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Bank Specific Factors and Their Impact on Bank Deposits: A Study of Nepalese Commercial Banks

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ABSTRACT

This study investigates the impact of bank-specific factors on the deposits of Nepalese commercial banks. Bank deposits are crucial financial arrangements where customers entrust their funds to banks, which utilize these deposits to generate revenue through loans and financial services. The research employs secondary data analysis, utilizing data from 20 commercial banks over a five-year period (2075-2079) with 100 observations. Descriptive statistics, trend analysis, and regression analysis were conducted to assess the relationships between the dependent variable (deposits) and independent variables (capital, profitability, non-performing loans, number of branches, interest rates, and liquidity).The findings reveal that paid-up capital, the number of branches, and saving interest rates positively and significantly impact deposits, while non-performing loans negatively affect deposits. Conversely, profitability (ROA and ROE), liquidity (current and quick ratios), and fixed deposit interest rates do not significantly influence deposits. These results underscore the importance of capital, branch accessibility, and competitive interest rates in enhancing deposit mobilization. The study concludes that banks should develop strategies to leverage positive factors and mitigate negative influences to foster deposit growth, thereby supporting economic stability and growth in Nepal.

Keywords: bank deposits, commercial banks, capital adequacy, interest rates, deposit growth

Introduction

Bank deposits are a critical component of the money supply and play a significant role in the economy. They represent the largest portion of the money supply available for public use, and fluctuations in money growth are closely linked to changes in the prices of goods and services. The variability of bank deposits is an essential factor in portfolio strategy; more volatile deposits necessitate a more liquid asset mix (Mishra & Kandel 2023; Mishra, Kandel & Aithal, 2021). This variability impacts banks' holdings of cash and excess reserves, influencing the distribution of total reserves within the banking system and the effectiveness of monetary policy actions. Consequently, deposits are vital for banks and, by extension, for the overall economy, as they enable banks to provide loans that stimulate productivity and economic growth while generating profit through interest (Ostadi & Sarlak, 2014).A bank deposit refers to money placed in a bank account, which can be in cash, checks, or wire transfers. These deposits are crucial for banks' funding since a significant portion of their assets is financed through customer deposits. This

means that banks capable of generating deposits efficiently can offer more competitive loans and increase profits, assuming other factors remain constant. The robustness of a country's financial system, particularly in bank-based economies, is fundamental to its economic growth and development. Banks function as intermediaries, mobilizing savings and lending them to investors, thereby facilitating capital formation (Adem, 2015). Commercial banks engage in deposit-taking and lending, serving as the backbone of trade and commerce. They help mitigate information asymmetries between investors and borrowers, monitor the use of depositors' funds, and provide risk management and insurance against unexpected economic shocks (Allen & Carletti, 2008). Despite the presence of other financial institutions, commercial banks remain pivotal in the financial sector's operation. Their role in corporate governance and the economy is substantial, as failures in commercial banks can lead to significant macroeconomic costs, affecting real economic activity (Ashcraft, 2005). In the context of Nepal, research indicates that factors such as lagged fixed deposits, the number of branches, and lagged savings deposits significantly influence bank deposits in the banking sector, suggesting that these variables positively impact commercial bank deposits (Pradhan & Paneru, 2016).

In summary, bank deposits are not only fundamental to the operations of commercial banks but also crucial for the economic stability and growth of a nation. The interrelationship between deposits, monetary policy, and economic activity underscores the importance of maintaining a robust banking system.

Problem Statement

The banking systems in Central European countries are predominantly characterized by foreign ownership, which has significant implications for financial stability. The recent crises in developed nations have adversely affected the financial stability of banks in developing countries, illustrating the interconnectedness of global financial systems. This situation is particularly critical as it mirrors historical instances of financial instability that typically accompany political system changes. Understanding the banking system's dynamics is essential for identifying developmental characteristics and vulnerabilities. Panic among depositors can severely impact decision-making and trust in the banking system. This has sparked a debate in the literature regarding the root causes of financial crises. A key issue arises when a large number of depositors attempt to withdraw their funds simultaneously, often influenced by the behavior of others. This phenomenon has led to the development of two primary economic models explaining banking crises. One model emphasizes banking factors as central to instability, suggesting that deteriorating banking conditions increase liquidity risk, prompting depositors to withdraw funds preemptively (Allen & Gale, 2000). Conversely, the other model posits that financial panic is driven by self-fulfilling beliefs among agents, where the actions of depositors create a crisis scenario, regardless of the bank's actual financial health (Diamond & Dybvig, 1983).

Research Objective

The general objective of this study is to investigate the impact of bank-specific factors on deposit behavior in the Nepalese commercial banking sector through analysis of the impact of capital, profitability, non-performing loans, liquidity, interest rates, and bank size on the deposits of sample for identifying the most significant impact on bank deposits.

