic factors on nonperforming loans in commercial banks in Kenya: a comparative panel data analysis. *Advances in Management & Applied Economics,* 3(2), 135-164.

Kaaya Indiael & Pastory Dickson (2013). Credit Risk and Commercial Banks Performance in Tanzania: A Panel Data Analysis. *Research Journal of Finance and Accounting*. 4(16), 2013.