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## **Analysis Numerically and Using the Ranking Formula: Causes of the Loan Classifications and Impact on the Profits of the Pubali Bank Limited**

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**ABSTRACT:** *Loan classification is a common phenomenon in the banking arena. Firstly, this study observes loan classification and recovery of loan classification within 5 consecutive years of Pubali Bank Limited. Secondly, it tries to identify the causes of a loan classification from both the bankers and the defaulted customers' points of view of the Pubali Bank Limited. Thirdly, it talks about the impact on profit of Pubali Bank Limited for the classified loan. And finally, it forwards some suggestions for improving the recovery performance of the classified loans. To identify the causes of loan classification, a total of 200 respondents' opinions have been taken which are randomly collected from 473 different branches of Pubali Bank Limited. The recovery of classified loans and the classified credit outstanding are hugely different from the years 2012 to 2016. To investigate the causes of loan classification, a questionnaire-based survey has been conducted to collect the primary data. The study shows that the lack of loan supervision is the vital reason for loan classification which is marked by the 62% defaulted customers; while on the other hand 66% bankers traced that the most important cause for the loan classification is lack of loan supervision. This study describes that the classified loan rate is the most important issue that has negative effect on bank profitability and inability to survive. Classified credits of the Pubali Bank's will not end in a blink, they have to reduce gradually. Therefore, Pubali Bank will have to train the customers before and after distribution loan, create reasonable interest rates, monitoring clients and select the genuine borrowers through fair investigation.*

**KEYWORDS:** Numerically and Ranking Formula, Loan Classification, Impact on the Profit, Pubali Bank.

## 1. Introduction

At present, Pubali Bank is the largest private commercial bank having 473 branches and it has the largest real-time centralized online banking network ([www.pubalibangla.com](http://www.pubalibangla.com)). The non-performing loans (NPLs) are that loans which are in or close to default. According to the rules of Bangladesh Bank the NPLs normally takes place when the principal and interest payments on the loan are overdue by 90 days or more. The NPLs are generally treated as bed debt that is why there is a minimum chance of greeting back (European Central Bank, 2016). The average percentage of classified loans is higher in Bangladesh compared to other countries (Banik & Das, 2015). Classified loans have unpaid interest and principal outstanding, and it is unclear whether the bank will be able to recoup the loan proceeds from the borrower. (Song, 2002) state that classifying a credit means allocating estimated risks of nonpayment, based on the loan assessment of a borrower's repayment capacity to meet his/her total obligations under the loan contract. The credits could be recovered from the creditors to increase the deposits so that the banks can invest the other customers. The performance evaluation of banks is important for all parties including depositors, investors, bank managers, and regulators. (Nasrin & Sarker, 2014) state that financial institutions are the blood of an economy and work as an agent to regulate the circulation of money as well as to ensure their profitability by credit disbursement in different sectors. The performance evaluation of a commercial bank is usually related to how well the bank can use its assets, shareholders' equities and liabilities, revenues and expenses. (Adhikary, 2005) finds that in the Indian subcontinent (India, Pakistan, Sri Lanka, Bangladesh and Nepal) the causes of loan classifications are usually attributed to the lack of effective monitoring and supervision on the part of banks, lack of effective lenders' recourse, weaknesses of legal infrastructure, and lack of effective

debt recovery strategies. This study observes loan classification and recovery of loan classification within 5 consecutive years from 2012 to 2016 of the Pubali Bank Limited. This study depicts that the recovery of classified loans and classified credit outstanding are hugely different during the years, so it is a burning issue for Pubali Bank Limited. To reduce this classified loans the study first tries to determine the reseason of loan classifications form customers' and bankers' points of view, the second describes the impact on profitability for classified loans and finally put some suggestions on how to recover it. Pubali Bank's classified credit will not end in a blink, it has to reduce gradually. This study shows that the lack of loan supervision is the vital reason which belongs to rank 1 (weighted score is 21.20%) for loan classification and 62% defaulted customers marked this problem is one of the three problems. This study also finds that willful default or refusal to repay the loan is the second heist reason the rank 2 (weighted score 18.20) and 57% bankers notice that this problem is one of three. The study shows that the fund diversion is the most vital reason for the loan classification from the banker's point of view which represents rank 1 (weighted score 27.70) and 66% bankers mark this problem as one of the three problems. This study also finds that willful default or refusal to repay the loan is the second reason the rank 2 (weighted score 18.20) and 40% bankers notice this problem as one of the three problems. The study also describes that the classified loan rate is the most important issue that has negative effect on bank profitability and inability to survive. The study provides suggestions that the Pubali Bank Limited can avoid their classified loans by adopting methods suggested by the Central Bank of Bangladesh. Therefore, Pubali Bank will have to train the customers before and after distribution loan, create reasonable interest rates, monitoring clients and proper loan lending.

