The Effect of Credit Reference Bureau Information Sharing on Credit Assessment in Financial Institutions in Uganda

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Abstract

The purpose of the study was to investigate the effect of Credit Reference Bureau (CRB) information sharing on credit assessment in financial institutions in Uganda. The objectives of the study were to examine the effect of financial information on credit assessment in financial Institutions in Uganda, and to examine the effect of non-financial information on credit assessment in financial Institutions in Uganda. The study adopted a descriptive survey design on 33 regulated financial institutions in Uganda (Bank of Uganda, 2015) with a sample size of 30 respondents selected using both purposive sampling and census. The study found that financial information on credit reports by financial institutions were significantly used during credit assessment just like the non-financial information. The study recommended that stakeholders need to work together to continually ensure that CRB information shared is relevant, accurate, reliable, accessible and secure because the information will affect significantly the credit assessment decisions. Furthermore, financial institutions, central bank and CRB service providers need to continuously develop financial literacy programmes for the public so that the public can understand the importance and use of the CRB information since it plays a crucial role in the financial sector. The study further recommends that there is need to revise and enact laws and put in place enabling regulations to broaden the scope of CRB information to include more financial stakeholders as evidenced in other countries according to IFC.

Keywords: Credit Reference Bureau, Information Sharing, Credit Assessment, Financial Institutions

Introduction

According to the World Bank (2011), credit reporting systems are a critical element of a country's financial infrastructure and are essential in facilitating access to financial services. Before 2008, many banks in Uganda experienced situations of multiple borrowing across banks and even among branches within the same bank. This situation easily went unnoticed due to the different identifiers and lack of a common National Identity Number, or other unique ways of identifying individual borrowers. Currently, financial institutions are able to grant credit to borrowers by first referring to Credit Reference Bureau (CRB) reports to know the borrowers'credit status, whether they have serviced other loans and what collateral has been encumbered. This facilitates the lenders' estimation of their exposure in case a loan is approved. The bureau has over one million FCS card numbers that have been issued and two million accounts with active loan balances each month (Malan, 2015). The bureau has a historical database of five years of data, currently in excess of sixty million account records showing how good and not so good borrowers repay their debt (Malan, 2015).

The concept of introducing Credit Reference Bureau services was to improve on loan performance through lenders being availed more information across the market to improve

their credit assessment decisions (Compuscan, 2008). Unfortunately, since 2008 when the Credit Reference Bureau services were introduced in Uganda, the percentage of non-performing loans to the total loan portfolio in financial institutions indicates mixed results (Bank of Uganda, 2014). The percentage of non-performing loans to the total loan portfolio in financial institutions indicated a reduction of 1.1% in the period from 2009 to 2011 and an increase of 3.6% from 2011 to 2014 leading to a net increase of 2.5% between 2009 and 2014 (Bank of Uganda, 2014). The declining portfolio quality represented an increase in non-performing loans and bad debts possibly due to gaps in the credit assessment process contrary to the goal of introducing CRB services. The hope was that the CRB services would reduce the information asymmetry about the character, capacity and capital of borrowers during credit assessment and eventually lower non-performing and bad debts among the financial institutions. There is therefore need to critically examine the effect of the CRB information sharing on credit assessment in financial Institutions in Uganda so as to arrive at recommendations for improving the effectiveness of use of the CRB information in credit appraisal. We discuss and draw policy implications, and highlight research limitations.

Literature Review

Theoretical Review

Information sharing can help financial institutions and their potential borrowers to overcome the problem of information asymmetry. The inability to differentiate between a good and a bad borrower leads to an information gap. If this information gap is not overcome, lenders might ration credits (Stiglitz & Weiss, 1981) and extract informational rents (Padilla & Pagano, 2000), while borrowers might apply for multiple credits without the knowledge of the lenders (McIntosh, Sadoulet, & Janvry, 2006). To overcome such exemplary problems resulting from information asymmetry, financial institutions (principals) need to align the interests of their borrowers (agents) with their own interests. As Legerwood (1999) observes, financial institutions can ask for physical collateral, frequent loan payments, compulsory savings, guarantees or even threatening their borrowers with public embarrassment and legal action to make sure every borrower is fully motivated to pay back their credit. These may help the financial institutions to lower their risk exposure while extending loans; but unfortunately may also be both cumbersome and detrimental to borrowing, which calls for alternative strategies such as the non-physical collateral of information sharing through the CRB.

