RELATIONSHIP BETWEEN CREDIT INFORMATION ON OUTSTANDING LOANS AND THE PERFORMANCE OF MICROFINANCE INSTITUTIONS IN KENYA.

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Abstract

When a financial institution evaluates a request for credit, it can either collect information from the applicant first hand or source this information from other lenders who have already dealt with the applicant. The objective of this study was to determine the effect of outstanding loans credit information on the performance of microfinance institutions in Kenya during a period when only negative information was being shared. The study adopted descriptive research design. The population of study was 54 from which a census was carried out hence no sampling was done. Results of tests for normality confirmed that data employed in analysis was normally distributed. Descriptive statistics and regression analyses were used to analyze data. The study established that outstanding loans affect the performance of microfinance institutions in Kenya. The study recommended the need to encourage all stakeholders to support this important activity.

1.1 Introduction

All over the developing world, Microfinance institutions have been increasingly trying to share more information about their clients' performance as a discipline device, but little is known about the consequences of such decisions. Previous developments in the theoretical and empirical literature have usually focused on the average effects of symmetric and universal increases in the information available to all lenders (Louto, 2007).

Empirical cross-country evidence suggests that information sharing is associated with broader credit markets and the alleviation of credit constraints (Jappelli and Pagano (2002), Love and Mylenko (2003), and Galindo and Miller (2001)). In addition, theoretical research on developed credit markets Padilla and Pagano (2000) and Vercammen (1995) suggests that exchanging detailed information on outstanding debt or client characteristics can dilute the clarity of default as a negative signal, possibly increasing default rates. In contrast, the few theoretical (McIntosh and Wydick (2007)) and empirical studies (Luoto et. al. (2007) available on microfinance markets suggest that the use of credit bureaus should reduce default rates.

1.1.1 Outstanding loans Credit Information

Jappelli and Pagano (2002) provide an initial empirical investigation of the existence and impacts of credit bureaus in various economies around the world. They find that the presence of credit information systems is associated with broader credit markets and lower credit risk. McIntosh and Wydick (2004) indicate that credit information systems first create a screening effect that improves risk assessment of loan applicants, thereby raising portfolio quality, which in turn reduces rates of arrears. Second, their very existence creates an incentive effect that may deter negligent borrower behavior as information about borrower behavior is shared among lenders. Some borrowers who are on the margin of misusing borrowed capital may be dissuaded from doing so if they sufficiently value future access to loans. In a competitive credit market, these efficiencies are passed on to borrowers in the form of a lower cost of capital. Improved informational flows thus enhance the

efficiency and stability of the entire financial system. Yet because of the public good characteristics of credit information systems, their natural emergence in the credit market is not always guaranteed. Consequently, the breadth, depth and general efficiency of credit information systems vary greatly between countries. Credit reporting, at some level, is a critical part of the financial system in most developed economies; in developing countries it is often much weaker if not altogether absent. This is because in a zero-information-sharing environment, repayment discipline in credit transactions typically happens via the oft-repeated transactions between a borrower and a single familiar lender in less-developed countries (LDCs). However, because borrowers often lack the ability to send signals of their creditworthiness to the entire pool of potential lenders in LDCs, they are more susceptible to borrowing terms being dictated by a solitary lender with whom they have had a past borrowing relationship. In this way informational flows between lenders can paradoxically shift market power to borrowers.

The most basic level of information-sharing between lenders involves sharing only negative information, such as borrower defaults and arrears. The simple creation of a public "black list" produces both screening and incentive effects, mitigating both adverse selection and moral hazard problems in the credit market. The existence of the blacklist helps lenders to avoid risky borrowers, and the fact that borrowers want to avoid being on the black list improves repayment incentives for borrowers who make it into the lending portfolio.

The most advanced information-sharing arrangements, however, include positive borrower data in addition to the negative data. Positive data, or a "white list", may include the debtor's overall loan exposure and guarantees, data from past credit history other than defaults and arrears, and debtor characteristics such as employment, income or line of business (Jappelli and Pagano 2000). The sharing of positive information allows for the debtor to create vital "reputation collateral" often in the form of a credit score, which can provide valuable information to the credit market, and signal a borrower's individual credit worthiness to a large pool of lenders. As demonstrated in McIntosh and Wydick (2005), the sharing of positive information helps to mitigate borrower over-indebtedness, lower default rates in the overall credit market, and (in competition) to reduce equilibrium interest rates.

