CREDIT MANAGEMENT STRATEGIES AND SUSTAINABILITY OF DIGITAL LENDING APPLICATIONS IN KENYA

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ABSTRACT

The sustainability of the rapid emergence and uptake of Digital Lending Applications in Kenya is worrying; Majority of Digital Lending Applications in Kenya deal with personal loans which are unsecured and therefore lenders charge a higher interest rate because of the higher risk nature of their customers and thereafter use aggressive debt collection techniques, this have led to calls from the general public, policy-makers and the CBK for the regulation of Digital Lending Applications. If the current status continues where millions of Kenyans are listed with CRB it will be to the detriment of Digital Lending Applications investors who will lose their investments and it will eventually lead to closing down of Digital Lending Applications which will be a backward trend to the innovative and inclusive idea Digital Lending Applications bring to Kenyans in comparison to the traditional financial institutions. The main objective of this study was to look at the credit management strategies of Digital Lending Applications in Kenya and how they affect the sustainability of Digital Lending Applications in Kenya. This study employed descriptive research design techniques in collecting, analysing, interpreting and presenting the information. Descriptive research design showed the relationship between credit management strategies and sustainability of Digital Lending Applications in Kenya. The study's population was the Digital Lending Applications listed in the android software that are operating in Kenya. The study collected both primary and secondary data based on the objectives of the study. Data collection started by obtaining a letter from the Kenyatta University introducing the researcher to the lending firms. The letter was used to accompany the questionnaires and interview guides for data collection, the respondents were the loan appraisal officers, credit staff and accounting staff employed by the Digital Lending Applications in Kenya. The collected data was analysed using Statistical Package for Social Sciences (SPSS) and Microsoft excel programs, inferential statistics were applied, and multiple regressions employed to test the relationship between credit management strategies and sustainability of Digital Lending Applications in Kenya. Figures and tables were used to present the data. The study found that credit appraisal strategies positively and significantly influences sustainability of Digital Lending Applications in Kenya; pricing strategies positively and significantly influence sustainability and that debt collection strategies positively and significantly influence sustainability. The recommendation of the study is that Digital Lending Applications in Kenya should improve their client appraisal techniques to lower their non-performing loans. Having a well-performing loan portfolio will improvement their financial performance and hence their sustainability. Digital Lending Applications in Kenya have incurred loan losses through lenient standards of lending. The study thus recommends Digital Lending Applications in Kenya to improve the way they deal with risk accruing from credit by improving their credit risk controls; this can be done by having an updated assessment database with a profile of prospective and current borrowers and guarantors, it should show a of history

repayment patterns and cash flow records of the borrower. The database can be shared among financial institutions and other lending companies to be used during the credit appraisal process; this can improve the quality of their loan books.

INTRODUCTION

The emergence of financial institutions in the financial markets has provided savers and investors alike with an avenue to invest their resources and source of finance for investment respectively (Chan & Wong, 2015). Savings and Credit Cooperatives (SACCOs) form an integral part of the financial sector in all parts of the world. They offer intermediation services by providing a platform where individuals and institutions can save their money and investors access capital. However, in pursuit of their objectives, these SACCOs are exposed In empirical studies on financials, dividend policy has remained a topic of debate. There are theoretical models that have been developed to guide managers on the factors that ought to be considered in making decisions on dividend policy. The income of a firm is can be put into use by paying debts, acquiring securities, investing in operating assets and/or distributing to shareholders also known as dividends. There are a number of reasons whether a firm ought to pay or should not pay dividends. Dividends are important to the investors because they are a source of current income to the investor, it is helpful in maintaining shares market price and providing a clear certainty about the financial status of a company. Increased dividend payouts positively affect companies. Companies with a history of stable dividend payout are negatively impacted by lowering dividend distribution. Declaring new dividends is perceived favourable in comparison to not having any form of dividends (Gill, Biger & Tibrewala, 2010).

Recently there have been emphasis on the management's approach in sustainable thinking; Corporations are now focusing on adopting sustainability as an organizational strategy and making it an integral part of the firm's strategies for the purpose of maintaining profitability (Enquist et al., 2007; Epstein, 2008). When a company is sustainable it means that the business has put appropriate systems and processes to enable the business to continuously offer services to its customers. Various factors determine sustainability including; pricing, costs of funds, administrative overheads, loan losses or portfolio quality, and inflation. Controlling of these determinants varies and also is their significance (Khabeer, 2006).

The sustainability of the rapid emergence and uptake of Digital Lending Applications is worrying , consumer protection on these digital loans are still wanting and protection on borrowers are very few, evidence show that majority of the borrowers lack understanding on loan terms (McKee et al., 2015). Although evidence has shown that there is high consumer interest in loans, it is a challenge to get a precise measure on rates of demand globally. An example is that of M-Pewa operating in Tanzania which reported that in the first two years of its operations they advanced loans to a total of 4.9 million individuals (Aglionby, 2016).

Based on 2015 statistics in Kenya, 1 out of 5 individuals used M-shwari which is a product that offers credit (Cook & McKay, 2015). The loan amounts a relatively low with the average loan sizes been US$30–50 in both countries, despite the loan amounts varying and increasing with history of good repayment, repayment periods is always approximately 4 weeks (Hwang & Tellez-Merchan 2016).

Globally, management of credit is one of the crucial practices used by any company and any economic enterprise that deals with credit, irrespective of its business nature, will not overlook it. According to Myers and Brealey (2003) credit management refers to strategies and techniques embraced by companies in ensuring that they maintain maximum credit levels and also ensure its management is effective. The strategy used in credit management affect the process of identifying credit default which is responsible for high rates of defaulting, decreased cash flow, low levels of liquidity, decline in loan provision and financial distress. According to Scheufler (2002), a company is able to earn financial returns by having credit policies, standards and procedures for conducting appraisals. In Kenya, a study conducted by Mureithi (2010) in his research established that there are a number of reasons why an institution conducts credit appraisal and one of the reasons is that appraisal is used as a selection tool, is used in quantifying risk, aids in decision making, and also makes sure that the quality of business is good and that credit worthiness is excellent. Documentation process is important as it helps the lending firm in making a choice on whether or not to give credit and it is also important in cases of defaulting because the lender uses it in legal follow-up. In Kenya, the mandatory documentations required by the financial institutions under Know Your Customer (KYC) are; proof of physical address, valid passport, voter's card, electricity or water bill, a letter from employer, personal identification number or driving licenses, and in some cases introduction or verification of details by an existing customer.