## 2. Objectives of the study

The study focuses on what causes loan to be classified from the perspective of bankers' and borrowers' of the Pubali Bank Limited. The objectives of the study can be stated as below –

- to observe classified loan and recovery of the classified loan within 5 consecutive years (from 2012 to 2016) of the Pubali Bank Limited.
- to identify causes of loan classification from both the bankers and the defaulted customer's point of view of the Pubali Bank Limited.
- to find out the impact on the profit of Pubali Bank Limited for the classified loan.
- to put some suggestions that will help to improve the recovery performance.

## 3. Literature review

Generally, banks conduct their businesses by taking deposits and making loans using those deposits. The causes of classified loans are usually attributed to the lack of effective monitoring and supervision on the part of banks, lack of effective lenders' choice and weakness of legal infrastructure. Lack of effective debt recovery strategies is a common phenomenon for the banking sector in Bangladesh. A bank is a financial institution that creates credit by lending money to a borrower, thereby creating a corresponding deposit on the bank's balance sheet. There are two types of credits: Funded and Non-Funded. While letter of credit, bank guarantee, etc. are non-funded credits, the Commercial Banks provide the following funded credits to meet various requirements of their customers such as short term credit, medium and long term credit, bridge credit, composite credit, consumption credit etc. (Bonin and Huang, 2001) state that the probability of banking crises increases if financial risk is not eliminated quickly. (Grigorian & Manole, 2002) tell that the banking sectors with few large, well-capitalized banks are likely to generate better efficiency and higher rates of intermediation. (Almazari, 2014) observes that low asset quality and poor liquidity are

the two major causes of bank failures and represented as the key risk sources in terms of credit and liquidity risk and attracted great attention from researchers to examine their impact on bank profitability. Access to financing continues to be one of the most significant challenges for the creation, survival and growth of companies' especially innovative ones (Mircea, 2012). (Hou, 2001) said, there is no global standard to define non-performing loans at the practical level. (Takamura, 2013) states that the credit defaults of a bank depend on aggregate productivity and the size of the business sector. (Spuchl'áková, Valášková & Adamko, 2015) state that default risk involves the inability or unwillingness of a customer or counterparty to meet commitments concerning lending, trading, hedging, settlement and other financial transactions. When aggregate productivity falls, the net worth of banks falls because of an unexpected increase in credit default. Therefore, from the above literature review, this study concludes that the causes of loan classification have a great impact on profit

## 4. Methodology

The research methodology is decided after observing the nature of the research and the objectives formulated. This research is conducted by both primary and secondary data. For secondary data, this study collects 5 consecutive years (from 2012 to 2016) Annual Report of Pubali Bank Limited. To identify the reasons for classified loans, a questionnaire survey was conducted separately from the points of view of bankers and defaulted customers. This study uses both qualitative and quantitative methods.

- In this study, the sample size is determined as:

$$n = \frac{z^2 p(1-p)}{e^2}, \text{ Where } n \text{ is the size of the sample;}$$

$z$  is the standard normal value corresponding to the desired level of confidence;

$P$  is the proportion of success; and  $e$  is the maximum acceptable sampling error

In favor of the study, we select the following determine the sample size. Because the important variable is a different type of qualitative characteristics:

$$n = \frac{z^2 p(1-p)}{e^2} = \frac{(1.96)^2 \times .85(1-.85)}{(.05)^2} = 196$$

For convenience, it has been used 200 samples instead of 196.