Bustelo (2009) in a study on integrating microfinance to credit information sharing in Bolivia found out that the new private credit bureau greatly improved lending operations particularly for MFIs. With the new bureau, lenders could verify the overall indebtedness of a customer before extending credit. The over-lending that had a crisis could be avoided. Now MFIs can perform systematic risk assessments of potential borrowers. This tool offered loan officers the opportunity to make immediate decisions, saving time and costs while improving customer service.

Borrowers' previous payments history is a powerful predictor of future payment behavior. Accessing the credit bureau's information helped lenders keep default rates very low. In 2008, non-performing loans represented less than 1.8% of microfinance loans' overall portfolio. At the same time, the default rate for commercial loans was three times higher. Sharing credit information allowed microfinance lenders to grow with good customers, avoiding systematic defaulters. This kind of growth is sustainable for lenders and borrowers and it's also significant. From 2005 to 2008, the number of individuals receiving microfinance loans more than doubled, reaching close to 2 million borrowers. That micro-lending growth spurt outpaced the 23% increase seen by regulated institutions over the same period. In the meantime, the percentage of non-performing loans for the whole banking system fell over time to just 5.7% in 2008, showing a good performance of the system. From the government's perspective, the public registry can use the bureau's information to better assess the level of lending in the economy. It can also monitor with more detail the level of

lending to vulnerable sectors of the economy. Non-banking institutions account for about 20% of the country's total loans, but they have close to 80% of all customers because microfinance loans are small. With such small numbers at stake, microfinance credit does not represent a significant systemic risk for the financial system, but its reach is such that any problem in this sector can have big social and political consequences (Bustelo, 2009).

Information sharing between lenders reveals borrowers' debt exposure to all participating lenders, eventually reducing aggregate indebtedness as highly indebted individuals receive less credit (Bennardo, Pagano and Piccolo 2009). The presence of a credit registry reduces the information monopoly of a lender on its borrowers, thus reducing the extra rents that lenders can charge their clients.

Credit markets present asymmetric information problems. Lenders know neither the past behavior and the characteristics, nor the intentions of credit applicants. This creates a moral hazard problem that causes lenders to make credit decisions based on the average characteristics of borrowers rather than on individual characteristics (Chen, 2010). Moral hazard implies a lower average probability of payment, making credit more expensive. Higher interest rates exacerbate another informational problem, adverse selection, because only higher risk borrowers are willing to accept loans at high interest rates (Kipyegon, 2011). Matthews and Thompson, (2008) argue that the idea underlying information sharing it that "the best predictor of future behaviour is past behaviour". In practice, it is an arrangement by which lenders contribute information about their customers to a common pool, which is accessible to all lenders that contribute. This is the work of credit bureaus (Brown, Jappelli & Pagano, 2006). This creates an imbalance of power in transactions which can sometimes cause the transactions to go awry, a kind of market failure in the worst case (Yun, 2009.Consequently information asymmetry should affect the acquisition and use of bank lines since short term credit is a primary external source of firm liquidity (Faulkender & Petersen, 2006).

Evidence on the impact that credit information institutions have on over-indebtedness is less prevalent, although some evidence does exist. For instance, another finding of the study by Brown and Zehnder (2007) was that an information sharing institution helped lenders avoid serious losses from short term borrowers. The study by Madrid and Minetti (2009) demonstrated that, after establishing a credit bureau, lenders were more likely to issue smaller and shorter-term loans and to require more guarantees. This could, indirectly, provide evidence that sharing information allows lenders to see the entire indebtedness of their borrowers. In cases where this is high, it could reduce overall indebtedness.

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1.2   RESEARCH METHODOLOGY

This study adopted the descriptive research design. It involves describing the current situation of a phenomenon (Saunders *et al.,* 2007).In this case it involved gathering of data to determine the relationship between clients outstanding loans credit information and the performance of taking microfinance institutions in Kenya by considering the performance before and after the credit information sharing. The population of this study was comprised of 54 credit managers from microfinance institutions which participate in credit information sharing in Kenya. A census was carried out hence no sampling was done.