Majority of Digital Lending Applications deal with personal loans that are unsecured and therefore lenders charge a higher interest rate because of the higher risk nature of their customers. In Kenya the interest rates charged by Digital Lending Applications are relatively higher in comparison to the interest rate charged by other financial institution. The bank's interest rate charged has been capped to 4 points above the rate by Central Bank and was therefore maintained at 9-10% (for a total of about 13–14% interest rate per annum) since the cap was instated (Central Bank of Kenya, 2016). On the other side of digital lending, Equity's Eazzy Loan charges an interest rate of 14.5 % with an addition of 1% as insurance fee; Safaricom's M-Shwari charges 7.5% interest per month; and KCB M-Pesa lends at an interest of 3.91% per month. Despite these type of loans charging high interest rates and helping customers who are experiencing liquidity constraints in their time of need (Karlan & Zinman 2010; Morse 2011), they also have negative effects which in the long run causes bankruptcy and over-indebtness (Skiba & Tobacman 2009), causing challenges in loan payments (Melzer 2011). According to a study by Microsave (2017), approximately 2.7 million individuals in Kenya had been listed in CRB in the three years prior to the study.

However in order to ensure efficiency in management of credit there are several policies that are put in place by institutions. Collection policy is one of them and is necessary since not all borrowers are punctual in repayment of their loans. There are borrowers who are non-payers

and others are slow in payers. Therefore, collection efforts are meant to accelerate collection from those payers who are slow and reduce losses from non-payers (Kariuki, 2010). Collection policies are meant to ensure collection is done regularly and is prompt. It is required to ensure that turnover for working capital is earned fast and also maintains bad debts and collection costs at its minimum. These policies need to clearly put across the procedures to be followed for collection. The procedures for fast dues need to be unambiguously established. Handling of slow payers should be tactful. However having clearly established collection policies, dealing of individual cases should be done based on their terms. There are those customers who are willing to pay their loan but their current situation cannot allow them. The only time these customers can be applied the policies is when they are out of their financial dilemma or it has been established that they do not intend to pay promptly (Pandey, 2010).

Statement of the Problem

The sustainability of the rapid emergence and uptake of Digital Lending Applications in Kenya is worrying, consumer protection on these digital loans are still wanting and protection on borrowers are very few, evidence show that majority of the borrowers lack understanding on loan terms (McKee et al., 2015). In Kenya, there is no data on performance of Digital Lending Applications mainly because providers of non-deposit taking service are unlicensed and not regulated by Central Bank of Kenya. This suggests that these lenders are not subjected to abiding by the 2016 law on interest rate caps which limited the rate of interest on credit to 4% above the reference rate by the CBK. However, there have been calls from the policy-makers and the CBK in the past few months lobbying for the regulation of Digital Lending Applications mostly because of the high interest rates they charge and the aggressive debt collection techniques they have been using.

Majority of digital lending applications deal with personal loans which are unsecured and therefore lenders charge a higher interest rate because of the higher risk nature of their customers. In Kenya the interest rates charged by Digital Lending Applications are relatively higher in comparison to the interest rate charged by other financial institution. The bank's interest rate charged has been capped to 4 points above the rate by Central Bank and was therefore maintained at 9-10% (for a total of about 13–14% interest rate per annum) since the cap was instated (Central Bank of Kenya, 2016). On the other side of digital lending, Equity's Eazzy Loan charges an interest rate of 14.5 % with an addition of 1% as insurance fee; Safaricom's M-Shwari charges 7.5% interest per month; and KCB M-Pesa lends at an interest of 3.91% per month. Despite these type of loans charging high interest rates and helping customers who are experiencing liquidity constraints in their time of need (Karlan & Zinman 2010; Morse 2011), they also have negative effects which in the long run causes bankruptcy and over-indebtness (Skiba & Tobacman 2009), causing challenges in loan payments (Melzer 2011). According to a study by Microsave (2017), approximately 2.7 million individuals in Kenya had been listed in CRB in the three years prior to the study.

It's worth noting that there is inadequate research on the link between credit management strategies and sustainability of Digital Lending Applications in Kenya. This research was aimed at establishing this relationship and bridging the knowledge gap by studying credit management strategies and sustainability of Digital Lending Applications in Kenya. If the current status continues where millions of Kenyans are listed with CRB it will be to the detriment of Digital Lending Applications investors who will lose their investments and it will eventually lead to closing down of Digital Lending Applications which will be a backward trend to the innovative and inclusive idea Digital Lending Applications bring to Kenyans in comparison to the traditional financial institutions.

Research Objective

The objective of the study is to investigate credit management strategies and sustainability of Digital Lending Applications in Kenya

LITERATURE REVIEW

Theoretical Review

Theories that are relevant to Digital Lending Applications are reviewed and discussed in this part of the research. The dynamic capabilities and the asymmetric information theories are reviewed and discussed in the context of credit management strategies and sustainability of Digital Lending Applications.

Dynamic Capabilities Theory

This theory was proposed by David Teece, Gary Pisano and Amy Shuen in 1997; they defined the theory and explained that a dynamic capability in a company is the company's ability in building, integrating, and reconfiguring both internal and external competencies with the aim of dealing with the rapid changes in the environment. Scott (2004) explained that the formal structures of a company can be significantly influenced by the environment more than pressure from the market it's operating in. The environment legitimizes those innovative structures that enhance technical efficiency of organizations considered to be early adopters. This therefore influences organizations, both new and existing to adopt these structures even if it won't result in enhanced efficiency. According to Zollo (2002), a collection of learnt and stable activity patterns are defined as dynamic capabilities and are what enables the company to generate and modify operating routines for the purpose of improving effectiveness.

