

# Strategies and Best Practices for Non-Performing Assets Management in Commercial Banks of Nepal: A Comprehensive Study

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**Abstract**—The growing number of Non-Performing Assets in Nepal's banking sector has led to problems with financial stability and operations. Proper management of NPAs allows banks to preserve profit margins and maintain steady carrying of loans. Thus, the research looks into the management of NPAs in commercial banks in Nepal to assess how asset quality, profits, and the required capital are related. This study intends to measure why ineffective management and supervision lead to higher NPAs and how these, in turn, impact a bank's performance. In order to reach its objective, the current study applies a quantitative method and uses information found in annual financial reports of a group of commercial banks. Total Non-Performing Assets (TNPA), Net Profit After Tax (NPAT), and Capital Adequacy Ratio (CAR) were examined by using Pearson correlation analysis. The statistics confirmed that there was a very strong positive relationship between TNPA and NPAT ( $r = 0.927$ ), and between TNPA and CAR ( $r = 0.931$ ). Still, the presence of such connections does not show that there is a direct relationship, so we should be careful when looking at them. In theory, a rise in NPAs should make banks put more money aside as provision for loan losses, which could lead to a loss in profit. Instead of NPAs impacting them positively directly, banks might benefit from them because of other factors, such as taking on more loans, growing their capital reserves, or gaining income from many different sources. According to this study, strong credit risk evaluation as well as effective supervision by regulators are important. While the research findings show some interesting results, regression analysis using the right control variables should be done to confirm the actual relationships between the variables. The information collected helps to understand proven ways to handle NPA issues in the commercial banks of Nepal.

**Keywords:** *Non-performing assets, commercial bank of Nepal, strategies and practices of NPAs, Ineffective credit appraisal, Regulatory measures.*

## I. INTRODUCTION

In the banking industry, Commercial administration and risk management are crucial facets which is securing the constancy, integrity, and commercial bank's long-term prosperity. Commercial administration is the management of instructions, protocols, and functions utilized to govern and regulate a company. Commercial administration is a compilation of ethics and norms which was secure that an organization is regulated the benefits of their investors and other stakeholders [1]. Hazard

governance is the system of labelling, appraising, and regulating prospective hazard to a company. It is a crucial aspect of commercial administration due to it aids to secure that the organization is conscious of and ready to face the potential risks.

The loan and advances provided by the bank have to be classified as pass loan and non-performing loan. The pass loans are the loans and upfront payments that have not delinquent and that are delinquent by a not exceeding three months [2]. And non-performing loans are loans that are overdue by the period of 90 days and more. Non-Performing Assets (NPA) is the bank loan that the borrower fails to pay for the period of 90 days or more. It refers to the classification of loans and advances that are in default. Every commercial bank has significant challenged with the deduction of NPAs, and proper administration of the NPAs is viewed as essential [3]. NPA is classified into Substandard assets, Doubtful assets and Loss asset. Substandard assets that have been NPAs which is less than 12 months, indicating the very first sign for the potential risk. Doubtful assets are those that have been over 12 months, indicating the higher likelihood sign for the potential risk and Loss assets are identified as irrecoverable by banks and external auditors [4]. This classification aids to banks to assess the credit risk, to allocate provisions and maintains the financial stability. To maintain the stability of banking sector, through by understanding and managing NPAs which is enhance the overall economic of the country [5].

The research intends to provide valuable insights and recommendations for banks, through correlation analysis that is employed on data which is acquired NPAT, TNPA, TSL and CAR for each year over a 7-year period, ultimately contributing to the development of strategies which is improve the financial stability and operational efficiency within Nepal's banking industry.

The rest of the sections of this research have been organized as follows: Review of the existing literature of Strategies and Best Practices for Non-Performing Assets Management in Nepal's banking industry in Section 2. In Section 3, proposed research hypothesis is explained. The presents the experimental results in Section 4. In Section 5, Conclusion and further work is mentioned and the study is concluded.