The non-physical collateral, information sharing via a credit bureau or a credit registry can play a close substitute to the physical alternative. Lenders can share data on a borrower's default history or even exchange default data (black information), along with information about the characteristics of a borrower (white information) with other lenders (Ledgerwood, Earne, & Nelson, 2013). By so doing, lenders create incentives for borrowers to put in enough effort to improve the probability of a successful investment so that they are able to pay back their loans. In case a borrower defaults, they are likely to be excluded from future credit (Morduch & Armendáriz, 2005). According to Padilla and Pagano (2000), information sharing eliminates the informational gaps and reduces cost of generating information. The availability of CRB information can also facilitate lender trade-off. If the borrowers fail to receive the lowest

possible interest rate, they can threaten to borrow from another lender. This is subject to the sharing of both black and white information, which theoretically eliminates any information asymmetry. Indeed, Pagano and Jappelli (1993) show that information sharing reduces adverse selection by improving banks' information on credit applicants. In their mode of doing business, each institution has private information about local credit applicants, but has no information about foreign applicants. If they exchange information about their clients' credit worth, they can assess the quality of foreign credit applicants and lend to them as carefully as they lend to local customers. By reducing information asymmetry between lenders and borrowers, credit registries allow loans to be extended to safe borrowers who had previously been priced out of the market, resulting in higher aggregate lending.

When banks exchange credit information about borrowers' behavior, the increase in lending to good credit borrowers may fail to compensate for an eventual reduction in lending to risky types, thereby reducing adverse selection problem signals. The adverse selection problem is a satiation where, when lenders cannot distinguish between good and bad borrowers, all borrowers are charged a normal interest rate that reflects their pooled experience. If this rate is higher than worthy borrowers deserve, it will push some good borrowers out of the borrowing market, which in turn forces banks to charge even higher rates to the remaining borrowers.

Through sharing of the credit information, the lender is able to distinguish bad borrowers from good borrowers in the market. Good borrowers with low risk would be given more attractive prices, stimulating credit demand, and fewer higher-risk borrowers would be rationed out of the market because of lenders' inability to offer these borrowers accommodating rates (Barron and Staten, 2008). If banks exchange credit information on defaults, borrowers are encouraged to apply more energy in their projects to ensure smooth payment of their loans. Non-payment is a sign of bad quality for outside banks and carries the penalty of higher interest rates or no future access to credit facility and a high chance of default (Padilla and Pagano, 2000).

The exchange of information between banks may also reduce the informational rents that banks can extract from their clients within lending relationships, as shown by Padilla and Pagano (1997) in the context of a two-period model where banks have private information about their borrowers. This informational advantage confers to banks some market power over their customers and generates a hold-up problem, anticipating that banks will charge predatory rates in the future, borrowers exert low effort to perform, resulting in high interest rates, default and possibly market collapse. If banks commit themselves to exchange information about borrowers' behavior, they restrain their own future ability to extract informational rents, leaving a larger portion of the surplus to entrepreneurs. As a result, these will invest greater effort in their project, resulting in a lower default probability, lower interest rates and greater lending relative to the regime without information sharing.

The moral hazard problem implies that a borrower has the incentive to default unless there are consequences for his/her future applications for credit. This results from the difficulty lenders have in assessing the level of wealth borrowers will have accumulated by the date of repayment and not at the moment of application. If lenders cannot assess the borrowers' wealth, the latter will be tempted to default on the borrowing. To forestall this, the lender

will increase rates, leading eventually to the breakdown of the market (Kwambai & Wandera, 2013). Financial institutions can tackle this incentive problem by committing to sharing their proprietary information about borrowers' quality. On the expectation that this information pooling will promote competition among lenders, borrowers will be reassured that no hold up will be possible and will step up their effort, lowering delinquency rates (Padilla and Pagano 2000). In this case, a high-quality borrower knows that anyway his/her high quality will be disclosed to lenders, regardless of whether his credit history is good or bad.

