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The Impact of Digitalization on Credit Risk Management in Microfinance Institutions in Nueva Ecija, Philippines

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Abstract - **The study examines the credit risk management practices of lending institutions in rural Nueva Ecija, Philippines, amidst their significant growth and the evolving economic landscape. Given their pivotal role in financial transactions, these institutions face inherent risks which necessitate effective management strategies. Employing a descriptive method, the research identified and evaluated credit risk management practices, focusing on credit analysis and collection policies. The study also assessed the impact of digitalization on these practices within microfinance institutions in the region. Findings indicated that while there was no significant relationship between credit risk management practices and loan collection performance, digitalization emerged as a promising avenue for enhancing efficiency and reducing risks. Metrics such as portfolio-at-risk, on-time repayment rate, and past due rate were used to evaluate loan collection performance.**

The study underscores the potential of digital tools and platforms in transforming credit risk management, offering opportunities to streamline operations and improve collection policies. It identifies current market challenges and outlines strategies to mitigate risks effectively, thereby enhancing the stability and efficacy of rural lending institutions in Nueva Ecija.

Keywords: **Collection Policies, Commercial Portfolios, Credit, Lending Institutions, Credit Risk Management**

I. Introduction

The Banking and the Non-Banking Financial Institutions are the two primary subcategories that make up the Philippine Financial Institution. Non-Banking Financial Institutions are made up of financial businesses that perform functions other than banking and quasi-banking organizations (Srinadi et al., 2023).

When looking for financial assistance or guidance, the first place that the majority of individuals would go through is to the bank (Glenhawk, n.d.). However, a large number of individuals also discover that the services provided by the bank do not fully suit their expectations, which leaves them at a loss and resorting to borrowing from non-banking financial companies like lending institutions (Rami et al., 2024).

A lending company is a corporation that is involved in the practice of lending money, either out of its own capital funds or out of funds received from no more than nineteen (19) different individuals (About Lending Companies and Financing Companies, n.d.). Why do so many Filipinos, instead of taking out loans from banks, turn to alternative funding sources with significantly higher interest rates, such as lending companies? According to (Inquirer.Net, 2015), 12 percent of the 47.10 percent who borrow money prefer to borrow through lending/financing firms.

The Central Bank of the Philippines as the lender of last resort served as the highest Central Monetary Authority with the monetary board that is responsible for setting the rules and regulations for all banking and non-banking institutions to maintain the good economic situation in the country by setting different levels of the portfolio (Udayakumar et al., 2023). Thus, further monitoring of borrowers is very important as current and potential exposures change with both the passage of time and the movements in the underlying variables (Mwisho, 2001), and also very important in dealing with moral hazard problems that can be encountered even by non-bank financial institutions like lending companies (Derban et al., 2005).

In light of the worsening economy brought on by the pandemic crisis, a wide range of banks and non-banking entities had formidable difficulties in collecting various amortization and loan receivables (Mohammad Abbas et al., 2024). This economic downturn is far worse than the one that happened during the 2008 financial crisis (Barrafrem et al., 2020) but as an aid to this, the Central Bank (Fuw et al., 2011) of the Philippines imposed guidelines in-line with the "Bayanihan Act" to lessen the burden of different agencies and individual entrepreneurs and to normalize the mobility of money circulating in the economy by decreasing the interest rates to convince local businesses to borrow money from different financial institutions to perpetuate the operation of the business despite crisis (Department of Budget and Management, n.d.).

As a realization of this unexpected happening, it can be mentioned that there's no such thing as forever success, particularly when it comes to establishing a business

(Anderson, 2012). This is also true for the credit-lending sector; difficulties might arise under any set of circumstances, but it is up to individual businesses to devise strategies for mitigating these different risks (Oleksandr et al., 2024). In point of fact, Swarens, (1990) said that an overly aggressive lending practice is the most widespread form of risk.

These lending companies' policies and methodologies play a vital role in the evaluations, monitoring, inspections, and approvals in terms of granting and offering credit. As a matter of fact, according to Cheruiyot, (2015), a well-defined credit policy positively influences loan repayment which is resulting in reduced delinquency. This strategy is also known as credit risk management practices.

Credit risk management is the identification, measurement, monitoring, and control of risk arising from the possibility of default payment on a loan contract (Graham & Coyle, 2000). In addition to this, it covers the technique of moderating losses by knowing the availability of a company's capital as well as its loan loss reserves at any one moment, which is a procedure that has been a struggle for financial institutions for a very long time (Dowd et al., 2008).

Credit risk management's ultimate goal is to maximize an institution's risk-adjusted rate of return by maintaining credit risk exposure within acceptable parameters. These principles were developed, as stated (Santomero & Babbel, 1997), to quantify risk exposure, design processes to manage these exposures, restrict exposure to acceptable levels, and encourage decision-makers to manage risk in a manner that is compatible with the firm's goals and objectives.

At present time, lending institutions are being advised to employ a risk management strategy based on a mixture of trust and monitoring to lessen the issues of moral hazard and adverse selection (Berggren et al., 2009). This helps avoid dealing with financially unstable borrowers and reduce the risk of losing their assets or badly impacting the business reputation which includes the formation of credit analysis, credit evaluation, and credit scoring; collection policies such as monitoring loans, collection efforts, and commercial portfolios (Paul Thomas & Rajini, 2024).