## II. LITERATURE REVIEW

The escalating challenge of Non-Performing Assets (NPAs) in Nepal's banking industry, particularly within commercial Banks (PSBs), has garnered significant scholarly attention [6]. Non-performing assets leads to significant complication to both the banks and its affecting its available funds in a negative manner. It is escalating their bad debts and also reducing their profitability [7]. One of the major causes of NPA is the poor control over banks as well as the procedure for debt recovery and legal procedure is very long and time consuming. As stated by the credit risk theory about non-performing assets and profitability, banks which are hold non-performing assets might had significant effect on its financial institutions and overall fiscal efficiency [8]. Moreover, the operating efficiency was increased when performance optimization has a detrimental connection with yield on assets that causes a reduction in yield on assets of Nepal's banking industry [2]. The industry ranking of non-performing assets of selected Nepalese banking institutions to recognize its relative productivity. Data collected from diverse secondary resources over a decade have been analyzed with descriptive statistics and ANOVA. All banks' policies are aimed at stemming the NPAs for improvement of asset quality and profitability [9]. Comparatively, NPAs acquire most in public banking sector as compared to private banking sector. Moreover, to reduce the NPAs problem the ministry wants to take action. However, banks those who are hold NAPs ought to also has to be more preventive to enact a configured NPAs principle to prevent the non-performing assets and ought to follow severe restrictions for its restoration [10]. In the study, it is observed that the level of Non-Performing Assets (NPAs) in public banks remains significantly higher than that of private banks. Achieving a state of zero NPAs is considered impractical. Hence, it is essential for the government and implementing corrective measures to address this issue. In comparison of the three banks NABIL has the less non-performing assets and consequently secured assets are the primary factors of escalating non-performing assets in the business alliance along with the minimum provisioning requirement although NIB having a least mean value of NPA & LLP. Ineffective credit appraisal, institutional pressure lending to non-priming worthy borrowers, inflated value of banks similar to NBBL [11]. Additional consideration contributing to growth of NPAs are inadequate credit approval procedure, ineffective credit supervising & managing administration, economic deceleration, defaulting behaviours etc.

### A. Research Hypothesis

In banking sector, hypothesis is a testable statements or possible predictions between two are more independent or dependent variables. In this context of the research about non-performing assets in Nepal's banking industry, suggested independent and dependent variables are followed as below:

#### 1) Independent variables:

- Ineffective credit appraisal

Regulatory measures

#### 2) Dependent variables:

Non-performing assets

Bank profitability

Bank performance

In the context of the research about non-performing assets in Nepal's banking industry, suggested hypothesis is followed as below:

#### a) Hypothesis 1: Ineffective Credit Appraisal Contributes to NPAs

The first hypothesis is Ineffective credit appraisal contributes to NPAs. The null hypothesis (h0) of Ineffective credit appraisal does not contribute to the occurrence of non-performing assets in Nepal's banking industry. Conversely, the alternative hypothesis(h1) of Ineffective credit appraisal suggests do indeed contributes to the occurrence of non-performing assets in Nepal banking sector [12]. This hypothesis is increased the NPAs which is turned negatively affect the bank profitability, bank performance and overall performance.

#### b) Hypothesis 2: Regulatory Measures Affect NPAs Management

The second hypothesis is Regulatory measures affect NPAs management. The null hypothesis (h0) of Regulatory measures suggests will not influence NPAs management in Nepal's banking industry. Conversely, the alternative hypothesis(h1) of Regulatory measures suggests will indeed influence the NPAs management in the Nepal banking sector [13]. This hypothesis is decreased the NPAs which is turned negatively affect the bank profitability, bank performance and overall performance.

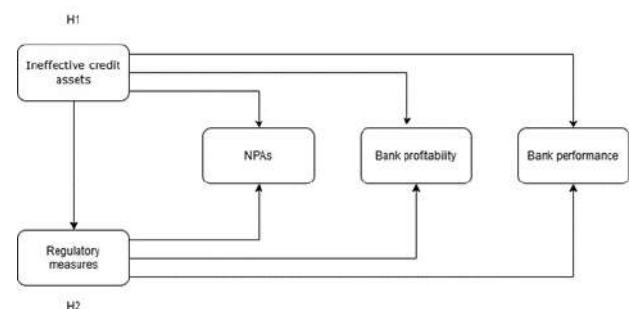


Fig. 1. Hypothesis development

## III. RESEARCH METHODOLOGY

The research methodology will encompass a single methods approach, i.e., quantitative techniques to gain a comprehensive understanding of current NPAs management. By utilizing the Correlation analysis through the hypothesis of Ineffective credit appraisal and hypothesis Regulatory Measures that is determine whether the changes of one variable is affected the

associated with the another variable or not. Moreover, using the Correlation analysis will influence the banking sector which is hold the NPAs.