This theory is of importance to this study since it emphasizes on company's ability in reengineering its activities as well as resources and redirecting its efforts in shaping the market in a manner that allows value creation and ensuring the company's sustainability. Corporations are now focusing on adopting sustainability as an organizational strategy and

making it an integral part of the firm's strategies for the purpose of maintaining profitability (Enquist et al., 2007; Epstein, 2008).

When a company is sustainable it means that the business has put appropriate systems and processes to enable the business to continuously offer services to its customers. Most of the time this requires modification, transformation or reconfiguration of systems as well as activities when need be for the purpose of completely revamping the activities of the company in order to ensure that a good fit is maintained (and in other cases transforming) the systems and the environment that the firm operates in. In this regard Digital Lending Applications are early adapting organizations which should take the opportunity to build, integrate and reconfigure their internal competencies or strengths (technology, systems and their unique lending procedures) to purposefully address the volatile lending market environment in Kenya, this will ensure that their companies achieve and sustain a competitive advantage over the existing financial institutions like Banks, MFIs and Savings and Credit Co-operatives as well as enable them to take advantage of the borderless expansion that technology offers.

Asymmetric Information Theory

The first proposition of this theory was in 1970 by Akerlof (1970). According to this theory, most of the time, there is no balance in information between buyers and sellers who in the case of this study is between lenders and borrowers. This simply means that one of the parties has better or more information than the other and therefore causing lack of balance in transaction power. Asymmetry in information causes moral hazard, monopoly of information and adverse selection; two economists were influential in developing and discussing solutions to the problems caused by information asymmetry.

During credit allocation, the failure of lenders to differentiate customers' level of credit risk causes adverse selection. When two projects are expected to give the same amount of returns, then the lender will select the one that is considered to be safer. During decision making is when the issue of adverse selection occurs and this is before loan disbursement. It has been established that customers who engage in risky ventures tend to hide the true nature of their projects and therefore takes advantage on the fact that the lender lacks compete information. During credit allocation, there is risk of moral hazard which occurs whenever creditor applies for funds for different reasons other than the ones they agreed with the lender who is therefore lacks information and control of borrowers. After conceding capital is when the risk of moral hazard occurs. Lastly, there is relationship between cost of monitoring and other costs that are hidden by borrowers, taking advantage of the information they have to declare a low income earning than the actual.

Asymmetric Information Theory is of relevance to this study since in the context of Digital Lending Applications, the borrowers have greater and better information regarding Digital Lending Applications as the information is easily accessible on the internet and also from the

experiences of other people who have borrowed before, on the other hand lenders have little or no information regarding the borrower.

Screening is one of the solutions proposed to overcome the problems that are brought about by information asymmetry , however Digital Lending Applications may find it hard to screen borrowers as it is not economical to devote resources to appraising and monitoring loans of small amounts considering also that the turn-around time for Digital Lending Applications is expected to be instant, the other challenge is that the loans applied for are for a shorter repayment period which means that the incomes earned from such loans are minimal to warranty a rigorous screening process and time commitment. This brings a tricky balance as information asymmetry is potentially detrimental to any business; it is of great importance that businesses know their customer, when a lender does not understand the borrower there is a high chance that the credit appraisal of prospective borrower won't be done accurately and it is therefore possible for Digital Lending Applications to advance loans to individuals with high risk of defaulting. Considering the fact that borrowers have more information on their financial position than the lender and therefore making it challenging for the lender to determine the probability for the borrower to default. In most instances, the lender will deal with this by focusing on borrowers past history and proof that their income is reliable. Nonetheless, the information obtained is limited. The resulting effect is that lenders will charge high interest rates to cover this risk. If reliable information existed, then banks would not be forced to charge for this risk.

Credit Management Strategy and Sustainability

Myers and Berkley (2013) explained that strategies for credit management are applied by organizations in making sure that company's credit levels are acceptable and its management is effective; they also explained that management of credit is part of financial management and comprises, analysis of credit, its classification and reporting. According to Basu and Rolfes (1995), proper and quality management of credit is important in ensuring any financial institution succeeds.

A study done by Mills and McCarthy (2014) focused on establishing credit accessibility and recovery and how technology influences the process. It was evident that small financial institutions and community lenders were more successful when they relied on underwritings that are more conservative such as employing experiences bankers, reviewing sales documents extensively, and considering borrowers collateral and cash flow. According to a research done by Vein, Niaz and Azimun (2015) on grading model for credit risk and performance of loans among commercial banks in Bangladesh, it was evident that the focus of most financial institutions has been on assessment of credit risk which is the first step in the process of loan appraisal; this was mainly because of increased levels of NPLs and stiff competition in the industry. In a study done on practices of managing credit and its effects on credit performance by Sufi and Qaisar (2015) it was evident that credit terms and appraisal of clients had significant effect on credit performance. It therefore suggests that financial institutions should embrace client appraisal if it intends to enhance its credit performance.

Mureithi (2010) in his research established that there are a number of reasons why an institution conducts credit appraisal and one of the reasons is that appraisal is used as a selection tool, is used in quantifying risk, aids in decision making, and also makes sure that the quality of business is good and that credit worthiness is excellent. In Kenya, a study conducted by Moti, Masinde, Sindani and Mugenda (2012) among MFIs sought to determine the effect of effectiveness of credit management systems on credit performance. It was evident that effective management of credit could only be achieved if the organization could manage effectively and intelligently credit lines of its clients. Any institution providing loans should be in a position to deal with the challenges brought about by NPLs and this is possible by having a deep insight on customers' history relating with credit scores, their financial strengths and change in patterns of payments (Moti et al., 2012).

In 2006, a study was conducted by Central Bank of Iraq (CBI, 2006) and sought to understand the process of credit. It was evident from the study that the credit process begins with extensively analysing borrowers' credit worthiness and their will and ability to repay back their loan. Furthermore, disbursement of loans needs to be done once the borrower has presented the required documents to the bank and has signed the agreement. The documents presented act as banks key protection after they have disbursed the loan. Before disbursing the loan, a loan agreement is signed by the financial institution and the borrower and is a legal document that binds the borrower and the lender.