As such, the researchers, who are all supporters of a risk-free financial system, set out to identify the existing risk management practices of selected lending institutions in Nueva Ecija, more specifically in the municipalities of San Isidro and Cabiao. As a result, this study could help the current institutions in acquiring information and in developing their standards and practices for the continuous improvement of providing services and offering credit in their present society (Wakuloba, 2007).

II. RESEARCH OBJECTIVES

This is due to the fact that the goals of risk management include ensuring the life of the business via expansion and profit (Fatemi and Glaum, 2000) and minimizing the negative effects of variations in currency exchange rates and cash flow (Podvalny et al., 2021). Hence, this study was conducted to answer the questions regarding the Credit Risks Management Practices of Lending Institutions in Nueva Ecija. Specifically, the objectives of this study are the following:

1. To describe the profile of the lending institutions in terms of:
   1.1 Profile of the Lending Officer; and,
   1.2 Profile of the Organization;
2. To describe the current risk management practices of Lending Institutions in terms of:
   2.1 Credit Analysis; and,
   2.2 Credit Policy;
3. To identify the level of loan collections performance in terms of:
   3.1 Portfolio at risk;
   3.2 On-time repayment rate; and,
   3.3 Past due rate;
4. To test if there is a significant relationship between credit risk management practices and loan collection performance; and,
5. To propose a Risk Mitigation Plan based on the results of the study.

III. RESEARCH METHODOLOGY

The primary purpose of this research is to investigate the methods of credit risk management utilized by lending institutions located in the province of Nueva Ecija. To successfully finish the study, the researchers opted to apply the descriptive design. Calderon & Gonzales, (2018), defined this method as the process of collecting, analyzing, classifying, and tabulating information about current conditions, practices, processes, trends, and cause-and-effect relationships. The key informants or respondents of the study were the four officers from the selected lending institutions in San Isidro and Cabiao, Nueva Ecija, Philippines. The survey questionnaire was the main instrument used by the researchers in conducting this study. According to McLeod, (2018), a questionnaire is a research instrument consisting of a series of questions to gather information from respondents and this can be thought of as a kind of written interview.

To examine the stability, validity, and consistency of the answers from the respondents, the researchers performed the test-retest technique. It is a measure of reliability conducted by the researchers, obtained by administering the same test twice over some time to the same respondents, which are in this case, the responding officers from the different lending institutions (Hernon & Schwartz, 2009).

The data collected from the lending officers were encoded, tallied, and analyzed. Statistical tools were utilized in its analysis. The following table I presents the four-point Likert

scale to measure and interpret the data specifically the current risk management practices of the lending institutions

Scale	Mean Range	Verbal Description	Verbal Interpretation
4	3.26–4.00	Oftentimes	The respondent viewed the statement as being practiced all the times
3	2.51–3.25	Sometimes	The respondent viewed the statement as being practiced occasionally
2	1.76–2.50	Seldom	The respondent viewed the statement as being practiced rarely
1	1.00–1.75	Never	The respondent viewed the statement as having never been practiced

Pearson's r was used to determine if there is a significant relationship the between credit risk management practices and loan collection performance.

IV. RESULTS AND DISCUSSION

This section presents the findings obtained from the primary instrument used in this study. The responses were organized, quantified, and interpreted using different statistical tools. The presentation observed the sequence of the specific problems formulated for the study.

The Profile of the Lending Institutions

TABLE I PROFILE OF THE LENDING OFFICER

Number of Years in Present Position	**Frequency**	**Percentage**	**Rank**
5 years/below	2	50%	1
6–10 years	1	25%	2.5
11–15 years	1	25%	2.5
TOTAL	**4**	**100%**	
Sex of the Officer	Frequency	Percentage	Rank
Male	1	25%	2
Female	3	75%	1
TOTAL	**4**	**100%**	
Educational Attainment	**Frequency**	**Percentage**	**Rank**
High School	0	0%	
Vocational	1	25%	2
Bachelor's Degree	3	75%	1
TOTAL	**4**	**100%**	

With the given data above, the study showed that two (2) of the four (4) responding officers, or 50% of the total, are just less than 5 years in their present positions. Meanwhile, only one (1) of the responding officers had been in-charged of his/her position for between 6-10 years. On the other hand, only a single (1) officer is working in his/her position for 11-15 years. It seems that the majority of the employees are new to their current position. Bilski, (2011) noted that the company is in a better position than the competition if the bulk of its staff members has been with the business for ten years or more. Besides, the staff is critical to the success of the organization and even some of the most successful people in business, including Richard Branson and Nick Hewer, believe that a successful firm keeps its employees happy and has a high retention rate (Atkinson, 2015).

Over and above, seventy-five percent (75%), or three (3) out of four (4), of the total responding officers are female, and only twenty-five percent (25%) are male. Regardless of the sex, one must maintain his efforts to improve professionally if he wants to achieve the career objectives he has set for himself and remain competitive in the employment market of today (Indeed Editorial Team, 2022). In their study, Ogunleye & Osekita, (2016) stressed that regardless of the sex of the employees, they all conduct their duties in a manner that is practically identical to one another, and they discovered that there was no substantial impact of sex on job performance.