#### A. Data Collection

This research is depending on the secondary data that are aggregated from Nepalese commercial banks. The primary factors of data collected from the Nepal Rastra Bank's (NRB) banking sector review and year-end reviews of the certain chosen commercial banks. This research is depending on informative in addition to non-experimental analysis schematics. Correlation analysis employed on the secondary data such as Yearly Net Profit After Tax (NPAT), Yearly Total Non-Performing Assets (TNPA), Yearly Total Sanctioned Loans (TSL) and Capital Adequacy Ratio (CAR) for the past 7 years from the Nepalese bank's financial reports. Utilizing a quantitative approach, secondary data were used that are aggregated from financial reports of certain selected commercial banks, and utilizing statistical analyses such as correlation analysis, which is used to determine the strength and relationship between the two or more Quantitative (numerical) data such that Total Non-Performing Assets (TNPA), Net Profit After Tax (NPAT), and Capital Adequacy Ratio (CAR). This approach determines whether the change of one variable affect or not the associated with another variable.

### IV. FINDINGS AND ANALYSIS

#### A. Correlation analysis

Correlation analysis is a statistical technique which is utilized to determine the strength and relationship between the two or more Quantitative (numerical) data [14]. This approach determines whether the change of one variable affect or not the associated with another variable. Correlation analysis employed on the quantitative data such as Yearly Net Profit After Tax (NPAT), Yearly Total Non-Performing Assets (TNPA), Yearly Total Sanctioned Loans (TSL) and Capital Adequacy Ratio (CAR) for the past 7 years from the Nepalese bank's financial reports.

The formula for Pearson's correlation coefficient ( $r$ ) is:

$$r = \frac{Cov(X,Y)}{\sigma_X \sigma_Y} \quad (1)$$

##### 1) Calculate the Correlation Coefficient between TNPA and NPAT

Correlation relation between TNPA and NPAT is strong and positive correlation. As TNPA increases, NPAT tends to increases well.

##### 2) Calculate the Correlation Coefficient between TNPA and CAR

Correlation relation between TNPA and CAR is strong and positive correlation. As TNPA increases, CAR also increases well.

These findings mitigate the understanding about best strategies and practices for non-performing assets

in Nepal banking sector. Table 2 illustrates the correlation relationship between TNPA, NPAT and CAR.

TABLE I. DATA ANALYSIS ON QUANTITATIVE DATA USING CORRELATION ANALYSIS

Variables	Correlation Coefficient (r)	Strength	Direction
TNPA vs NPAT	0.927	Strong	Positive
TNPA vs CAR	0.931	Strong	Positive

Correlation analysis of quantitative data determines the relationship between TNPA, NPAT and CAR. By calculating the correlation relationship between TNPA versus NPAT, 0.927 of correlation co-efficient and strong and positive correlation occurred based on the quantitative data. Calculating the correlation relationship between TNPA versus CAR, 0.931 of correlation co-efficient and also strong and positive correlation occurred based on the quantitative data. Figure 2 illustrates the correlation relationship between TNPA, NPAT and CAR. According to the correlation analysis, Hypothesis 1 and 2 are supported, but the findings go against established financial theory. Thus, it becomes necessary to repeat the analysis with models that adjust for credit availability, reserves set by banks, and economic trends. As a result, a high correlation does not always show a direct link, so further analysis is needed.