Documentation process is important as it helps the lending firm in making a choice on whether or not to give credit and it is also important in cases of defaulting because the lender uses it in legal follow-up. In Kenya, the mandatory documentations required by the financial institutions under Know Your Customer (KYC) are; proof of physical address, valid passport, voter's card, electricity or water bill, a letter from employer, personal identification number or driving licenses, and in some cases introduction or verification of details by an existing customer.

Majority of digital lenders deal with personal loans that are unsecured and therefore lenders charge a higher interest rate because of the higher risk nature of their customers. However, Nakayiza (2013) indicated that there is lack of effectiveness in looking at the impact of interest rates increase and its effect to the loan repayment history and trends. Henrietta (2011) in his study on causes of non-repayment of loan in Ghana, concluded that the reason most customers are not ready to repay in time, is because of macroeconomic and bank related factors, for example, high inflation, trade and loan fee, time taken to do payment after application, time of repayment being too short and the credit being deficient to produce enough business.

Similar to traditional lending, digital credit provisions also apply incentives and punishment for the purpose of reducing moral hazard incentivizing repayments (Francis, Blumenstock & Robinson, 2017). For example, timely repayment of loans in these Applications raises once chance of getting access to a larger loan and most Applications discourage default by e.g. interfering with future loan access, automatically deducting outstanding amounts of loans

from savings in other mobile accounts linked to it, blacklisting of defaulters with bureaus responsible for credit and some even send messages to the borrowers phone contacts informing them that the borrower has defaulted on a loan and risks been listed with the CRB. Murunga (2017) suggests that loans that are mobile based should only be disbursed once the details of the borrower have been authenticated. Also, there is need to set limits on the maximum amount of money that can be borrowed and disbursed via mobile phone; by doing so, financial institutions will reduce the amount of NPLs they incur. Furthermore, there is need to closely monitor and evaluate digital lending for the purpose of ensuring that repayment is in agreement with the signed agreement. In addition, training of credit officers is crucial in ensuring that errors in handling orders are reduced.

Pricing Strategy and Sustainability

In the event that a monetary organization offers credit to a client, at that point the credit terms will determine the credit repayment period and the cost of credit. Credit repayment period is the time frame in which the credit is agreed. Cost of credit is the charges of offering loans to clients (Ross, Westerfield & Jordan, 2008). The length of the credit is impacted by various variables like the loan insurance approval. In the event that the insurance approved is low, the credit time frame is likely to be shorter. Credit terms influence the presentation in business banks. At the point when the terms are positive, at that point it implies that the credit will perform. Expecting that business bank has a strategy that is adaptable as far as advance reimbursement. This infers customers will have the option to reimburse the advance dissimilar to when they are given severe cut off times.

Along these lines, business banks ought to receive credit terms which will empower their clients to reimburse their advances oftentimes as concurred consequently causing the advance to perform. If commercial banks charge high interest rates, borrowers may take loans because of pressing needs at the moment but later may tend to default due to the high interest rate (Saunders & Cornett, 2007). Commercial banks thus should adopt interest rates which are favorable to the customers and to the institution itself.

Most of the time, loans by digital lenders is characterised by high interest rates and the borrower is required to provide their personal information including social media information before they are given the loan (Kaffenberger & Chege, 2016). According to Hoque et al. (2011), leverage lowers the level to which poor individuals can access loans this is mainly because it causes an increase in cost of capital and therefore the cost of borrowing goes up. The higher the cost of loans, the higher the default rates which in turn affect the growth of a lending institution.

In Kenya the interest rates charged by Digital Lending Applications are relatively higher in comparison to the interest rate charged by other financial institution. The bank's interest rate charged has been capped to 4 points above the rate by Central Bank and was therefore maintained at 9-10% (for a total of about 13–14% interest rate per annum) since the cap was instated in 2016 (Central Bank of Kenya). On the other side of digital lending, Equity's

Eazzy Loan charges an interest rate of 14.5 % with an addition of 1% as insurance fee; Safaricom's M-Shwari charges 7.5% interest per month; and KCB *M-Pesa* lends at an interest of 3.91% per month. The Digital Lending Applications e.g. Branch and Tala charges even more (Microsave, 2017). Despite these type of loans charging high interest rates and helping customers who are experiencing liquidity constraints in their time of need (Karlan & Zinman 2010; Morse 2011), they also have negative effects which in the long run causes bankruptcy and over-indebtness (Skiba & Tobacman 2009), causing challenges in loan payments (Melzer 2011). At the same time, consumer protection on these Digital Lending Applications are still wanting – protection on borrowers are very few and evidence show that majority of the borrowers lack understanding on loan terms (McKee et al 2015). According to a study by Microsave (2017), approximately 2.7 individuals in Kenya had been listed in CRB in the three years prior to the study.

According to Shankar's (2007) study conducted in India, the key factors driving transaction cost were workers remuneration, group size each worker was dealing with and the practice of collection. Manyumbu (2014) established that because of high gearing, the cost incurred by MFIs has been high and is approximated to be 36% to loan servicing which limits growth and also bad debt expense is high standing at 15% of overall cost ad therefore, conclusion drawn was that MFIs are susceptible and geared towards risks relating with interest rates. After assessment of feasible debt relations, debt cost and collaterals demanded, an increase in new debts case asking affects debt financing negatively (Oluyol, OLebe & Akbas, 2014). The microfinance institutions performance and growth is increased when the interest charged is low (Ahlin, Lin & Maio, 2011). Morduch (1999) revealed that MFI's usually charge high rates of interest in comparison to commercial banks and therefore affecting alleviation of poverty. Interest rates that are high often increases the risk of non-performing loans as mentioned by Hulme & Mosley (1996). However, Wangechi (2008) argued that the composition of interest rate should be optimal for borrower as well for the lending institution to cover its operations cost to survive and able to supply the funds in future.

Debt Collection Strategy and Sustainability

In order to ensure efficiency in management of credit there are several policies that are put in place by institutions. Collection policy is one of them and is necessary since not all borrowers are punctual in repayment of their loans. There are borrowers who are non-payers and others are slow in payers. Therefore, collection efforts are meant to accelerate collection from those payers who are slow and reduce losses from non-payers (Kariuki, 2010).