A pilot study was done to access the capability of the research instruments to collect the required data for the research (Bryman & Bell, 2003). Zikmund (2010) stresses the importance of pre-testing the questionnaire. The pilot testing helped in identifying and rectifying weaknesses in the questionnaire before the actual research was carried out using 4 credit managers from microfinance banks because they share quite a number of characteristics with the deposit taking microfinance institutions. Mugenda and Mugenda (1999) observes that a successful pilot study uses 1% to 10% of the actual sample size.

Validity is the degree to which a questionnaire captures information that reflects reality (Howard, 2008). The focus here is not necessarily on scores or items, but rather inferences made from the instrument. It involved a focus on content validity, construct validity, and criterion validity. Content validity considered whether or not the items on a given test accurately reflect the theoretical domain of the construct it claims to measure. This was measured through seeking of expert opinion on whether the instrument is appropriate. The construct validity of a measure is directly concerned with the theoretical relationship of a variable to other variables. This was ascertained by clearly defining the variable being measured, formulating the hypothesis based on theory underlying a variable and then testing the hypothesis logically and empirically. Criterion validity refers to the ability to draw accurate inferences from the existence of a current condition. It was measured as a coefficient of correlation between test scores and another of known validity (Howard, 2008).

1.3 Results and Discussion
1.3.1 Correlation results for borrower's current loans and performance

Pearson correlation coefficient was used to determine whether there is a relationship that exists between borrower's current loans and performance. A correlation analysis as shown in table 1.1 shows that (r=-0.288, α=0.05) .This shows that there is a negative relationship between borrowers current loans and performance. When the consumer applies for a loan from the bank, each additional amount he borrows reduces the probability of repayment of the capital and interest to the credit card company. Thus, the consumer's expected repayment per shilling of debt is a decreasing function of his total debt and he has the incentive to over-borrow. Anticipating this moral hazard, both lenders will ration the amount of credit supplied and/or require a higher interest rate, or even deny credit unless assisted by collateral or covenants restricting total debt. This moral hazard problem disappears if the bank and the credit card company agree to reveal to each other the magnitude of the credit extended to the client. So, when lenders share information about outstanding loans they can be expected to increase the supply of lending and/or improve the interest rates offered to credit borrowers (Pagano, 2010)

A complementary response to the problem of asymmetric information is through mechanisms that allow lenders to discover the repayment potential of lenders. This is done through credit bureaus or credit registries where the borrowing and payment history of lenders is recorded. This mechanism creates a different form of collateral -reputation collateral- that can be used to screen potential borrowers when granting loans. Based on credit histories or on other type of reputation collateral a borrower can gain access to credit. It is a common policy among banks to grant credit to new individuals only after they can observe their cash flows. The same principle applies to the clients of other banks. Accumulated information on credit histories, collateral or current debt exposure can be shared among lenders, reducing asymmetries and improving efficiency in the allocation of resources. The role of credit bureaus is to collect, to distribute, and often to analyze information on

a borrower's behavior from a variety of sources, for creditors to screen potential clients (Galindo, 2010)

Table 1.1: Correlation results for borrower's current loans and performance

Correlations			
		Performance	Gross Outstanding Loans
Pearson Correlation	Performance	1.000	-.228
	Gross Outstanding Loans	-.228	1.000
Sig. (1-tailed)	Performance	.	.060
	Gross Outstanding Loans	.060	.
N	Performance	48	48
	Gross Outstanding Loans	48	48

1.3.2: Regression Results of Borrowers Current Loans on performance of Microfinance institutions

$H_0:\mu_{1=}\mu_2$ Borrower`s current loans information has no effect on the performance of deposit taking microfinance institutions in Kenya

Table 1.2 presents the regression model on borrower`s current loans on performance of Microfinance institutions. As presented in the table, the coefficient of determination R square is 0.052 and at 0.05 significance level. The means that 5.2 % of the variation on Microfinance institutions performance is influenced by borrower`s current loans. This finding is similar to Bustelo (2009) in a study on integrating microfinance to credit information sharing in Bolivia found out that the new private credit bureau greatly improved lending operations particularly for MFIs. With the new bureau, lenders could verify the overall indebtedness of a customer before extending credit.