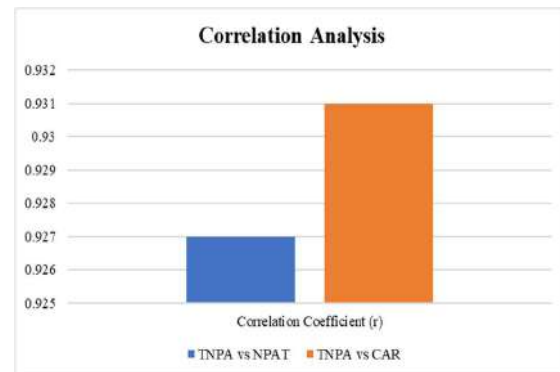


Fig. 2. Correlation Analysis

The data from the past four fiscal years has been used to create a correlation matrix showing how these main financial indicators—the NPL ratio, LLP, CAR, and Credit Interest Rate—are related in Nepalese commercial banks. NPL and LLP are strongly connected with a positive correlation of 0.96. As non-performing loans get higher, banks are obliged to increase funds in loan loss reserves to defend against defaults. It is confirmed that when there is more credit risk, banks increase the amount of funds they set aside. There is a strong negative link ( $r = -0.99$ ) showing that when non-performing loans increase, the banks' capital adequacy ratio drops. This reveals that as things get

worse in a bank's assets, its capital base is weakened, the total assets with significant risk become higher, and buffers are no longer enough, so the bank's stability and obedience to rules may be at risk. Also, banks experience a strong negative connection ( $r = -0.93$ ) between loan loss provision and their total capital as they hold more for loan losses, their capital quantities fall. It demonstrates that overproviding for risks, as a safety measure, often means less money is available for growing or creating a surplus.

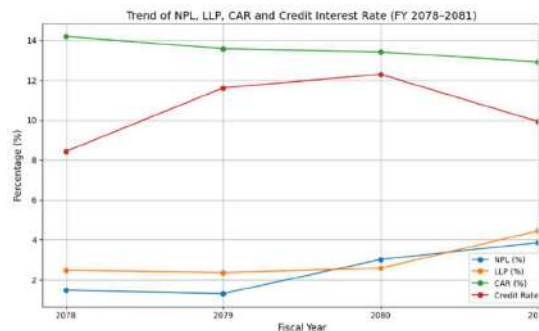


Fig. 3. Overall Correlation analysis

### B. Trend Analysis

Trend analysis is a mathematical and analytical technique that is used to evaluate the data point which is collected a certain period of time [16]. Figure 4 illustrates the Trend analysis on Quantitative data. Trend lines showing simultaneous increases in NPAT and TNPA may, however, mask underlying economic stress. Higher profits on the part of banks might result from other sources of income or prior provisioning buffers. Thus, the upward trend in TNPA should rather be taken as an indicator of risk than be seen as a facilitator for performance.

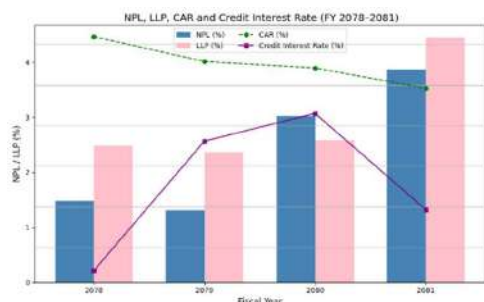


Fig. 4. Trend Analysis in Nepalese Commercial Banks

Overall, trend analysis reveals the strength and stability of the financial organization, the increasing of TNPA of organization indicates a necessity of risk management practices. Over the 4-year period, trends analysis reveals the data characteristics of the financial organization. Net Profit After Tax (NPAT) showcased a correctly manner growth in upward trend, which is representing the increasing profitability of banking sector. Because of this growth, Total Non-Performing Assets (TNPA) also showcased stable incensement,

which is represents the higher-level risk of banking management. The increase in Total Sanctioned Loans (TSL) associated with profitability of banking sector, which is showcased the necessity of the best strategies and practices for non-performing assets of the Nepal banking sector.