In light of the data presented above, three (3) of the responding officers had obtained their Bachelor's degrees before they are appointed to their current position. Indeed, it has been hypothesized that educational background, is more likely to be associated with a job an individual may land (Van Knippenberg et al., 2004). The ability to recognize and comprehend the tasks associated with their professions is facilitated by familiarity with their work, hence knowledge is a must. Hence, performance may be improved by better matching workers with jobs (Lewis, 2019). Noticeably, the one (1) remaining responding officer just earned a vocational degree. The value of vocational education cannot be denied, which is why it is receiving more focus from governments, policymakers, educators, and even businesses like lending companies (Vietnam Manpower, 2015).

This is also the reason why in the past years, different organizations have been offering vocational programs for those that cannot afford to enter and study in universities and colleges because of financial difficulties (Hoeckel, 2008). With the help of these vocational programs, people can learn and acquire enough knowledge about the jobs that they prefer, and that responding officer is one good example. This typically focuses on the skills and knowledge that are relevant to the particular needs of the enterprise (Karmel & Nguyen, 2006) like the lending companies. Therefore, what is best for the country as a whole, such as developing a workforce that is skilled and adaptive, and what people aspire for may not be the same as what is in the best interest of businesses regardless of the degree (McIntosh, 2004).

TABLE II PROFILE OF THE ORGANIZATION

No of Years in Operations	**Frequency**	**Percentage**	**Rank**
1–3 years	1	25%	2.0
4–6 years	1	25%	2.0
7–9 years	1	25%	2.0
10 and above	1	25%	2.0
TOTAL	**4**	**100%**	
Outstanding Loan Portfolio	**Frequency**	**Percentage**	**Rank**
3–5 million	3	75%	1.0
6–8 million	1	25%	2.0
TOTAL	**4**	**100%**	
Types of Loans	**Frequency**	**Percentage**	**Rank**
Individual Loans	2	50%	1.5
Group Loans	2	50%	1.5
TOTAL	**4**	**100%**	

Average Amounts of Loans	Group Loans	Individual Loans	
Maximum–1st loan	₱ 10,000.00	₱ 691,9666.67	
Minimum–1st loan	₱ 5,000.00	₱ 14,000.00	
Maximum succeeding loan	₱ 10,000.00	₱ 1, 050,000.00	
Minimum succeeding loan	₱ 7,000.00	₱ 50,000.00	
Term of Loans Offered	**Frequency**	**Percentage**	**Rank**
3 months	3	75%	1.0
6 months	0	0%	
1 year	0	0%	
Others (One-Time Payment)	1	25%	2.0
TOTAL	**4**	**100%**	
Loan Repayment Period	**Frequency**	**Percentage**	**Rank**
Monthly	0	0%	
Weekly	3	75%	1.0
Others (Single)	1	25%	2.0
TOTAL	**4**	**100%**	

Only one (1) lending institution has been offering microfinance loans for its clients for more than 10 years now. According to Curtis, (2022), keeping a small business viable in harsh economic times is tricky but with well-performing employees, fast services, and having the focus on the satisfaction of its clientele, it can be considered an established institution in terms of granting microfinance loans. If truth is to be told, the continued survival of a business even after its founder has passed away is one definition of business longevity (Haugh & Talwar, 2010). Krell, (2000) also noted that a company's longevity may be determined by the qualities that can assure its continued existence and success throughout time.

Next to it is a lending company that has been in business for between 7–9 years currently, while the other one (1) has been in operation for between 4–6 years. Mina et al., (2021) pointed out that for the company to achieve sustainability, the top management must have clear communication and a bright point-of-view regarding the operational level up to the managerial level to identify the best course of actions and undertakings to be incorporated into the policy of the organization.

Considerably, only (1) lending institution is just new to its operation with an experience of between 1–3 years. Grzegorzek, (2021) believed that finding the first few clients and developing the first few products or services are necessary steps in the growth process for new businesses. As other new competitors are also likely to strive for growth, new businesses need to be better and more competitive in securing the first few orders to compete with their growing rivals.

Three (3) of the respondents have an outstanding loan portfolio which is ranging from ₱ 3,000,000.00–₱ 5,000,000.00. It is their outstanding balance or the unpaid capital with the interest of their loan portfolios from all of their clients, while only one (1) lending company has a receivable of ₱ 6,000,000.00–₱ 8,000,000.00. A loan portfolio constitutes loans that have been made or bought and are being held for repayment (Haugh & Talwar, 2010). In addition to that, the value of the loan portfolio is not only determined by the interest rates that are earned on the loans but also by the probability that both the interest and the principal will be paid back. With respect to this, by having a more holistic perspective of the loan portfolio, a portfolio manager is now able to receive early signs of growing risk (Walland & Koch, 2000).

It can be gleaned from the table II above that half of the respondents (50%) are offering individual loans. Lake (2021) identified individual loans, which are sometimes known as personal loans, as a loan that can be given out for a variety of reasons, including medical, educational, agricultural, domestic, and commercial needs. The length of time before repayment on individual loans varied anywhere from two months to twenty-four months, according to the level of expertise held by the borrower as well as the industry in which the money was being invested (Attanasio et al., 2014).

Also, half of the total respondents (50%) are offering group loans. According to Giné & Karlan, (2010) borrowers in this technique get together at one of their homes (termed "centers") and have regular meetings to discuss the repayment of their loans; these meetings often occur once per week.

With this, only an employee of the company will be needed to attend those centers for the discussion of some important matters (Attanasio et al., 2014).