According to Bwonya-Wakuloba (2007), the most dangerous problem a micro credit program faces is repayment default and therefore digital lending firms should put in place a collection policy to ensure prompt and regular collection. Collection policies are meant to ensure collection is done regularly and is prompt. It is required to ensure that turnover for working capital is earned fast and also maintains bad debts and collection costs at its minimum. These policies need to clearly put across the procedures to be followed for collection. The

procedures for fast dues need to be unambiguously established. Handling of slow payers should be tactful.

Another policy is that of business and managements analysis. Aside from client appraisal, it is important to consider clients businesses' nature and quality of its management. Financial institutions should have an internal audit conducted on borrower's business to determine weakness in its management. Business structures that are over centralized and lack proper systems of management can fail in the long run. If the businesses nature is in constant fluctuation or its buyers are financially weak or are dependent on a few buyers, then it can be considered risky in advancing loan (Weston, 2006).
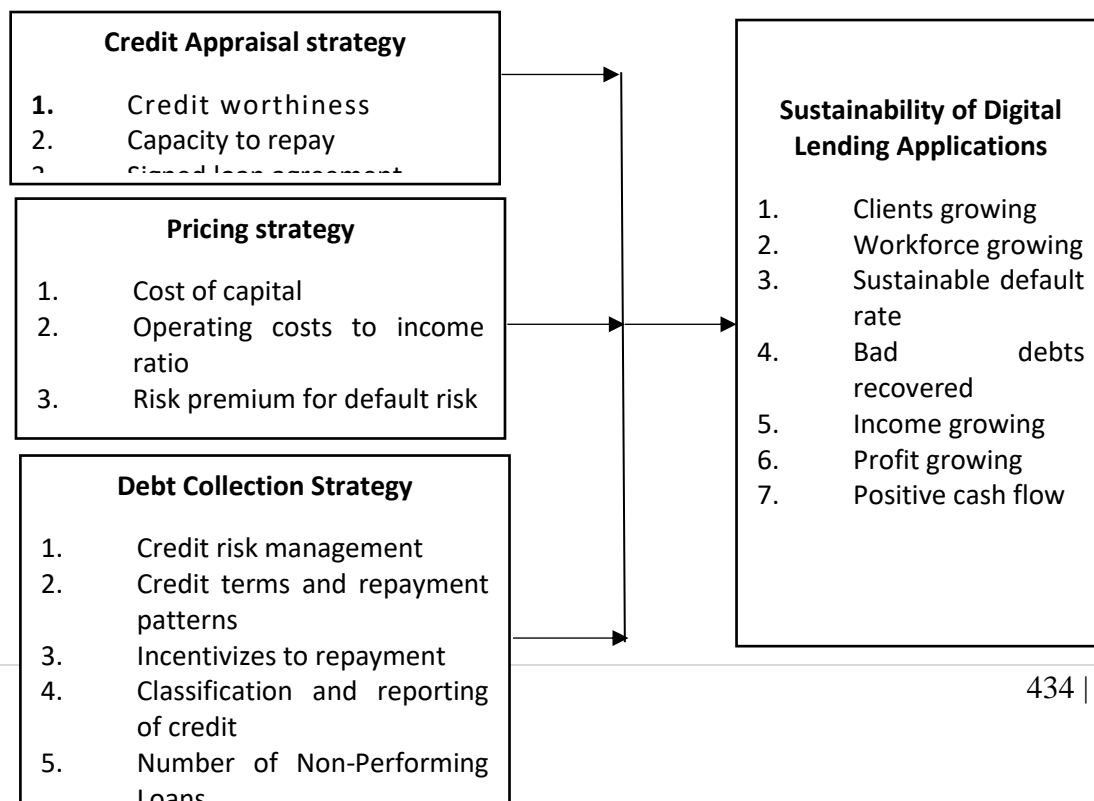
The credit limit should also be a serious policy which should be observed as per the customer's strength. The maximum amount of credit that a financial institution can offer at a particular time is termed as credit limit. It shows the level of risk the company is willing to take to extend the credit to the customer. At times, the customer may ask for the amount of credit in excess of his credit limit and credit period must be received periodically and only extended if returns are high as compared to costs involved in monitoring (Weston 2006). Scheufler (2002) emphasized that credits policies, standards and appraisal procedures enable firms to earn financial returns. Horne and Wachowicz (1998) went further to state that the only time credit is beneficial to a company is if the profit they get from increased sales is more than the added cost.

Despite having clearly established collection policies, dealing of individual cases should be done based on their terms. There are those customers who are willing to pay their loan but their current situation cannot allow them. The only time these customers can be applied the policies is when they are out of their financial dilemma or it has been established that they do not intend to pay promptly (Pandey, 2010).

Conceptual Framework

Independent Variables   **Dependent Variable**

Credit Appraisal strategy

1. Credit worthiness
2. Capacity to repay
3. Signed loan agreement

Pricing strategy

1. Cost of capital
2. Operating costs to income ratio
3. Risk premium for default risk

Debt Collection Strategy

1. Credit risk management
2. Credit terms and repayment patterns
3. Incentivizes to repayment
4. Classification and reporting of credit
5. Number of Non-Performing Loans

Sustainability of Digital Lending Applications

1. Clients growing
2. Workforce growing
3. Sustainable default rate
4. Bad debts recovered
5. Income growing
6. Profit growing
7. Positive cash flow

Source: Author (2020)

MATERIALS AND METHODOLOGY

Research Design

This study used a descriptive, cross -sectional research design. This research design wash chosen because it enabled the researcher collect large amount of information efficiently and economically using questionnaires. Lavrakas (2008) also explains research design as the overall plan for obtaining answers to the questions being studied for the handling some of the difficult encountered during the research process. This study adopted a descriptive research design; it is a scientific method that involves observation and description of behaviour of subject without influencing it in any way.