During the period from FY 2078 to 2081 (Mid-July 2021 to 2024), some main financial indicators of Nepalese banks indicate trends related to their assets and ability to remain stable. The percentage of loans considered non-performing increased a lot in FY 2081 compared to FY 2078. Because of this rise, we may conclude that the loans are less reliable because of reductions in the economy, risky borrowers, or the lack of effective credit assessments. In the same way, the percentage of Loan Loss Provision (LLP) to total loans went up too, though not as rapidly—moving from 2.48% in FY 2078 to 4.45% in FY 2081. It means that banks are becoming less vulnerable to bad loans, though the amount banking reserves set aside may not match the new and severe level of NPAs, which could create issues with possible under-provisioning. The Capital Adequacy Ratio (CAR) measured in FY 2081 was 12.92%, down slightly from the 14.19% it was in FY 2078. The gradual fall in the ratio means there is more pressure on capital as bad loans become a larger share of the bank's assets. The Weighted Average Interest Rate on Credit, which serves as a measure of banks' earnings from lending, looks like it is not growing in a straight line. In the fiscal year 2078, it stood at 8.43%, reached 12.30% in fiscal 2080 because of firm monetary policies and increased risk costs, and went down again to 9.93% in fiscal 2081. If this unstable situation continues, there might be higher risks and less money for businesses to use. Summing up, rising NPAs, higher provisioning needs, diminishing capital cushions, and an unstable loan margin have been seen, making it critically important for Nepal's banks to step up their risk management and NPA control efforts.

In the research of Non-Performing Assets (NPAs) in commercial banks, numerical statistical were calculated through key aspects of the dataset which is collected from the certain selected of commercial banks in Nepal. The mean values for Total Non-Performing Assets (TNPA), Net Profit After Tax (NPAT), and Capital Adequacy Ratio (CAR) were calculated, offering the performance evaluation for financial metrics. The correlation analysis addressed strong positive correlative relationships between TNPA and both NPAT and CAR. Especially, the correlation coefficient between TNPA and NPAT was ( $r = 0.927$ ), which means TNPA and NPAT has a strong positive correlation. Both TNPA and NPAT are seeing simultaneous increases, yet this increase could happen because of outside economic elements or a rise in the amount of money lent, not because they affect each other. According to the NRB regulation, a rising level of NPAs must be addressed by increasing provisions, which in most cases reduces profits. Because of this, the observed relationship is mostly due to statistical connections rather than genuine advantages from



NPA. Similarly, the correlation coefficient between TNPA and CAR was ( $r = 0.931$ ), which means TNPA and CAR has a strong positive correlation. This addressed that as the level of Capital Adequacy Ratio increases, the net profit after tax also tends to increase well. Table 4 suggests the overview of the correlative relationship between TNPA, NPAT, CAR and TSL.

#### V. CONCLUSION AND FUTURE SCOPES [3]

This research on Non-Performing Assets (NPAs) management in commercial banks has several key indicators such that mean values for Total Non-Performing Assets (TNPA), Net Profit After Tax (NPAT), and Capital Adequacy Ratio (CAR) were calculated, offering the performance evaluation for financial metrics. The correlation analysis addressed strong positive correlative relationships between TNPA and both NPAT and CAR. Especially, the correlation coefficient between TNPA and NPAT was ( $r = 0.927$ ), which means TNPA and NPAT has a strong positive correlation. The seeming positive correlation observed between NPAs and profit contradicts classical banks' theory and NRB provisions stating that higher NPAs should eventually decrease profit. Hence, future research should be based on regression models including relevant control variables (e.g., total income, loan growth, and provisioning) and consider possible time-lag effects in the evaluation of the real impact of NPAs on profitability. Similarly, the correlation coefficient between TNPA and CAR was ( $r = 0.931$ ), which means TNPA and CAR has a strong positive correlation. Overall, these results addressed the both hypothesis of Ineffective credit appraisal and Regulatory measures which is preserves the overall banks' performance.

While this study offering valuable recommendation to manage the impact of the best strategies and practices to handle the non-performing assets in banking sector which is a big risk of banking sector. Low level of NPAs leads to the higher performance of the overall banking sector in Nepal. In conclusion of this context, future research could contribute to develop the best strategies and practices to the non-performing assets in Nepal banking sector.

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