- This study has taken 200 respondents' opinions from which 100 have been taken from defaulted customers and another 100 from bankers' opinions about the causes of loan classification.
- This study uses the ranking process to categorize ordinal data for analyzing primary data.
- Rank order data are often coded as a

bankers' and another one for the borrowers' points of view.

In the questionnaire, there are ten causes from which options respondents have been selected three causes and make them rank as per the highest reason occurred respectively like rank 1, rank 2 and rank 3. Later on, it has to give weight that means rank 1×3, rank 2×2 and rank 3×1 then add these three values. After that, it makes percentages. According to the percentages it makes rank once again.

## 5. Findings

### 5.1 Credit Disbursement and Achievement

In the banking business, the main source of income is the credit which is also an asset of a Bank. Bank mainly collects a deposit from surplus and then this deposit is disbursed to a deficit as credit. At the beginning of the year, the global bank management distributed credit disbursement target, deposit collection target, etc. so that at the end of the year bank can reach their goal.

**Table 1: Target Disbursement and Achievement Status of Credit during 2012-2016(Taka in Crores)**

Year	Target	Achieved	Unreached	% of achievement	% of unreached
2012	15,000.00	12,206.85	2,793.15	81.38	18.62
2013	15,500.00	13,694.04	1,805.96	88.35	11.65
2014	17,500.00	14,997.50	2,502.50	85.70	14.30
2015	20,000.00	17,312.54	2,687.46	86.56	13.44
2016	20,200.00	20,301.12	-101.12	100.50	-0.50
Max	20,200.00	20,301.12	---	100.50	---
Min	15,000.00	12,206.85	---	81.38	---
Avg.	17,640.00	15,702.41	1937.59	88.50	11.50

Sources: Annual Report from 2012 to 2016 of the Pubali Bank Limited

- consecutive integer from 1 to n category
- Primary data has been collected from November to December 2017. Two questionnaires have been made, one for the

The following Table I shows that the disbursement target and the achievement of credit according to the annual report of Pubali Bank Limited the data have been collected from 2012 to 2016 years.

The above Table1 shows that in 2012 the credit target is Tk.15, 000.00 crores but the achievement is Tk.12, 206.85 crore which means 18.62 percent remains to achieve the target. In 2013, 2014 and 2015 Table1 shows that 11.65, 14.30 and 13.44 percent

## 5.2 Classified Loan and Recovery of Classified Loan

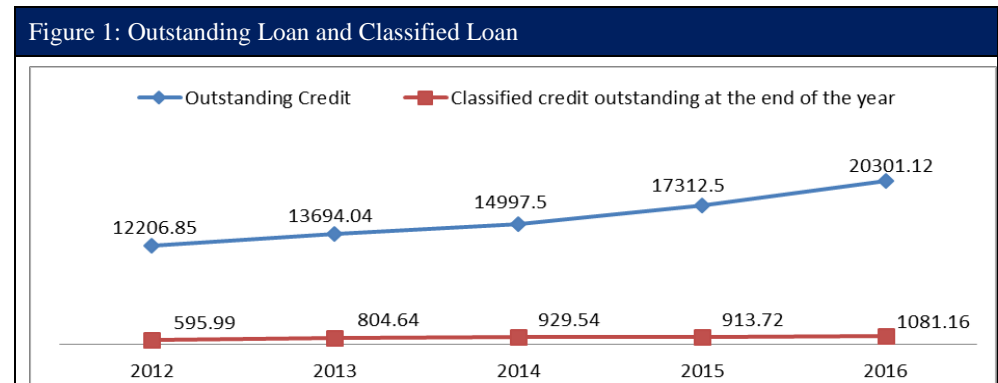
In the bank, more classified loan shows more weak financial health and less classified loan