Target Population

The target population in this study was the 22 Digital Lending Applications in Kenya as listed in Google Applications store. The target respondents were 930 and comprised of managers, directors, loan appraisal officers, credit officers and accounting officers in these companies.

Sampling and Sample Size

This research used simple random sampling method to select respondents from each of the Digital Lending Applications in Kenya. For this study the sample size of 16% was taken from the employees of who are involved in the day to day core activities like loan appraisal & credit collection as well as the management team since they are involved in loan pricing decisions as well as strategic decisions with regards to company's model sustainability. Mugenda and Mugenda, (2003) noted that the target population is divided into homogeneous strata that enable the researcher to choose the most relevant strata geared toward the research objectives. Therefore, stratified random sampling was the most suitable method to be used in the selection of the respondents in each subgroup while simple random sampling was used to select respondents in the strata with the help of stratified sampling formula ($n_1 = n/N * N_1$)

Where;

n= Total Sample Size

N=Total Target Population

N_1= Target sample size per level

Table 1: Distribution of sample size

Digital Lending Applications Name	No. of Loan Appraisal Officers	No. of Credit Officers	No. of Accountants	Management Team	Total
Fuliza	21	17	11	3	**53**

Tala	10	10	6	2	**27**
Branch	12	11	6	2	**30**
Okash	1	0	0	1	**2**
Opesa	2	2	0	1	**5**
Stawika	0	1	0	1	**2**
UbaPesa	1	2	1	1	**5**
PesaZone Loans	1	1	0	1	**3**
GetBucks	5	4	3	1	**12**
Fadhili	1	0	0	1	**2**
Umba	1	0	0	1	**2**
Usawa	0	0	0	1	**1**
Total	**56**	**48**	**29**	**16**	**149**

Source: Author (2020)

Data Collection Instrument

This study used a questionnaire as the only data collection instrument, the questionnaire contained close ended questions. The questionnaires were administered by multiple approaches that include drop and pick later method and use of email to contact the respondents. To increase the response rate, a follow up was done by use of telephone calls.

Pilot Study

A pilot test was conducted to assess the questions' validity and the likely reliability of the data that was collected. In this study, pilot testing was done by administering nine (9) questionnaires to respondents who were not part of the study sample. Pilot testing helped in improve the questionnaire and to eliminate ambiguous questions.

Reliability of the Research Instrument

The research ensured accurate wording of each question to avoid leading respondents to answer in particular way. The measure was considered reliable if a person's score was similar if given the same test. The filled questionnaires were coded and the responses were inputted into SPSS to generate the reliability coefficient. The study used the most common internal consistency measure known as Cronbach's Alpha which was generated by SPSS. The acceptance value of 0.7 was used to cut off reliability of the study.

Validity of Research Instruments

The validity of this study was achieved by pre testing the instrument to identify and change any ambiguous, ineffective questions. The unclear questions were made clear and irrelevant questions were replaced or deleted, validity testing also helped to measure whether the questionnaire provides adequate coverage of the topic under study.

Data Analysis and Presentation

For this research, the questionnaire was use to gather data. After collecting the questionnaires from the respondents, data was examined and checked for completeness and thereafter responses were classified, coded and tabulated to analyse quantitative data. Data was analysed using SPSS and Ms excel. The data analysis mainly involved the use of descriptive analysis by using multi linear regression to determine the relationship between the dependent and independent variables. Multiple regression model was used to test the relationship between the dependent and independent variable. After analysis, data was presented using pie chart and tables. The purpose of the presentation was to highlight the results to make the data more illustrative.

The model was presented as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where:

Y = growth sustainability

β_0 = Constant Coefficient

X_1 = Credit appraisal strategies

X_2 = Interest rate on loans

X_3 = Debt collection strategies

ε = Random Error Term

RESEARCH FINDINGS AND DISCUSSION

Reliability Analysis

Reliability measures the degree to which the research instrument gave consistent results. The study used the most common internal consistency measure known as Cronbach's Alpha which was generated by SPSS. The acceptance value of 0.7 was used to cut off reliability of the study. Table 2 presents the findings obtained.

Table 2: Reliability Results

Scale	Number of Items	Cronbach's Alpha
Credit Appraisal strategy	5	0.761
Pricing strategy	4	0.794
Debt Collection Strategy	9	0.803
Overall reliability of the instrument		**0.786**

Source: Pilot test data (2020)

From the findings above, the variables were considered reliable because all of them had alpha values greater than 0.70 and were used for data collection as they are.

Response rate

Out of the 149 questionnaires issued to managers, directors, loan appraisal officers, credit officers and accounting officers of Digital Lending Applications in Kenya, the study was able to receive 123 questionnaires having been dully filled.

Table 3: Response Rate

Questionnaires	Frequency	Percent
Response	123	82.6
Non-Response	26	17.4
Total	**149**	**100.0**

As shown in Table 3, the returned questionnaires formed a response rate of 82.6%. As explained by Mugenda and Mugenda (2013), a response rate of 50% and above is adequate for analysis and reporting. He added that a response rate of 60% and above is good while that of 70% and above is excellent. Based on these assertions, our response rate was excellent and was used for further analysis and reporting.

Descriptive Analysis

In this section, the respondents were requested to indicate their level of agreement with various statements on Credit appraisal strategy, pricing strategy, debt collection strategy and sustainability. Using a 5-point Likert scale

Credit Appraisal Strategy

Respondents gave their level of agreement with various the statements on credit appraisal strategy. Table 4 presents the findings obtained.

Table 4: Descriptive Analysis for Credit Appraisal Strategy

	Mean	Std. dev.