In practice, credit seekers may apply simultaneously for credit from several lenders and often manage to get loans and lines of credit from more than one. Jappelli and Pagano (2000) note that maintaining multiple bank relationships have several advantages from the standpoint of a borrower. First, it may help reduce the cost of credit by forcing the various providers of credit to compete. Second, each of the lenders will have to bear a smaller amount of risk, and therefore, will require a lower risk premium in the interest it charges. Third, being able to get credit from multiple lenders insures the borrower against the risk that any of the lenders may suddenly call back their loan or withdraw their line of credit. Multiple bank relationships have also costs; they discourage each bank from monitoring the borrower closely, lest other borrowers free - ride on its monitoring effort, and prevent the inter-temporal sharing of rent surplus that would be possible within an exclusive bank - firm relationship.

The cost of multiple lending relationships escalate if each potential lender has no clear information about how much credit the borrower has already obtained or will be able to obtain from other lenders. A borrower's default risk, from the viewpoint of a given lender, depends on the overall indebtedness of the borrower when their obligation towards that lender will mature. If this information is unavailable to the lender, the borrower has the incentive to over - borrow.

Anticipating this moral hazard, lenders will ration the amount of credit supplied and/or require a higher interest rate, or even deny all credit unless assisted by collateral or by covenants restricting

total debt (Jappelli & Pagano, 2000). A lender is not only threatened by the borrower's prior debt commitments, but also by those that he may contract in the future, as shown by Bizer and Peter (1992). The available evidence, summarized by Ongena and Smith (1998), suggests that the number of bank relationships has a negative impact on the availability of credit, whereas it is ambiguous regarding its impact on interest rates.

This particular form of moral hazard is eliminated if lenders agree to reveal to each other the magnitude of the loans and lines of credit that they have extended to each client. This suggests that when lenders share information about outstanding loans, they can be expected to increase thesupply of lending and/or improve the interest rates offered to credit seekers. Borrowers will, therefore, prefer those lenders to those that do not agree to communicate to each other such information. This explains why banks may want to pool data about the amount lent to each of their clients. Bernardo, Pagano and Piccolo (2007) show that the danger of over - lending that stems from this uncertainty may result in inefficiently scarce credit. Insofar as it makes lending safer, information sharing about debt exposure can raise investment and welfare (Brown et al. 2007).

The models mentioned so far not only highlight different channels through which information sharing affects the credit market, but also show that by exchanging different types of information, lenders may control different informational problems.

Table 1.2 Regression model summary for borrower`s current loans

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.228[a]	.052	.031	.04218	.052	2.520	1	46	.119

a. Predictors: (Constant), Borrower Current loans

1.3.3 Coefficient for Outstanding Loans

The study further determined the beta coefficients of repayment history on performance of Microfinance institutions. Table 1.3 shows that the relationship between borrowers current loans and performance of Microfinance institutions is negative since the coefficient of repayment history is -0.228 which is less than zero. The t-statistics is -1.588 which is also negative. This demonstrates that a single unit change in information about borrower's current loans causes performance to decrease by 1.588 units. This finding is similar to Brown and Zehnder (2007) who found out that found out that information sharing helps lenders avoid serious losses from short term borrowers. The study by Madrid and Minetti (2009) demonstrated that, after establishing a credit bureau, lenders were more likely to issue smaller and shorter-term loans and to require more guarantees. This could, indirectly, provide evidence that sharing information allows lenders to see the entire indebtedness of their borrowers.

Table 1.3 Coefficient for Borrower`s Current Loans

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.359	.008		43.838	.000
	Gross Outstanding Loans	-2.685E-011	.000	-.228	-1.588	.119

a. Dependent Variable: Performance of Microfinance institutions

1.3 CONCLUSIONS AND RECOMMENDATIONS

With the new bureau, lenders could verify the overall indebtedness of a customer before extending credit. The over-lending that had a crisis could be avoided. Now MFIs can perform systematic risk assessments of potential borrowers. This tool offered loan officers the opportunity to make immediate decisions, saving time and costs while improving customer service

Credit information sharing provides a scenario that mitigates adverse selection, an incentive effect that mitigates moral hazard and a credit expansion effect that causes higher default rates from larger loans. There is therefore need for all stakeholders to support this worthy initiative so as to realize the benefits of credit information sharing.

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