Year	Outstanding Loan	Classified Loan at the beginning of the year	New Classified Loan during the year	Recovery of Classified Loan during the year	Classified Loan outstanding at the end of the year
2012	12206.85	214.64	388.29	6.94	595.99
2013	13694.04	615.96	197.65	8.97	804.64
2014	14997.50	813.61	124.15	8.22	929.54
2015	17312.54	937.76	0	24.04	913.72
2016	20301.12	921.84	170.3	10.98	1081.16
Max	20301.12	921.84	388.29	24.04	1081.16
Min	12206.85	214.64	0	6.94	595.99
Avg.	15702.41	700.76	176.08	11.83	865.01

Sources: Annual Report from 2012 to 2016 of the Pubali Bank Limited

are remaining to reach the target respectively. Finally in 2016 Pubali bank reached their goal and the success rate is 100.50 percent. Table1 also depicts that maximum achievement is 20,301.12 in the year. 2016 which is more than the target. Table1 also shows that the average target is 17,640.00 crore and the average achievement is 702.41 crore from the year 2012 to 2016.

shows more financial health. The following Table 2 shows classified loans, recovery of classified credit against their total credit for five years from 2012 to 2016 of the Pubali Bank Limited. Table 2 shows that the loans of Pubali Bank Ltd. are increasing gradually from 2012 to 2016. It also shows that the maximum classified loan outstanding is 1081.16 crore in the year 2016 and the maximum recovery classified loan is 24.04



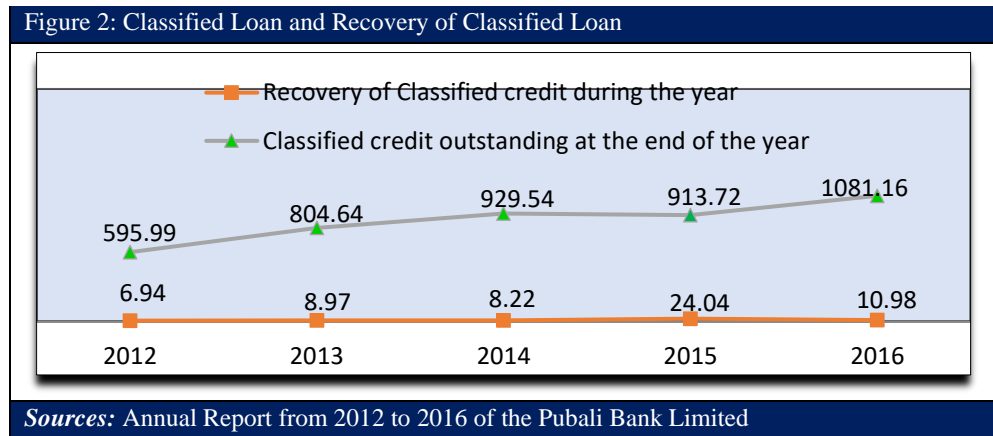
crore in the year 2015. It also depicts that the average classified loans and recovery of classified loans are 865.01 crore and 11.83 crore respectively from 2012 to 2016 year of the Pubali Bank Limited.

### 5.3 Credit Outstanding and Classified loan from 2012 to 2016 of Pubali Bank Limited.

The following Figure 2 shows that the classified

loan outstanding is increasing whereas the recovery of classified loan is not increasing as per the same rate from 2012 to the 2016 year of the Pubali Bank Limited.

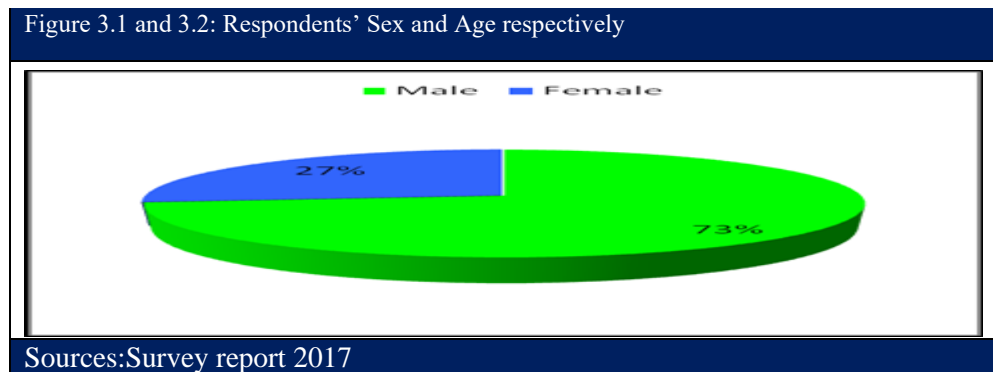
From the above Figure 2 depicts that the