	Mean	Std. dev.
Digital Lending Applications ensure that they have the necessary Know Your Customer(KYC) documents and they have the necessary records to track the borrower if they defaulted on the loan repayment	3.982	1.370
Digital Lending Applications examine the income or cash flows of borrowers to determine the capability to pay	3.889	1.381
Digital Lending Applications verify the credit history of prospective borrowers before advancing credit	3.777	1.275
Digital Lending Applications determine the appropriate loan limit to advance to each borrower	3.738	1.320
Digital Lending Applications ensure that borrowers understand the loan terms before advancing the loan	3.698	1.331
Aggregate	**3.817**	**1.335**

The study findings in Table 4 concurs with Mills and McCarthy (2014) that small financial institutions were more successful when they relied on underwritings that are more conservative such as employing experiences bankers, reviewing sales documents extensively, and considering borrowers collateral and cash flow. The focus of most financial institutions was on assessment of credit risk which is the first step in the process of loan appraisal; this was mainly because of increased levels of Non-Performing Loans and stiff competition in the industry. Therefore, credit appraisal strategy is used by Digital Lending Applications to improve their performance by mainly avoiding losses from non-performing loans and consequently ensuring their sustainability.

Pricing Strategy

Respondents gave their level of agreement with various the statements relating with pricing strategy. Table 5 presents the findings obtained.

Table 5: Descriptive Analysis for Pricing Strategy

	Mean	Std. dev.
Your organization consider the cost of capital before making a decision on the interest rate to charge borrowers before advancing the loans	3.948	1.263
Are the interest rates higher than necessary	3.915	1.343
The profit from loan interest income generate enough revenue to cover operating costs of the company	3.863	1.326
Interest rates charged on loans is enough to cover any collection costs in case of default by the borrower	3.836	1.220
Aggregate	**3.891**	**1.288**

The findings in Table 5 show that the aggregate mean value is 3.891 an indication that on average the respondents agreed with the statements on pricing strategy. Also, the standard deviation value was 1.288 which is a small (<2) suggesting that the responses did not deviate greatly from the man value. The study findings agree with Wangechi (2008) who argued that the composition of interest rate should be optimal for the borrower as well for the lending institution to cover its operations cost to survive and able to supply the funds in the future. As explained by Kaffenberger and Chege (2016), loans by digital lenders are characterized by high interest rates. These studies agree with study findings because Digital Lending Applications are more risky than the traditional financial institutions' and therefore they are keener when pricing their loans to ensure that all the potential risks and costs that may arise due to those risks are covered.

Debt Collection Strategy

Respondents gave their level of agreement with various the statements relating with debt collection strategy. Table 6 presents the findings obtained.

Table 6: Descriptive Analysis for Debt Collection Strategy

	Mean	Std. dev.
Borrowers repay within the agreed time	3.994	1.476
There is accurate and timely reporting	3.994	1.343
The non-performing loans are escalated to debt collectors or to CRB in good time	3.988	1.475
The company has a system that help to track payments, due loans, and overdue loans	3.961	1.476
The value of non-performing loans as a % of loan book has been reducing	3.961	1.674
The company has put in place strategies to predict payment patterns of repeat borrowers	3.955	1.546
Constant reminders are sent to the borrower with both the amount payable and the loan due dates	3.856	1.525
The company has put in place incentives to motivate timely loan repayments	3.836	1.426
Loan reports are able to flag over-due loans in good time and enable sending of timely reminders to borrowers	3.830	1.441
Aggregate	**3.931**	**1.487**

On average, the findings in Table 6 show that the aggregate mean is 3.931 an indication that on average, the respondents agreed with various statements on debt collection strategy. The standard deviation was 1.487 which is small, indicating that the responses provided did not

deviate significantly from the mean. The findings agree with Scheufler (2002) who emphasized that credits policies, standards and appraisal procedures enable firms to earn financial returns. This is why financial institutions including Digital Lending Applications have collection policies are meant to ensure collection is done regularly and is prompt. This has allowed the amount of non-performing loans to reduce and therefore the company is able to grow.

Sustainability

Respondents gave the level to which they agreed with the statements on sustainability. Table 7 presents the findings obtained.

Table 7: Descriptive Analysis for Sustainability

	Mean	Std. dev.
The clients have been growing at a stable rate	3.975	1.169
The company is able to repay its loans or the investors and pay its operating expenses on time without struggling	3.902	1.235
The number of employees have been increasing	3.902	1.235
The loan book has been growing	3.902	1.345
The recovery efforts are working and the borrowers who default are making an effort to pay	3.836	1.207
The default rate as a % of loan book has been reducing over time	3.830	1.300
The company's profit has been increasing	3.817	1.142
There is a good quality of repeat borrowers who have shown a record of timely repayment	3.764	1.168
Aggregate	**3.866**	**1.225**

The aggregate mean values as shown in Table 7 is 3.866 which suggests that on average, the respondents agreed with the statements on sustainability. The average value for standard deviation was 1.225, an indication that the responses did not deviate very much from the mean value. These findings suggest that the Digital Lending Applications are implementing effective credit management strategies which have enabled them to reduce non-performing loans and grow their companies over time. The study findings therefore agree with Ogboi and

Unuafe (2013) who established that sound credit risk management and capital adequacy has a positive effect on sustainability of Digital Lending Applications.

Multiple Regression Analysis

The study computed multiple regression analysis to investigate the influence of credit management strategies on sustainability of Digital Lending Applications in Kenya. The findings were presented in three tables presented and discussed in the subsections below.

Model Summary

The model summary is used to show the amount of variation in dependent variable that can be explained by changes in the independent variables. In this study, the amount of variation in sustainability of Digital Lending Applications in Kenya as a result of changes in debt collection strategy, pricing strategy, and credit appraisal strategy was sought.

Table 8: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.769[a]	.592	.582	.25327

a. Predictors: (Constant), Debt Collection Strategy, Pricing strategy, Credit Appraisal strategy

From the findings presented in Table 8, the value of adjusted R square is 0.582. This suggests that 58.2% variation in sustainability of Digital Lending Applications in Kenya can be explained by changes in debt collection strategy, pricing strategy, and credit appraisal strategy. The remaining 41.8% suggests that there are other factors that can be used to explain variation in sustainability of Digital Lending Applications in Kenya that were not discussed in this study. The findings also show that the independent variables (debt collection strategy, pricing strategy, and credit appraisal strategy) and the dependent variable (sustainability) are strongly and positively related as indicated by correlation coefficient value (R) of 0.769.

Analysis of Variance

Analysis of variance is used to show the significance of the model developed. In this study, the significance of the model was tested at 5% level of significance.