As shown above, it can be perceived that the average maximum first (1st) loan that the two (2) lending companies that are offering group loans are ₱ 10,000.00 at a minimum of ₱ 5,000.00. But after that cycle, the debtors can take a loan amounting between ₱ 7,000.00–₱ 10,000.00. The members that would have problems in terms of payment will not be granted a possible increase in their loans. Under other conditions, group loans tend to be dissolved when one or more members were not able to comply with the requirement. Mallinguh & Zoltan, (2022) mentioned that the loan amount is positively correlated with the kind of lending institution, the value of collateral, the proportion of fixed assets owned by the owner, and the balance of any existing credit facilities.

On the other hand, individual debtors have higher average choices of amounts that they wish to loan. They can borrow between ₱ 14,000.00–₱ 691,9666.67 on their first loans. Personal loaners should be able to have a high evaluation in terms of their payments for them to be able to increase their desired amounts when they decided to apply for a succeeding loan (Roszbach, 2004) which is between ₱ 50,000.00 and ₱ 1, 050,000.00.

Three (3) of the total respondents have a 3-month term of the loan which means that a debtor, whether with a group or individual, has to be able to complete the whole cycle of collecting or paying his/her loan in fortnight, weekly, or monthly basis for the entire three (3) months. The remaining one (1) lending institution only offers a one-time repayment rate (Jansson, 2002). It means that it only offers its loans, and

the debtors have to pay it with interest just once in the agreed period. None of the respondents from San Isidro, and Cabiao, Nueva Ecija has a term of loan between six (6) months to one (1) year. For small-scale enterprises, reliable access to short-term and small amounts of credit is more valuable, and emphasizing it may be more appropriate in credit programs aimed at such enterprises (Atieno, 2001).

Loan repayment is the act of paying back money previously borrowed from a lender (Twin, 2021) in the agreed period. In this study, the loaners from the three (3) institutions are paying weekly, whether in a group loan or individual loan, while one (1) respondent has a loan repayment period on a single-basis. Successful loan repayment is defined as the capacity to repay the loan in accordance with the loan agreement, whereas loan default is defined as the inability to return the loan due to either a failure to finish the loan as per the loan agreement or a failure to service the debt (Rose, 2007).

The Current Risk Management Practices of Lending Institutions

TABLE III CREDIT ANALYSIS

No.	Most Common Sources of Information	Weighted Mean	Verbal Description	Rank
1	Interview	3.75	Oftentimes	1.0
2	Credit Bureaus	2.75	Sometimes	3.5
3	Personal References	3.50	Oftentimes	2.0
4	Any Billing History with other Company	2.25	Seldom	6.0
5	Networks with other Organizations	2.75	Sometimes	3.5
	Average Weighted Mean	**3.00**	**Sometimes**	
No.	**Information Gathered from Clients**	**Weighted Mean**	**Verbal Description**	**Rank**
1	A resident of the community for 1 (one) year	3.00	Sometimes	6.0
2	A thorough credit investigation is being done on the applicant	3.25	Sometimes	2.5
3	Applicants must have an existing business (individual loans)	3.25	Sometimes	2.5
4	Borrowers must be willing to organize themselves into groups of the required number of members.	3.00	Sometimes	6.0
5	Borrowers should not have existing loans with other lending Institutions.	3.25	Sometimes	2.5
6	Screening of applicants by income in their present occupations or source of earnings	3.25	Sometimes	2.5
7	Should hold down consistent employment or be in the professional workforce.	2.25	Seldom	8.0
	Average Weighted Mean	**3.18**	**Sometimes**	
No.	**The Basis for Credit Evaluation**	**Weighted Mean**	**Description**	**Rank**
1	C's of Credit	4.00	Oftentimes	1.0
2	Credit Investigation	3.25	Sometimes	2.0
	Average Weighted Mean	**3.63**	**Oftentimes**	
No.	**Components of Credit Investigation**	**Weighted Mean**	**Verbal Description**	**Rank**
1	Character–Willingness to meet credit obligations	2.75	Sometimes	3.0
2	Capacity–Ability to meet credit obligations	4.00	Oftentimes	1.0
3	Capital–Current available Asset	2.50	Seldom	4.5
4	Condition–General economic conditions of client's line business	3.25	Sometimes	2.0
5	Collateral–Owned property or properties of the debtor that can be pledged as a guarantee	2.50	Seldom	4.5
	Average Weighted Mean	**3.00**	**Sometimes**	
No.	**Other Components of Credit Investigation**	**Weighted Mean**	**Verbal Description**	**Rank**
1	Address verification	3.75	Oftentimes	1.0
2	Court cases verification	2.50	Seldom	4.0
3	Employment verification	2.50	Seldom	4.0
4	Property/Ownership verification	2.50	Seldom	4.0
5	Trade references if any (customer/supplier)	3.00	Sometimes	2.0
	Average Weighted Mean	**2.85**	**Sometimes**	

As can be gleaned from the table III above, the interview method is the most commonly used source of information by the respondents. With this method, a representative from the lending company performs an interview with the possible loaners personally. In order to answer the questions based on the interview, a semi-structured interview guide is being prepared by the company (Denzin, 2008). The representative asks questions to the debtor about the different terms in applying for a loan and once the interview is finished, the representative would transfer the data that were gathered to the office to review it if and decide whether the borrower is approved to get a loan. According to Zoleta, (2022), applying for a personal loan is much like applying for a job. In order to secure a loan from a financial institution, a potential borrower must demonstrate their creditworthiness. Submitting the necessary requirements and the loan application form is similar to submitting a résumé and a portfolio.