The following Figure 1 shows that the outstanding loan increases but the classified loans are not increasing as per the same rate. So we can say that the recovery performance is not satisfactory level as a guideline provided by the regulatory body of the Bangladesh Bank

### 5.4 Classified Loan and Recovery of Classified Loan

recovery of classified loans and classified credit outstanding are hugely different during the years, so it is a burning issue for Pubali Bank Limited. To reduce this classified loan the study firstly tries to find out the causes of loan classifications from customers' and bankers' perspective, secondly describes impact on profit for classified loans and finally put some suggestions on how to recover it.



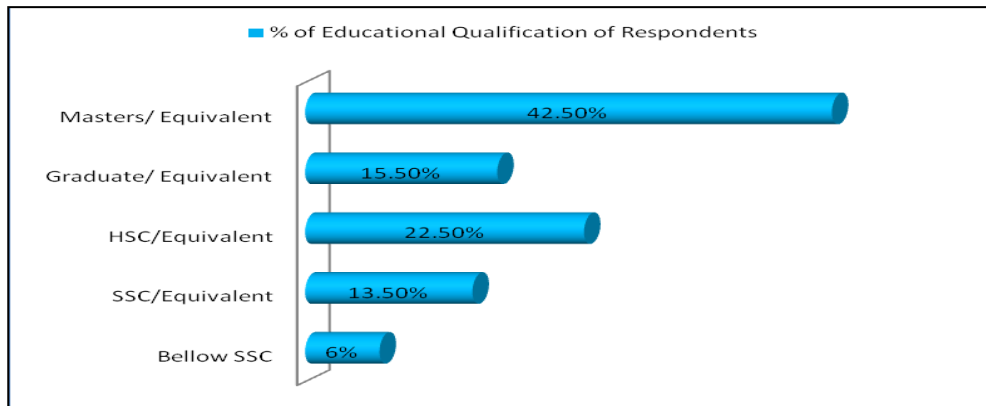
### 5.5 Respondents' Sex and Age

The following figure 3.1 shows that the majority of 73 percent of the respondents are male and the other 27% is female.

The above figure 3.2 shows that the majority

The following figure 4.1 shows that the majority of 42.50 percent of the respondents have been completed the Post Graduation. Figure 4.1 also depicts that 15.50 and 22.50 percent of the respondents have completed

Figure 4.1 and 4.2 Respondents' educational background and occupation respectively



Sources:Survey report 2017

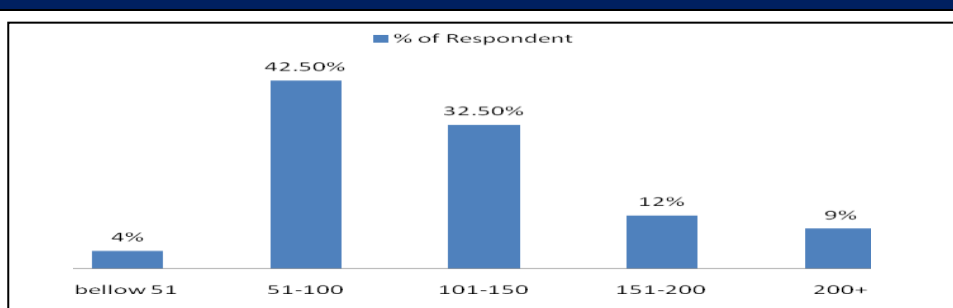
of 62.50 per cent of the respondents are 40-49 years category. Figure 3.2 also shows that 38 and 27 percent respondents are in the 50-59 years and 30-39 years category respectively.

### 5.6 Respondents' Educational Background and Occupation

the Graduation and the Higher Secondary Certificate respectively.