Financial Information and Credit Assessment

Financial information is used in determining financial indicators obtained as relations between relevant categories of the figures in the financial statements. Financial indicators have a great analytical importance in assessing the financial structure and financial standing of a potential debtor. By comparing the values of these financial indicators with the desired values, a clear picture is obtained of the loan applicant's capacity, possibilities of the loan repayment and justification of the loan application in general. The most commonly used categories of financial indicators include liquidity indicators, indebtedness indicators, activity indicators, profitability indicators and cost-efficiency indicators (Romana & Milivoje , 2011). In terms of loan applications, financial institutions may have to review the current loan balance from the CRB report. Current loan balance on a credit report is the sum of all open balances across all open accounts (Compuscan, 2008). Interest expense on these loans payable is another factor that financial institutions consider when assessing the financial statements of an entity before awarding credit. The financial institution will review this financial information in an attempt to determine the ability of the applicant to make the loan payments and hence the risk exposure for the bank (Horngren, Harrison , & Oliver, 2012). In terms of liquidity, an entity's most liquid assets (those that can be easily converted to cash) are compared with its short-term liabilities. The greater the coverage of liquid assets to short-term liabilities, the better as it is a signal that the entity can pay its debts that are coming due in the near future and still fund its ongoing operations. An entity with a low coverage rate should raise a red flag as it may be a sign that the company will have difficulty meeting its operations and obligations (Romana & Milivoje, 2011).

The other area critical to the assessment is the arrears amount. Arrears amount on a credit report is the sum of all arrears across all open accounts (Compuscan, 2008). An entity is in arrears when it is late in paying the money it owes (University of Oxford, 2010). Arrears amount helps in determining how the person is paying his obligations and therefore aid in partially judging the person's character. Persons lacking character are assigned a low priority to repaying debts and are quick to default on any loan commitment (Ruth, 2004). Arrears amount sheds light into the bill-paying habits of the person, the way the person manages business affairs and the way they manage adversity which have a major bearing on a person's character (Matz, 1988).

The other key information consideration is the instalment amount, the sum of all instalment amounts on all open accounts (Compuscan, 2008). Instalment amount is the total loan instalment that is principal and interest that is payable by a borrower at a given time

period depending on the loan terms specified at the time the loan was granted by the bank (Legerwood, 1999). Loan instalments are therefore important in the assessment of the cash flows of the borrower for a given period of time as they contribute to the total cash outflows of the borrower. Financial institutions often refer to capacity to repay debt as cash flow where capacity is the borrower's ability to satisfy all obligations or manage cash. Cash flow aids in the quantitative determination of one's capacity or ability to service debt (Ruth, 2004).

Non-Financial Information and Credit Assessment

Non-financial information on the credit report is used in assessing the borrower beyond the boundaries of the financial information. Non-financial information sheds more light in the character and capacity of the borrower. The results of this analysis are subjective in nature and are therefore to the discretion of the lender (Ruth, 2004). Non-financial information that is critical for credit assessment may include worst days' arrears, security commitments and adverse accounts. Worst days in arrears on a credit report is the highest number of days in arrears on all accounts displayed (open and closed) held by the client (Compuscan, 2008). Arrears days show when the person has paid or is paying his obligations late, thus assisting in revealing more about a person's character. The number of days in arrears is directly proportional to loan loss reserve and hence more loan loss provisioning expense is incurred by the bank (Legerwood, 1999). Therefore, borrower may pay all the loan instalments; but if payments are made many days in arrears, the bank incurs a huge cost of provisioning before the payment is cleared. Days in arrears therefore help to shed more light on the customer's willingness and determination to meet loan obligations (IFC, 2012).

Security commitments on a credit report is the number of times a person or entity is linked as a guarantor on any other loans in any institution (Compuscan, 2008). Often a guarantor is analyzed to ensure that they can perform as required. Guarantee agreements are often as precise as possible, stating the specific credit facilities being guaranteed and under what circumstances the guarantor will be expected to perform. Adverse accounts refer to the sum of adverse account listings in the credit report. An account becomes adverse when its risk classification changes from normal to outstanding and beyond terms, write-off or recovery (Compuscan, 2008). Different accounts can have different adverse levels depending on the number of days in arrears of the account. It is important to assess the way the borrower has been responding to adversity which will show the true character of the borrower (Matz, 1988).