Based on the data above, it can be observed that the majority of the lending companies believed that through credit investigation done on the applicant, when applicants have an existing business specifically for individual loans when borrowers do not have existing loans with other lending institutions and by screening applicants through income in their present occupations or source of earnings, the company can use them as a basis in making a decision whether to approve the loan applicants. In addition to getting the personal information of the applicant, their employment history and income details will also be verified (Zoleta, 2022). It can be mentioned that each lending company has its

own method for analyzing a borrower's creditworthiness (Segal, 2023).

According to the respondents, one of the best basis for a borrower's creditworthiness is the 5 C's of Credit. The term "due diligence" is often used to describe the steps taken to ensure a loan is being made responsibly. Five financial analysis topics or tools—character, capacity, capital, condition, and collateral—aid in the loaning process (Baiden, 2011). The underwriter usually uses these instruments as useful guidelines in credit analysis while making a loan decision.

Going into detail, the respondents believed that among the 5 C's of credit, the capacity or the ability to meet credit obligations is oftentimes the most significant variable being considered prior to the approval of the loan (Ruth, 2004). The ability to control cash flows is synonymous with management's capacity to create sufficient surplus cash to meet all obligations. Some commercial loan providers prefer the term "cash flow" because of its emphasis on liquid assets. Freixas & Rochet, (2008) mentioned that a business may earn enough surplus cash to cover its obligations, but it may instead choose to invest in long-term assets like computers and office furniture.

Lastly, other components of credit investigation include address verification which is oftentimes implemented by the company. Many different types of financial services, like lending companies, rely heavily on applicants' investigation even in terms of their employment as one of its foundational functions (Byanjankar et al., 2015).

TABLE IV CREDIT COLLECTION POLICY

No.	The Basis for Monitoring Loans	Weighted Mean	Verbal Description	Rank
1	Regular visitations of project/business of client officer	4.00	Oftentimes	1.0
2	Surprise visits to the business of the client	3.25	Sometimes	2.0
3	The external person does the monitoring or evaluation	2.75	Sometimes	3.0
4	Require submission of financial reports regularly	2.50	Seldom	4.0
	Average Weighted Mean	**3.06**	**Sometimes**	
No.	**Ways of Tracking Payments**	**Weighted Mean**	**Verbal Description**	**Rank**
1	Using the Average collection period (ACP)	3.75	Oftentimes	1.0
2	Aging Schedule	3.50	Oftentimes	2.0
	Average Weighted Mean	**3.63**	**Oftentimes**	
No.	**Methods of Collection**	**Weighted Mean**	**Verbal Description**	**Rank**
1	Collectors go house to house	4.00	Oftentimes	1.0
2	Collections are done during center meetings	3.00	Sometimes	3.5
3	Clients go to the office to pay the loans	3.00	Sometimes	3.5
4	Group leaders go to the office to pay	3.50	Oftentimes	2.0
	Average Weighted Mean	**3.06**	**Sometimes**	
No.	**Procedures for Delinquent Accounts**	**Weighted Mean**	**Verbal Description**	**Rank**
1	Send out a delinquency letter	3.25	Sometimes	1.5
2	Make a telephone call to the customer or group leader	3.25	Sometimes	1.5
3	Send collection officer for door-to-door collection	3.00	Sometimes	3.5
4	The client may lose access to other services	3.00	Sometimes	3.5
5	Take legal action against the client	2.50	Seldom	5.0
	Average Weighted Mean	**3.00**	**Sometimes**	

From the data presented in the table IV above, it can be remarked that regular visitations of project/business of client officers are oftentimes practiced by lending companies as a basis for monitoring loans. Microfinance loan collection policies are designed to make it easier to manage borrowed money. Loan officers are more likely to be successful and timely in collecting payments from borrowers when an appropriate credit collection policy is in place within the institutional framework (Danstun & Harun, 2019). Indeed, microfinance institutions need to have credit collection strategies that would make clients attracted to find it easy to repay their loans without enforcement (Goldberg & Palladini, 2010).

Along with that, the company oftentimes uses the average collection period (ACP) as one of the ways of tracking payments. The primary purpose of the microfinance credit collection policy is to improve the efficiency of the credit administration of the funds that have been distributed (Ceyhan et al., 2011). It is therefore important to ensure that the rate of return on investments made by microfinance organizations is higher than the cost of providing loans. Sree et al., (2019) argued that loan officers can be more efficient and timely in the collection of cash from customers when an appropriate credit collection policy exists within the institutional framework they operate within.

Over and above, the lending companies oftentimes go house to house as one of their methods of collection and in other cases, group leaders go to the office to pay. Certainly, the client has to be evaluated to see whether or not he is keeping his payment promises, and he also needs to be capable of recording the actions related to the collection. Additionally, it is essential to conduct follow-up on each individual case and step up collection efforts, even if doing so results in the loss of a client (Pandey, 2011).

Into the bargain, the company oftentimes sends out a delinquency letter and makes a telephone call to the customer or group leader as part of their procedures for delinquent accounts. Microfinance institutions that have a loan portfolio that is at high risk are seeing a high level of delinquency from their consumers (Danstun & Harun, 2019). As a result, the microfinance industry has to get an understanding on the fact that charging high-interest rates that are beyond a specific level is considered to be adverse for the lending companies' capacity to maintain their financial viability (Onyeagocha et al., 2012). As a result, Colquitt, (2007) pointed out that microfinance institutions need to manage portfolio quality against delinquency and defaults, by establishing effective strategies in the lending and collection processes.