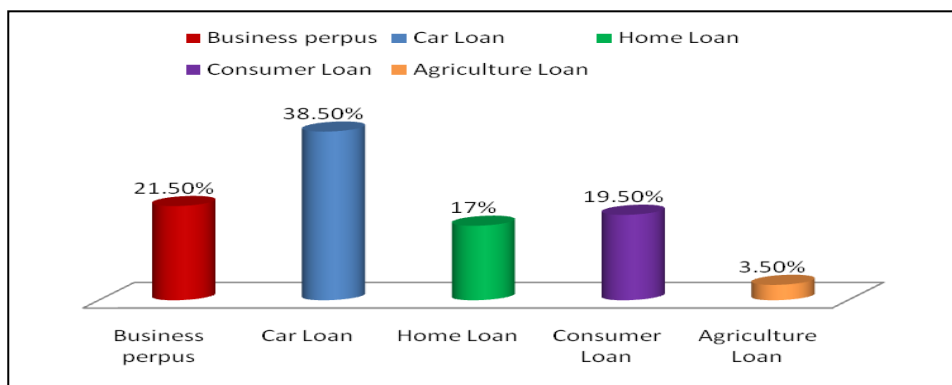
The above figure 4.2 represents that the majority of 50 percent of the respondents are bankers. Figure 4.2 also shows that 43 and 4 percent of the respondents are entrepreneurs and service holders respectively

Figure: 5 Monthly Income Level of the Respondents (Income in thousands)



Sources:Survey report 2017

Figure: 6 Types of Loan



Source: Field survey (2017)

5.7 Monthly Income Level of the Respondents

The figure 5 shows that the majority 42.50 percent of the respondents' monthly income level is 51-100 thousand and 32.50 percent

of the respondents' monthly income level is 101-150 thousand.

5.8 Types of Loan Received by Respondents

Table 3: Reasons for Default from the viewpoint of Defaulted Customers'

Reasons for Default from the viewpoint of Defaulted Customers'	Borrowers ranking			Weighted Score	Rating (%)	Rank
	Rank 1	Rank 2	Rank 3			
Inefficient Management	13	11	4	65	10.80	3
Lack of loan supervision	25	15	22	127	21.20	1
Lack of collateral/Financial securities	8	12	6	54	9.00	5
Lack of legal action by the banks against defaulters	18	16	23	109	18.20	2
Lack of adequate efforts for recovery	6	8	5	39	6.50	7
A change of regulator's (Bangladesh Bank) policies.	4	6	8	32	5.30	9
Unrealistic project appraisal studies	7	9	18	57	9.50	4
Corruption of Bank employee	7	5	4	35	5.80	8
Delayed assessment of loan proposal	4	6	4	28	4.70	10
Delayed disbursement of the approved fund	8	12	6	54	9.00	6
Total	100	100	100	600	100.00	

Note: The first ranking problem earns three points, the second two points and the third one point. On the basis of percentage of total weighted score for each problem, overall ranking is made. Source: Survey Data (2017)



The Figure 6 shows that the majority 38.50 percent of the respondents are taking car loan and 21.50 percent is taking the loan for the business purpose

classification from the defaulted customers' points of view.

(Bichanga & Aseyo, 2013) state that the poor monitoring and lake of supervision lead

**Table 4 Reason of Default from the viewpoint of Bankers'**

The reason for Default from the viewpoint of Bankers	Bankers Ranking			Weighted Score	Rating %	Rank
	Rank 1	Rank 2	Rank 3			
Fund Diversion / The loan didn't use in proper	42	16	8	166	27.70	1
Willful default or refusal to repay	12	15	13	79	13.20	2
Damage of crops due to Natural Disasters	6	7	9	41	6.80	8
Lack of business experience	10	12	9	63	10.50	3
Lake of financial securities	4	8	14	42	7.00	7
Industrial sickness	8	12	8	56	9.30	5
Sanction of inadequate loan limit	7	12	17	62	10.30	4
"BENAMI" loan received	3	6	5	26	4.30	9
Poor Financial Performance	6	8	12	46	7.70	6
Inefficient Management	2	4	5	19	3.20	10
Total	100	100	100	600	100.00	