Methodology

The study adopted a descriptive survey design which is a method of collecting data and information by any means and using the data to describe a given situation (Ordho, 2003). The study used both qualitative and quantitative approaches. The study population was made up of 33 financial institutions implementing the CRB services in Uganda by December 2015 (Bank of Uganda, 2015). A sample of 30 respondents was selected using statistical tables for Morgan and Krejcie (1970) and purposive sampling. The study utilized open-ended questionnaires and interviews to collect qualitative data, and close-ended questionnaires to collect quantitative data.

The questionnaire instrument for data collection was tested for validity following the conventional practice of computing the content validity index (CVI) which was found to be 0.9, and hence above the recommended. For reliability of the instrument, Cronbach's alpha tests were performed and values yielded an alpha value higher that 0.70 accepted for social sciences. Therefore it can be concluded that the instrument was consistent in measuring them and therefore reliable. Following successful pretesting of the questionnaires, the instrument was administered to the target respondents.

Data was organized in a manner that facilitates analysis and it involved data being converted to numerical codes, a process known as coding (Mugenda & Mugenda, 1999). Completed questionnaires were edited for completeness, accuracy, uniformity and comprehensiveness. The interview guide was used to check the feedback from the respondents, noting the relationships between the given answers and asked questions. The data analysis was to help the researcher to make conclusions on the previously stated hypothesis.

Results

In terms of the effect of financial information on credit assessment in financial Institutions in Uganda, Correlation Analysis was undertaken regarding the indicators of financial information and credit assessment and the results of the results of the correlation test are presented in Table 1 below.

Table 1: Correlation of Financial Information and Credit Assessment

Correlations			
		Financial Information	**Credit Assessment**
Financial Information	Pearson Correlation	1	.928**
	Sig. (2-tailed)		.000
	N	29	29
Credit Assessment	Pearson Correlation	.928**	1
	Sig. (2-tailed)	.000	
	N	29	29
**. Correlation is significant at the 0.01 level (2-tailed).			

Source: Primary Data (2016)

Table 1 shows Pearson's correlation coefficient r = 0.928** and p = 0.000 between the financial information and credit assessment, suggesting a high positive relationship between financial information and credit assessment in financial institutions in Uganda. This implies that credit analysts highly depend on credit report financial information in order to inform their decisions as they perform credit assessments for credit. A regression analysis was conducted to measure the extent to which Financial Information affected Credit Assessments using the ANOVA techniques of adjusted R^2 values, standardized beta values, t-values and significance measured at 0.05 levels as shown in Table 2 below.

Table 2: Regression model between Financial Information and Credit Assessments

Model Summary									
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	.928[a]	.862	.857	.1005462	.862	168.420	1	27	.000
a. Predictors: (Constant), Financial Information									

Source: Primary Data (2016)

The regression model shows adjusted R^2 value of 0.857 between financial information and credit assessment, suggesting that financial information alone predicted 85.7% of the variance in credit assessments in financial institutions. This implies that financial information on credit reports highly influences the credit decisions made by credit analysts during credit assessments. In terms of the effect of non-financial information on credit assessment in financial Institutions in Uganda, correlation analysis was undertaken and the correlation test results are in Table 3 below.

Table 3: Correlation of Non-Financial Information and Credit Assessment

Correlations			
		Non-Financial Information	**Credit Assessment**
Non-Financial Information	Pearson Correlation	1	.771**
	Sig. (2-tailed)		.000
	N	29	29
Credit Assessment	Pearson Correlation	.771**	1
	Sig. (2-tailed)	.000	
	N	29	29
**. Correlation is significant at the 0.01 level (2-tailed).			

Source: Primary Data (2016)

Table 3 shows Pearson's correlation coefficient r = 0.771** and p = 0.000 between the Non-financial information and credit assessment, suggesting a high positive relationship between Non-financial information and credit assessment in financial institutions in Uganda. This implies that credit analysts highly depend on credit report non-financial information in order to inform their decisions as they perform credit assessments for credit. The Regression model results between Financial Information and Credit Assessment are in Table 4 below.