TABLE V LOAN COLLECTION PERFORMANCE

No.	Portfolio at Risk	Frequency	Percentage	Rank
	5% and below	2	50%	1.0
	6% – 10%	1	25%	2.5
	12% – 15%	0	0%	0.0
	16% – 20%	1	25%	2.5
	21% – 25%	0	0%	0.0
	26% and above	0	0%	0.0
	Total	**4**	**100%**	
No.	**On-Time Repayment Rate**	**Frequency**	**Percentage**	**Rank**
	20% and below	0	0%	
	21% – 40%	1	25%	2.5
	41% – 60%	2	50%	1.0
	61% – 80%	0	0%	
	81% and above	1	25%	2.5
	Total	**4**	**100%**	
No.	**Past Due Rate**	**Frequency**	**Percentage**	**Rank**
	5% and below	2	50%	1.5
	6% – 10%	2	50%	1.5
	12% – 15%	0	0%	
	16% – 20%	0	0%	
	21% – 25%	0	0%	
	26% and above	0	0%	
	Total	**4**	**100%**	
No.	**Basis for Measuring Loan Collection Performance**	**Weighted Mean**	**Verbal Description**	**Rank**
1	Portfolio at Risk (PaR)	3.75	Oftentimes	1.0
2	Repayment Rate	3.50	Oftentimes	3.5
3	Past Due Rate (Arrears Rate)	3.75	Oftentimes	1.5
4	Loan Loss Reserve	3.00	Sometimes	5.5
5	Written-Off Ratio	3.50	Oftentimes	3.5
6	Current Recovery Rate	3.00	Sometimes	5.5
	Average Weighted Mean	**3.42**	**Oftentimes**	

It can be seen from the table V above the loan collection performance of the lending companies in Nueva Ecija. Two (2) of the respondents answered that 5% and below of their portfolio are at risk. According to Danstun & Harun (2019), the fact that the default rate on loan portfolios is increasing is evidence that microfinance institutions are not meeting the globally recognized criterion of having 3% of their loans be considered risky. That being said, a microfinance institution that invests in borrowers' capacity to self-response to loan payback has a greater probability of keeping its loan portfolios of a high quality (Edwards, 2004).

On the other side of the coin, two (2) of the total respondents said that they have a 41%–60% On-Time Repayment rate, while a single (1) company answered 21%–40%. Noticeably, one (1) company said that it has an 81% and above rate, and it might be the lending institution that has a single-loan repayment period with a term of the loan at a one-time payment. For example, Woolcock, (1999) noted that the rate at which loans are repaid is the most common metric used to evaluate the effectiveness of a microfinance program. This is because the rate at which loans are repaid has a significant impact on the likelihood that a program will be able to remain financially viable (Tundui & Tundui, 2013). According to Godquin, (2004), a microfinance borrower who displays a commitment to repaying the loan by requesting a longer amount of time to pay off the loan implies that they are financially stable. This may lead to enhanced financial performance as well as reduced risk to the gross loan portfolio.

Into the bargain, half of the total respondents (2) said that their past due rate is 5% and below while the other half (2) said that it is between 6%–10%. The past due rate should always be at its lowest because these are the loan payments that are not yet paid as of their due date (Swain & Varghese, 2013). Borrowers at past due will be subjected to penalties.

Lastly, portfolio at risk, repayment rate, past due rate (arrears rate), and loan loss reserve are oftentimes the basis of the lending companies in measuring loan collection performance. Mckernan, (2002) mentioned that the high interest rates charged by most microfinance institutions on credit facilities significantly contribute to loan default. It was further argued that even if microfinance institutions may have effective appraisal and assessment strategies of their loan applicants. Increased interest rates charged to borrowers may lead to default payment and high rate of portfolio at risk of the microfinance institutions. In connection to this, efforts should be made by microfinance managers to enforce rigorous debt collection practices that would benefit both the borrowers and the portfolio as a whole by keeping default rates low and creditors on high alert (Njeru Warue, 2012). The realization that not all customers will fulfill their commitments in a timely manner and without the need for enforcement was the impetus for the establishment of a set of policies (Palladini and Golgberg, 2010). There are some customers who just forget, and the majority of them are not likely to pay their bills unless they are strongly encouraged to do so. When there is a delay in the repayment of loans by customers, financial lending institutions see a rise in the amount of bad debt in their loan portfolios (Wongnaa & Awunyo-Vitor, 2013). As a consequence of this, the objective of credit collection initiatives is to expedite the recovery of loans from customers.

TABLE VI THE SIGNIFICANT RELATIONSHIP BETWEEN CREDIT ANALYSIS AND LOAN COLLECTION PERFORMANCE

Credit Analysis		Portfolio at Risk	On-Time Repayment Rate	Past Due Rate	Basis for Measuring Loan Collection Performance
Most Common Sources of Information	Pearson Correlation	.816	.707	.000	.000
	Sig. (2-tailed)	.184	.293	1.000	1.000
	N	4	4	4	4
Information Gathered from Clients	Pearson Correlation	–.471	–.816	–.577	.577
	Sig. (2-tailed)	.529	.184	.423	.423
	N	4	4	4	4
The Basis for Credit Evaluation	Pearson Correlation	.246	.000	-.905	.905
	Sig. (2-tailed)	.754	1.000	.095	.095
	N	4	4	4	4
Components of Credit Investigation	Pearson Correlation	–.816	–.707	.000	.000
	Sig. (2-tailed)	.184	.293	1.000	1.000
	N	4	4	4	4
Other Components of Credit Investigation	Pearson Correlation	–.816	–.707	.000	.000
	Sig. (2-tailed)	.184	.293	1.000	1.000
	N	4	4	4	4

*. Correlation is significant at the 0.05 level (2-tailed).