Literature Review

The relationship between bank-specific factors and deposit behavior has been a significant area of research in the banking sector. Commercial banks primarily rely on deposits from customers, and understanding the motivations behind depositors' decisions is essential. According to Keynes's theory of money demand, individuals hold money for three main reasons: transactions, precautionary measures, and investment (Haron et al., 2003). This framework underpins the various types of deposit accounts offered by banks, catering to the diverse needs of consumers and

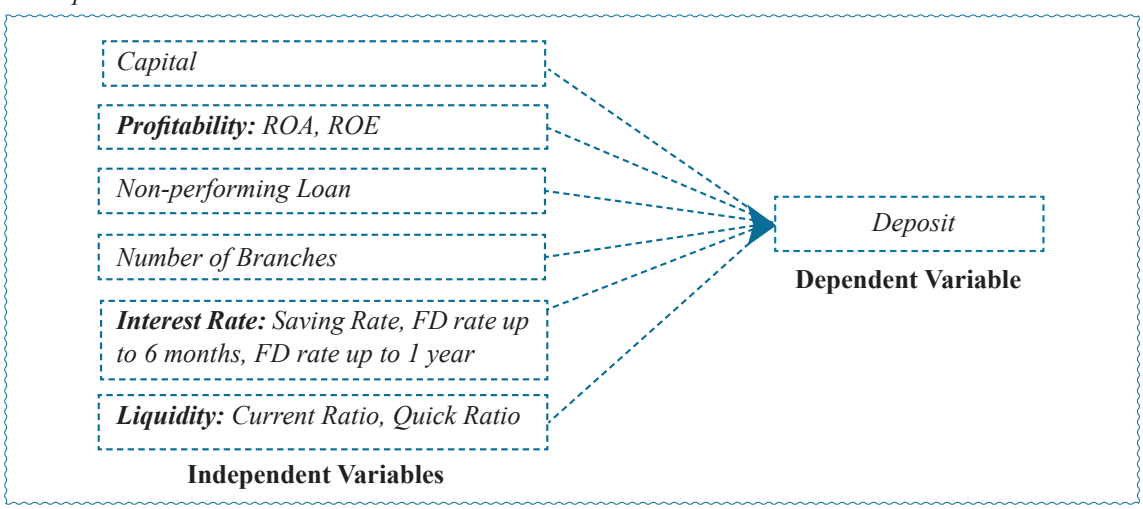
businesses. Several theories have been developed to explain savings behavior, including Friedman's Permanent Income Hypothesis, which suggests that individuals base their savings on expected lifetime income rather than current income (Friedman, 1957). The Life Cycle Hypothesis proposed by Modigliani and Brumberg (1954) further elaborates that individuals save during their working years to fund retirement, indicating that savings behavior is not solely dependent on current income but also on future expectations. Recent studies have expanded on these theories, introducing concepts such as the Buffer Stock Theory, which posits that individuals save to protect against income fluctuations (Carroll, 1992). Empirical research has identified various bank-specific factors influencing deposit levels. For instance, Thao and Thanh (2021) examined the effects of capital adequacy, profitability, non-performing loans, liquidity, and macroeconomic factors on bank deposits in Vietnam. Their findings indicated that profitability and GDP positively affect deposits, while other factors like bank size and inflation showed negligible effects. Similarly, Roy (2021) analyzed Indian banks and found that the maturity of deposit portfolios significantly impacts deposit growth, with short-term deposits yielding higher growth rates compared to long-term deposits. In the context of Nepal, Pradhan and Paneru (2016) identified key determinants of bank deposits, including the number of branches and lagged savings deposits, emphasizing the importance of these factors in influencing deposit behavior. Additionally, studies in other regions, such as Ghana and Indonesia, have highlighted the roles of liquidity, interest rates, and branch networks in shaping deposit mobilization strategies (Hadad, 2013; Rachmawati & Syamsulhakim, 2004). Overall, the literature underscores the complexity of factors affecting deposit behavior, suggesting that both bank-specific and macroeconomic variables play crucial roles. Understanding these dynamics is vital for improving deposit mobilization strategies and enhancing the financial stability of banking institutions across different contexts.

Conceptual Framework

The independent variables include fives bank specific factors such as capital, interest rate, profitability, non-performing loan, liquidity and bank size (Thao & Thanh, 2021).