Table 4: Regression model between Financial Information and Credit Assessment

Model Summary									
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	.771[a]	.595	.580	.1722106	.595	39.616	1	27	.000
a. Predictors: (Constant), Non-Financial Information									

Source: Primary Data (2016)

The regression model shows adjusted R^2 value of 0.595 between non-financial information and credit assessment, suggesting that financial information alone predicted 59.5% of the variance in credit assessments in financial institutions. This implies that non-financial information on credit reports highly influences the credit decisions made by credit analysts during credit assessments.

Discussion and Policy Implications

Financial Information and Credit Assessment

The study found that current loan balance had the strongest correlation (0.919) followed by arrears amount (0.768) and instalment amount (0.536) respectively. The study also showed that current loan balance had a strong significance in determining the capacity of the borrower to pay the loan and capital considerations. This is in agreement with Romana and Milivoje (2011) who argued that since current loan balance affects the liquidity ratio calculation, the greater the coverage of liquid assets to short-term liabilities the greater the entity's capacity to meet its debts that are coming due in the near future and still fund its ongoing operations.

The study showed that arrears amount was significantly used in the character assessment and capital considerations of the client during credit assessment in agreement with Matz (1988) who posited that arrears amount helps in determining how the person is paying his obligations and therefore aid in partially judging the person's character. Ruth (2004) also states that persons lacking character are assigned a low priority to repaying debts and are quick to default on any loan commitment. Matz (1988) further argues that arrears amount sheds more light into the bill-paying habits of the person, the way the person manages business affairs and the way he or she manages adversity which have a major bearing on a person's character and capital requirements.

Moreover, the study found that instalment amount was used in determining the capacity of the borrower to pay the loan. This agreed with Ruth (2004) who argues that loan instalments are important in the assessment of the cash flows of the borrower for a given period of time as they contribute to the total cash outflows of the borrower which aids in the quantitative determination of one's capacity or ability to service debt.

Non-Financial Information and Credit Assessment

In terms of non-financial information, security commitments had the strongest correlation (0.633) followed by adverse accounts (0.558) and days in arrears (0.539) respectively. The study also clearly showed that security commitments information was strongly considered in character assessment. This supports the U.S. Department of Treasury (2011) assertion that since guarantors are often analyzed to ensure that they can perform as required, agreements are often drafted as precisely as possible, stating the specific credit facilities being guaranteed and under what circumstances the guarantor will be expected to perform. An unconditional guarantee therefore extends liability equal to that of the primary obligor. A conditional guarantee requires the creditor to meet a condition before the guarantor becomes liable hence affecting the borrower's character.

The survey showed that worst days in arrears information were strongly considered in character assessment. This is in agreement with Legerwood (1999) who asserted that since arrears days show when the person has paid or is paying his obligations late, they assist in revealing more about a person's character. International Finance Corporation (2012) further states that the reason why arrears days are considered is that the borrower may pay all the loan instalments but if they are always paid when they are in many days in arrears the bank incurs the huge cost of provisioning before the payment is cleared, shedding more light on the customer's willingness and determination to meet loan obligations.

The study also found that adverse accounts were strongly used in both character and capital assessments. The study agreed with Matz (1988) who suggested that since different accounts can have different adverse levels depending on the number of days in arrears of the account, it is important to assess the way the borrower has been responding to adversity which will show the true character of the borrower.

Policy Implications

The banking stakeholders including clients, financial institutions, Bank of Uganda and CRB service providers need to work together to continually ensure that CRB information shared is relevant, accurate, reliable, accessible and secure since it will affect significantly the credit assessment decisions. CRB service providers need to come up with a uniform objective credit scoring matrix to aid in quick decision making process by financial providers and easy to use by clients. The financial institutions, central bank and CRB service providers need to continuously develop financial literacy programmes to the public so that they can understand the importance and use of the CRB information because it plays a crucial role in the financial sector. The central bank and legislators need to revise and enact laws and put in place enabling regulations to broaden the scope of CRB information to include mobile money network operators, insurance companies, utility companies and unregulated financial institutions that play a major role in financial inclusion as evidenced in other countries, according to IFC (2012).

Limitation of the Study

The major limitation of the study was the scope in terms of geographical coverage. The study was limited to financial institutions in Uganda where CBR services were introduced recently and what was available is both scanty and not regularly updated. Therefore, the findings of the study may not be replicated in economies with different environmental factors regarding the CRB services.

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