Note: The first ranking problem earns three points, the second two points and the third one point. On the basis of percentage of total weighted score for each problem, overall ranking is made. Source: Survey Data (2017)

5.9 The defaulted customers' point of view has been taken regarding the reasons behind their loan classification

The loan portfolios of the lending institutions are major assets that generate a significant amount of interest income. Adhikary (2006) finds that the immediate consequence of a large amount of classified loans in the banking system is bank failure as well as an economic slowdown. The causes of nonperforming loans are usually attributed to the lack of effective monitoring and supervision on the part of banks, lack of effective lenders' selection, weakness of legal infrastructure, and lack of effective debt recovery strategies and high-interest rate. To base on the above causes, this study selects the following reasons for loan

to default a loan. As evident of Table 3 shows that the lack of loan supervision is the vital reason which belongs to rank 1 (weighted score is 21.20%) for loan classification and 62% defaulted customers marked this problem is as one of the three problems. This study also finds that willful default or refusal to repay the loan is the second reason the rank 2 (weighted score 18.20) and 57% bankers notice that this problem is one of three. The study depicts that inefficient management is the third reason which belongs to rank 3 (weighted score is 10.80%) for the loan classification. Alex (2014) confirmed that the causes of loan default to include; high-interest rate, inadequate loan sizes, poor appraisal, lack of monitoring, and improper client selection.

Therefore, Pubali Bank will have to train the customers before and after distribution loan, create reasonable interest rates, and select the genuine borrowers through fair investigation.

#### 5.10 Reason of Default from the viewpoint of Bankers

Mungure, 2015) found that the interest rates charged on loans, diverting funds from its intended use, multiple borrowing have a direct impact on repayment. This study selects the following reasons for loan classification from the bankers' points of view.

Above Table 4 shows that the fund diversion is the most vital reason for the loan classification from the banker's point of view which represents rank 1 (weighted score 27.70) and 66% bankers mark this problem as one of the three problems. (Mungure, 2015) reveals that high-interest rates and lack of collateral are the burning issues for the loan classification. This study also finds that willful default or refusal to repay the loan is the second highest reason the rank 2 (weighted score 18.20) and 40% bankers notice this problem as one of three. According to Ahmad, (1997), causes of loan default include; lack of willingness to pay loans coupled with the diversion of funds by borrowers, willful negligence and improper appraisal by credit officers. This study also revealed that the lack of business experience is rank 3 (weighted score 18.20) from the bankers points of view and the rating percent is 10.50. (Akter & Roy, 2017) finds that banks provide loan to a new business with inexperienced owner, sanctioning loans without adequate collateral. Therefore, Pubali Bank will have to train the customers before and after the distribution loan. Moreover, they have to create reasonable interest rates, monitoring clients and select

genuine borrowers through fair investigation.

#### 6. Impact on profit for classified loan

Research evidence regarding identification, measurement, effect and cause of bank failure suggests that NPLs rate is the most important issue that has a negative effect on bank profitability and inability to survive. This is true because NPLs have a serious negative impact on loan growth rate; in which case, there will be a negative effect on banks profitability as it reduces loan amount and interest income of the banks simultaneously. Bank directors are expected to review policies, including credit risk policies, and responsibilities. Effects of classified loans are such as stopping money cycling, earning reduction, capital erosion, increase in loan pricing, frustration, etc. As a result, the values of security are increased and the risks of financial recession also see a rise. Victor and Eze (2013) confirmed that the lending rate and monetary policy rate has significant and positive effects on the performance. Amplifications of the effect of classified loans are as follows:

1. There is a negative relationship between the classified loans and performance efficiency. So, the increase in classified loans hampers the profit.
2. Classified loans can lead to efficiency problems for the banking sector. It is found by several economists that failing banks tend to be located far from the most-efficient frontiers because banks don't optimize their portfolio decisions by lending less than demanded.
3. Classified loans create a credit crunch situation. The credit crunch is a phenomenon that banks ration loan disbursement and new credit commitments to protect but add more risks. Banks treat a loan as an asset. They expect a return from it. If loans become classified loans then banks have a lack of funds to give loans according to their

commitment or banks could give loans at their previous interest rate.