Figure 1

Conceptual Framework



The relationship between bank-specific factors and deposits is a critical area of research in banking. "Capital" refers to the financial resources that banks hold to meet obligations and absorb losses, categorized into Tier 1, Tier 2, and total capital (Allen & Gale, 2000). Paid-up capital, the

amount shareholders contribute for shares, is a key indicator of a bank's financial strength, influencing depositor confidence and the bank's overall stability (Ostadi & Sarlak, 2014). Profitability is another vital factor, often assessed using Return on Equity (ROE) and Return on Assets (ROA). ROE measures how effectively a bank generates returns for its shareholders, while ROA indicates how efficiently a bank utilizes its assets to produce profits (Roy, 2021). High profitability can enhance depositor trust, as it suggests a bank's ability to manage its resources effectively. Non-Performing Loans (NPLs) represent loans that are not generating expected income, posing risks to banks and influencing depositor confidence. High NPL levels can lead to concerns about a bank's financial health, prompting depositors to withdraw funds (Thao & Thanh, 2021). The number of branches a bank operates can significantly affect its ability to attract deposits. A wider branch network enhances accessibility and convenience for customers, which is crucial for attracting individuals and businesses (Rachmawati & Syamsulhakim, 2004). Interest rates also play a pivotal role in deposit behavior. Banks offer varying rates for different deposit products, with higher rates generally attracting more deposits (Nwe Ni Tun, 2019). Lastly, liquidity, defined as a bank's ability to meet short-term obligations, is essential for maintaining depositor confidence. Higher liquidity ratios indicate a bank's capability to handle withdrawals and operational needs, thereby reassuring depositors (Hadad, 2013). In summary, various bank-specific factors, including capital, profitability, non-performing loans, branch networks, interest rates, and liquidity, significantly influence deposit behavior. Understanding these relationships is crucial for improving deposit mobilization strategies and ensuring the stability of banking institutions.

Methodology

This study employs a quantitative research approach to investigate the impact of bank-specific factors on deposit behavior in the Nepalese commercial banking sector. The research design is explanatory, aiming to establish causal relationships between the variables.

Data Collection and Sample

The study utilizes secondary data obtained from the published financial statements of 18 commercial banks listed on the Nepal Stock Exchange (NEPSE) for the period of 2008 to 2013, resulting in 108 observations. This time frame was chosen based on data availability and the significant growth experienced by the Nepalese banking sector during this period.

Variables

The study considers both bank-specific and macroeconomic factors as independent variables, while the dependent variable is the level of bank deposits.

Independent Variables

1. **Capital:** Measured by the capital adequacy ratio (CAR), which is the ratio of a bank's capital to its risk-weighted assets.
2. **Profitability:** Assessed using Return on Assets (ROA), calculated as the ratio of net income to total assets.
3. **Non-Performing Loans (NPLs):** Represented by the ratio of non-performing loans to total loans.
4. **Liquidity:** Measured by the liquidity ratio, which is the ratio of liquid assets to total assets.
5. **Interest Rates:** Proxied by the deposit interest rate offered by banks.
6. **Bank Size:** Measured by the natural logarithm of total assets.

Dependent Variable

1. **Deposit Level:** Represented by the natural logarithm of total deposits.

Analytical Techniques

The study employs pooled cross-sectional analysis to examine the relationships between the variables. Multiple regression analysis is used to estimate the impact of the independent variables on the dependent variable. The general form of the regression model is as follows:

$$\ln(\text{Deposits}) = \beta_0 + \beta_1 CAR + \beta_2 ROA + \beta_3 NPL + \beta_4 Liquidity + \beta_5 Interest\ Rate + \beta_6 \ln(Assets) + \epsilon_{ln}$$

$$(\text{Deposits}) = \beta_0 + \beta_1 CAR + \beta_2 ROA + \beta_3 NPL + \beta_4 Liquidity + \beta_5\ Interest\ Rate + \beta_6 \ln(Assets) + \epsilon$$

Where, β_0 is the constant term, β_1, β_2, β_3 ... , β_6 are the coefficients of the independent variables, and ϵ epsilon is the error term. The study also includes a trend variable to capture the effect of time on the deposit level. Lagged values of some variables are used to address potential endogeneity issues.

Structure and Pattern Analysis

This section deals with the structural and pattern of selected dependent and independent variables of this study. The structure has been shown year wise along with average value, median, minimum, maximum, standard deviation and coefficient of variation.

Structure and Patterns of Bank Deposit

This section attempts to analyze the structure and pattern of bank deposit over the period of 2074/75 to 2078/79.

The deposit of 20 Nepalese commercial banks from the fiscal year 2074/75 to 2078/79 in millions. From the table Rastriya Banijya Bank has the highest average deposit with NPR 223,976 million whereas Standard Chartered Bank has the lowest average deposit with NPR 80551.20 million.

Apart from this, in the year FY2074/75, there is minimum average value of deposit with 102,614.40 million whereas there is maximum average value of deposit in FY2078/79 with NPR 191,812.75 million.

Structure and Patterns of Capital

This section attempts to analyze the structure and pattern of Capital of Nepalese Commercial Banks over the period of 2074/75 to 2078/79.