From the table VI above, it's clear that the credit analysis and loan collection performance have no significant relationships in all variables. Nikolaidou & Vogiazas, (2014) defined credit risk management as a set of coordinated tasks and activities that help an organization control and direct the risks it faces by using key risk management tactics and processes in line with the organization's goals. Today, credit risk management encompasses both loan reviews and portfolio analysis (Nelson & Schwedt, 2006). Unfortunately, even though financial institutions worked hard, the number of problems in both developing and developed economies of the world grew by a lot (Basel, 2004), especially in terms of credit collections. As a matter of fact, Colquitt, (2007) pointed out that, weak credit collection policy has been the main cause of business failures including lending companies.

TABLE VII THE SIGNIFICANT RELATIONSHIP BETWEEN CREDIT COLLECTION POLICY AND LOAN COLLECTION PERFORMANCE

Credit Collection Policy		Portfolio at Risk	On-Time Repayment Rate	Past Due Rate	Basis for Measuring Loan Collection Performance
The Basis for Monitoring Loans	Pearson Correlation	–.915	–.792	.140	–.140
	Sig. (2-tailed)	.085	.208	.860	.860
	N	4	4	4	4
Ways of Tracking Payments	Pearson Correlation	.246	.000	–.905	.905
	Sig. (2-tailed)	.754	1.000	.095	.095
	N	4	4	4	4
Methods of Collection	Pearson Correlation	–.915	–.792	.140	–.140
	Sig. (2-tailed)	.085	.208	.860	.860
	N	4	4	4	4
Procedures for Delinquent Accounts	Pearson Correlation	.764	.756	–.535	.535
	Sig. (2-tailed)	.236	.244	.465	.465
	N	4	4	4	4

*. Correlation is significant at the 0.05 level (2-tailed).

It is abundantly obvious from the data shown in the table VII that the credit collection policy and the performance of the loan collection process do not share any significant relationships in any of the variables. This only means that the practices of the lending companies do not have effect on their credit collection performance. According to Palladini and Golgberg (2010), a credit collection policy is a set of principles that construct a procedural set that is utilized to recover accounts receivable that have become delinquent. If truth be told, microfinance management efforts for ensuring that strict collection procedures are adhered to; help to keep debtors alert, and reduction of the portfolio at risk (Njeru Warue, 2012). Thus, regardless of the results of this study, it can be contended that every financial institution like lending company is required to have an in-depth knowledge of credit risk management, including the ability to price their loans on a market-to-market basis, determine the marginal risks adjusted contribution of each loan, and allocate, measure, and monitor economic capital (Cuthbertson & Nitzsche, 2003).

The following criteria are the factors subject as the foundation for designing the mitigating plan for the lending institutions: (shows in table VIII and table IX).

TABLE VIII PROPOSED RISK MITIGATING PLAN

Source of Risk	Business Side Implication	Risk Category	Mitigating Strategy
Any Billing History with other Company	Poor background investigation	Business Risk	Countercheck the Statement of Accounts (SOA) from other lending institution (past and present) to determine the credibility and capacity of repaying
Should hold down consistent employment or be in the professional workforce.	Sluggard source of Income	Credit Risk	Capacity and Credibility must dance together-thus having an stable source of income is one of the parameters as a basis for granting specific loanable amount
Capital–Current available Asset	Unfavorable acid-test ratios	Business Risk	Meeting the current obligation is important to determine the solvency of a certain individual/business debtor
Court cases verification	Undetermined credibility	Business Risk	Provide additional verification or security to prove the character of the debtor
Employment verification	Veracity of Information	Credit Risk	Requiring the debtor to provide Income Tax Return (ITR) to check the source/s of income
Property/Ownership verification	Authenticity of Documents	Credit Risk Liquidity Risk	Utilize government agencies to identify the veracity of documents such; LTO, BIR, RD; and banking institutions
Require submission of financial reports regularly	Undetermined financial cash flow	Liquidity Risk	Determine the number of years of operation and together with the historical trend
Take legal action against the client	Exhausted allowance for unrealizable accounts	Liquidity Risk Credit Risk	Provide a more comprehensive repayment scheme for unrealizable accounts