4. During the crisis moment, to restore the credibility among creditors and depositors, failing financial institutions not only try to expand their equity bases but also reduce their risk assets or change the composition of the asset portfolio. Because of such suspicious actions, the corporate debtors are always targeted, thus the economic growth is being stalled overall.

5. Money cycling gets stopped due to an increase in classified loans. The slow-flowing of cash always harms any business.

6. Classified loans exist as a natural consequence of lending behavior. When banks re-balance their portfolio, they decide on the degree of risks they will tolerate for a given level of expected return according to their risk preference because banks have to keep 10% of their risk weight asset as capital. Banks treat loans as risky assets. If the risk is high, banks will expect a high return. The study shows that the average classified loans and the recovery of classified loans are 876.26 and 11.83 crores respectively in Table 2 from 2012 to 2016 of Pubali Bank Limited. So, the study represents the difference between classified loans and recovery of classified loans is very high. When the level of classified loans goes beyond a certain point bank cannot accept, and then it affects the bank's re-balancing actions. So, when classified loans cross the boundary of the above threshold, they start to spawn negative effects on more lending.

This result support empirical evidence to confirm that nonperforming loans portfolio has negative effect on bank profitability.

## 7. Conclusions

The success of banking business depends on how efficiently banks collect fund and how efficiently manage the loans so that the

performance of loans management is important for banking industry. Pubali Bank is the largest private commercial bank having 473 branches with an online banking network. The study finds that targets and achievements are gradually increasing from 2012 to the 2016 year of Pubali Bank Limited. It also depicts that the average classified loans and recovery of classified loans are 876.26 corers and 11.83 corers respectively during the years. This study shows that the lack of loan supervision is the vital reason which belongs to rank 1 (weighted score is 21.20%) for loan classification and 62% defaulted customers marked this problem is one of the three problems. This study also finds that willful default or refusal to repay the loan is the second heist reason the rank 2 (weighted score 18.20) and 57% bankers notice that this problem is one of three. The study shows that the fund diversion is the most vital reason for the loan classification from the banker's point of view which represents rank 1 (weighted score 27.70) and 66% bankers mark this problem as one of the three problems. This study also finds that willful default or refusal to repay the loan is the second heist reason the rank 2 (weighted score 18.20) and 40% bankers notice this problem as one of the three problems. The study also describes that the classified loan rate is the most important issue that has negative effect on bank profitability and inability to survive.

## 8. Recommendations and suggestion

Any organization has some obstacles, some limitations; Pubali Bank is not out of it. Create reasonable interest rates, monitoring clients and select genuine borrowers through fair investigation. Vodova (2003) suggested that to reduce default loan risk the bank should be able to separate "bad" customers from those with a low probability of default. This study recognizes several weaknesses in

banking; Pubali Bank Limited should follow the following instructions

- i. Selection of genuine borrower with the fair investigation.
- ii. The banks should observe closely to the customer so that the customers are unable to divert fund from sanction project to other areas of business.
- iii. Better publicity, Seminar and workshop on loan and advice may brighten the situation, highlighting the needs and problems of the borrowers.
- iv. The concerned authority should take the initiative to stop the unethical activities or corruption of the banks' staffs in loans sanction;
- v. Steps should be taken to solve the problems of the borrowers.
- vi. Efficient and motivated manpower for sanctioning loans should be ensured.
- vii. The rate of interest should reduce.
- viii. Spot investigation for loan allotment should be ensured before disbursing the loan.
- ix. Prompt services should be given to the borrower.
- x. Proper legal action against defaulted customers should be taken.
- xi. The government of the country should take initiative to prevent the political influence to create pressure for sanction of loans to a customer who are not eligible for those loans.
- xii. Awareness of refunding the loan should be increased.

Pubali Bank's classifies credit will not finish in a blink, they have to decrease gradually. If the above suggestions follow the Pubali Bank Limited then their classified loan will be reduced and they will reach the target.

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