Table 1: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	11.072	3	3.691	57.535	.000[b]
1	Residual	7.633	119	.064		
	Total	18.705	122			

a. Dependent Variable: Sustainability

b. Predictors: (Constant), Debt Collection Strategy, Pricing strategy, Credit Appraisal strategy

From the findings in Table 9, the significance of the model was 0.000 which is less than the selected level of significance 0.05. This therefore suggests that the model was significant. The findings further show that the F-calculated value (57.535) was greater than the F-critical value ($F_{3,119}=2.681$); this suggests that the variables, debt collection strategy, pricing strategy, and credit appraisal strategy can be used to predict sustainability of Digital Lending Applications in Kenya.

Beta Coefficients of the Study Variables

The beta coefficients were fitted to the following modelled regression equation;
$Y= \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$
Where: **Y**= growth sustainability; **β_0**= Constant Coefficient; **X_1**= Credit appraisal strategies; **X_2**= Interest rate on loans; **X_3**= Debt collection strategies; **ε** = Random Error Term

Table 2: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.833	.267		3.117	.002
	Credit Appraisal strategy	.474	.066	.475	7.219	.000
	Pricing strategy	.323	.068	.302	4.739	.000
	Debt Collection Strategy	.218	.063	.245	3.468	.001

a. Dependent Variable: Sustainability

From the findings presented in Table 10, the following regression equation was fitted;
$Y= 0.833 + 0.474\ X_1 + 0.323\ X_2 + 0.218\ X_3 + \varepsilon$
From the equation above, it can be seen that when all the other variables (debt collection strategy, pricing strategy, and credit appraisal strategy) are held to a constant zero, sustainability will be at a constant value of 0.833.

The finding also show that credit appraisal strategy has significant influence on sustainability ($\beta=0.474$, p=0.000). The findings further showed that credit appraisal strategy has positive influence on sustainability. These findings suggest that credit appraisal strategy positively and significantly influence sustainability. Therefore, a unit increase in credit appraisal strategy will result in an increase in sustainability of Digital Lending Applications in Kenya by 0.474 units.

Pricing strategy is seen to have significant influence on sustainability (β=0.323, p=0.000). The findings further showed that pricing strategy has positive influence on sustainability. These findings suggest that pricing strategy positively and significantly influence sustainability. Therefore, a unit increase in pricing strategy will result in an increase in sustainability of Digital Lending Applications in Kenya by 0.323 units.

The findings finally showed that debt collection strategy has significant influence on sustainability (β=0.218, p=0.001). The findings further showed that debt collection strategy has positive influence on sustainability. These findings suggest that debt collection strategy positively and significantly influence sustainability. Therefore, a unit increase in debt collection strategy will result in an increase in sustainability of Digital Lending Applications in Kenya by 0.218 units.

CONCLUSION

The study found that credit appraisal strategy has significant influence on sustainability. The findings further showed that credit appraisal strategy has positive influence on sustainability. These findings suggest that credit appraisal strategy positively and significantly influence sustainability. Therefore, from the findings, the study concluded that a unit increase in credit appraisal strategy will result in an increase in sustainability of Digital Lending Applications in Kenya.

Pricing strategy was found to have significant influence on sustainability. The study further found that pricing strategy has positive influence on sustainability. These findings suggest that pricing strategy positively and significantly influence sustainability. From the study findings, the study concluded that a unit increase in pricing strategy will result in an increase in sustainability of Digital Lending Applications in Kenya.

The study finally found that debt collection strategy has significant influence on sustainability. The findings further found that debt collection strategy has positive influence on sustainability. These findings suggest that debt collection strategy positively and significantly influence sustainability. From these study findings, the study concluded that a unit increase in debt collection strategy will result in an increase in sustainability of Digital Lending Applications in Kenya.

RECOMMENDATIONS

The study recommends that Digital Lending Applications in Kenya should improve their client appraisal techniques to lower their non-performing loans. Having a well-performing loan portfolio will improvement their financial performance and hence their sustainability. Digital Lending Applications in Kenya have incurred loan losses through lenient standards of lending. Digital Lending Applications in Kenya should improve the way they deal with risk accruing from credit by improving their credit risk controls; this can be done by having an updated assessment database with a profile of prospective and current borrowers and guarantors, it should show a of history repayment patterns and cash flow records of the

borrower. The database can be shared among financial institutions and other lending companies to be used during the credit appraisal process; this can improve the quality of their loan books.

This study recommendations agree with studies done, the composition of interest rate should be optimal for the borrower as well for the lending institution to cover its operations cost to survive and able to supply the funds in the future. This study recommends that because of the risk nature digital lending the management of Digital Lending Applications should be keener when pricing their loans to ensure that all the potential risks are covered when pricing the loans. There is also need to keeping reviewing a borrowers repayment patterns, good borrowers who repay their loans on time should be given incentives by offering them lower interest rates in future to encourage good behaviour.

Digital Lending Applications should consider formulating a universal credit policy document in Kenya. Also, stringent policies should always be useful in regulating the whole process of loan application, loan appraisal issue and loan repayment. This will be adopted by Digital Lending Applications from which rating of their financial performance through credit risk management can be measured and regulated. The management of Digital Lending Applications in Kenya should also have collection policies that ensure clearly written procedures to be followed for debt collection. Digital Lending Applications in Kenya should also have an internal audit conducted on the borrower's business if that was the basis for the loan approval, to determine management weakness, this will also allow the lender to determine the businesses that are risky and how to deal with them when advancing credit in the future.

Suggestions for Further Studies

The focus of this study was to investigate credit management strategies and sustainability of Digital Lending Applications in Kenya. This study was limited to Digital Lending Applications in Kenya; the study thus recommends a study to be conducted among other credit lending institutions like MFIs and SACCOs in Kenya to find out if the findings are only limited to Digital Lending Applications . The study explained 58.2% variation in sustainability; the study thus recommends a study to be conducted on other factors that affect sustainability like credit risk control. Further study can also be done on the effectiveness of collection policies imposed by Digital Lending Applications in Kenya.

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