TABLE IX ACTION PLAN

MITIGATING STRATEGY	PERSONS/ DEPARTMENTS INVOLVE	REASONS AND OBJECTIVES	RECOMMENDED ACTION PLAN
Countercheck the statement of accounts (SOA) from other lending institutions (past and present) to determine the credibility and capacity of repaying	Credit and Investigation Department	To evaluate the repayment capacity of the borrower based on his/her performance of paying in other lending institutions. More so, to identify the reason/s for adding/transferring accounts.	As a formal organization, the Lending institution must empower the Credit and Investigation Department to conduct more profound information. Additionally, there must be a job placement rotation in terms of areas of jurisdiction of the CI personnel to avoid conspiracy between the borrower and the investigator.
Capacity and Credibility must dance together-thus having a stable source of income is one of the parameters as a basis for granting a specific loanable amount	Credit Analyst Legal Department	Willingness to pay varies on the capacity of repaying. There are some instances that the client/s are willing to pay but do have the capacity for repaying due to the fact of insufficient income.	The credit analyst must consider not just only the source of income but rather the flow of income throughout the year by verifying the Income Tax Return (ITR). It is also recommended that the lending institution must consider another payment scheme before writing-off a specific account such as Dacion en pago and a long-term repayment scheme.
Meeting the current obligation is important to determine the solvency of a certain individual/business debtor	Credit Manager Credit Officer	The acid test ratio is an accounting tool to countercheck the capacity of one entity of meeting the current obligations. Thus, the objective of this plan is to identify the capacity for repaying short-term loans which happened to be the nature of the lending institution.	When it comes to borrowers/owners of formal business entities, the lending organization must check the Financial Statement to determine the capacity of the organization for meeting current obligations. However, for borrowers that do not have a formal FS that would serve as a medium of reference, the borrower must provide Barangay Clearance stating that they are residents of a specific barangay and has no records connected to or with unsettled financial obligations.
Provide additional verification or security to prove the character of the debtor	Credit and Investigation Department	To counter check the veracity of documents specifically it is the subject of mortgage such title of land, certificate of ownership, OR/CR of cars/motorcycle, among others	When it comes to verification, the Lending institution must seek other government offices such Registry of Deeds, Land and Transportation Office, Courts, and Banks for vindicating the authenticity of the documents. The borrower must provide a Special Power of Attorney to authorize the said institution if possible.
Requiring the debtor to provide Income Tax Return (ITR) to check the source/s of income	Credit Analyst Credit Bureau Credit Information Corporation (CIC)	To provide more thorough information regarding the credit standing of the borrower	The Credit Information Corporation and other credit bureaus provide a massive amount of information. Thus, a lending institution in the municipality of Cabiao and San Isidro must affiliate with these organizations to check the credit standing of one individual or organization. Furthermore, by requiring the Income Tax Return, the Credit Investigation team can countercheck the net taxable income of the borrower which could be a good parameter for evaluating the solvency of the borrower.
Utilize government agencies to identify the veracity of documents such; LTO, BIR, RD; and banking institutions	Other Government Agencies Credit Investigation Department Legal Officer	The usual practice of requiring collateral for a high amount of loans is very common and normal nowadays. Due to this, unfaithful borrowers use to falsify documents to borrow larger amounts. Hence, this method of information search can screen falsified documents and other fictitious legal instruments.	The lending organization must incorporate and empower the liaison officer to accompany the borrowers for the authentication of documents.
Determine the number of years of operation and together with the historical trend	Credit Investigation Department	To identify the solvency level of one organization or individual business owners	The lending organizations must require the loan applicants to submit a copy of the following certificates: 1. DTI 2. Barangay Permit/ clearance 3. Government Issued I.D
Provide a more comprehensive repayment scheme for unrealizable accounts	Legal Department	To help the borrowers to settle their finances using other schemes of payment	Instead of writing-off a certain account, the lending organization must provide other terms of payment such Dacion en pago (based on the actual market value) and a long-term payment scheme to reduce the burden of the client for paying accumulated debts.

V. CONCLUSION

This research was conducted to determine and define the credit risk management practices of different lending institutions in Nueva Ecija. As to the profile of the lending institutions, most of them have been offering microfinance loans between one (1) to ten (10) years and above with an upstanding portfolio of P3,000,000.00 to P5,000,000.00 and they proposed individual and group loans. For group loans, the average maximum first loan is P10,000.00 at the minimum of P5,000.00, and P7,000.00 for the succeeding loans. On the other hand, the average maximum first loan for individuals is P691,966.67 and P14,000.00 at the minimum. At their succeeding loans, and P50,000.00. P1,050,000.00 the can between borrow Majority of the lending institutions have terms of loans for three (3) months at weekly loan repayment period.

As to the current risk management practices that they are implementing interview is their most common method of acquiring relevant information. The most important information that had to be gathered is the detailed credit investigation of the applicant, whether the applicant has an existing business with its income going to be screened, and whether borrowers must not have remaining loans with other lending institutions. The responding lending institutions perform credit evaluations with the 5C's of credit as their basis, and the most important for them is capacity. Another component of credit investigation is the address verification of the applicant. In terms of monitoring loans, the client officers of every company perform regular visitations on the projects/businesses of the borrowers and they use the average collection period as their way of tracking payments. In collecting payments, the majority of lending institutions send their collectors' house-to-house. For the delinquent accounts, they either send a delinquency letter or make a telephone call to the customer or group leaders.

As to the level of loan collection performance, the majority of the lending institutions have a portfolio at risk of 5% and below; an on-time repayment rate of 41–60%; and a past due rate of 5% and below and 6–10%.

RECOMMENDATION

Establishing methods to prevent risks, limit risks, or lessen the impact risks have on businesses is an important part of developing a comprehensive risk mitigation plan. Based on the findings of the study, the researchers highly recommended the implementation of the proposed Risk Mitigating Plan or Strategy and the proposed action plan in each strategy. This plan is suggested to assist the different lending companies in accomplishing their organizational objectives.

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