The capital of 20 Nepalese commercial banks from the Fiscal year 2074/75 to 2078/79. In the above table, the average value of capital shows increasing trend from the year FY2074/75 to 2078/79. In the year FY2074/75, there is minimum average value of capital with 8,920.65 million whereas there is maximum average value of capital in FY2078/79 with NPR 13,454.00 million.

From the table Global Ime Bank has the highest average value of capital with NPR 16,720.20 million whereas Standard Chartered Bank has the lowest average value of capital with NPR 6,282.80million.

Structure and Pattern of Profitability

Structure and Pattern of Return on Assets

The trends of independent variable Return on assets according to selected commercial banks are shown and described using tables and figures as under. The trend in the mean value of return on assets of 20 Nepalese commercial Banks from the period of FY 2074/75 to 2078/79.In the above table, The average value of ROA shows fluctuation trend from the year FY2074/75 to 2078/79. The average ROA of Nepalese Commercial Banks was highest in FY 2075/76 which is 1.84 percent and lowest in the year 2078/79 which is 1.24 percent. The highest average value of ROA is of Standard Chartered Bank which is1.99 and Prabhu Bank Limited has the lowest average value of ROA which is 0.90

Structure and Pattern of Return on Equity

This section attempts to analyze the structure and pattern of return on equity of Nepalese Commercial Banks over the period of 2074/75 to 2078/79.

Table 1

Structure and Pattern of Return on Equity (ROE) of Nepalese Commercial Banks

Banks/Years	2075	2076	2077	2078	2079	Mean	Median	Std	Max	Min	C.V
RBB	13.5	12	9	11.3	11.1	11.38	11.3	1.63	13.5	9	14.32
NBL	14.76	13	8.92	11.04	11.17	11.78	11.17	2.21	14.76	8.92	18.73
ADBL	13	12	9	11.3	11.1	11.28	11.3	1.48	13	9	13.08

Banks/Years	2075	2076	2077	2078	2079	Mean	Median	Std	Max	Min	C.V
NMB	14.71	13	8.92	11.04	11.17	11.77	11.17	2.19	14.71	8.92	18.60
GBIME	16.19	18.47	12.88	13.38	13.93	14.97	13.93	2.33	18.47	12.88	15.56
PRIME	14.3	14	13.5	13.65	13.36	13.76	13.65	0.38	14.3	13.36	2.79
NABIL	20.94	17.76	13.61	15.19	9.78	15.46	15.19	4.22	20.94	9.78	27.27
SANIMA	18.67	23.2	16.09	18.57	14.13	18.13	18.57	3.40	23.2	14.13	18.77
NIMB	14.76	13	8.92	11.04	11.17	11.78	11.17	2.21	14.76	8.92	18.73
HBL	14	18	16	15	11	14.80	15	2.59	18	11	17.49
EBL	12.1	11.8	11.2	7.93	10.9	10.79	11.2	1.67	12.1	7.93	15.44
SCB	11.98	18.66	19.49	15.15	9.44	14.94	15.15	4.29	19.49	9.44	28.70
SIDBL	15.34	15.71	13.81	15.88	13.82	14.91	15.34	1.02	15.88	13.81	6.84
PBL	7.69	12.45	7.76	10.06	9.93	9.58	9.93	1.97	12.45	7.69	20.54
NSBI	14	18	16	15	11	14.80	15	2.59	18	11	17.49
MBL	12.3	12.8	10.74	10.75	9.3	11.18	10.75	1.40	12.8	9.3	12.49
CZBIL	11.2	11.71	8.93	11.17	10.21	10.64	11.17	1.10	11.71	8.93	10.34
NIC ASIA	14.76	13	8.92	11.04	11.17	11.78	11.17	2.21	14.76	8.92	18.73
KBL	9.93	10.5	6.71	10.43	12.28	9.97	10.43	2.03	12.28	6.71	20.35
SUNRISE	12.78	13.9	10.15	9.79	10.5	11.42	10.5	1.81	13.9	9.79	15.85
Mean	13.85	14.65	11.53	12.44	11.32						
Median	14	13	10.445	11.235	11.1						
Std	2.86	3.29	3.45	2.63	1.46						
Max	20.94	23.20	19.49	18.57	14.13						
Min	7.69	10.50	6.71	7.93	9.30						
C.V	20.69	22.43	29.93	21.18	12.88						

Table 1 provides the trend in the mean value of return on equity of 20 Nepalese commercial Banks from the period of FY 2074/75 to 2078/79. In the above table, the average value of ROE shows fluctuation trend from the year FY2074/75 to 2078/79.The average ROE of Nepalese Commercial Banks was highest in FY 2075/76 which is 14.65 percent and lowest in the year 2078/79 which is 11.32 percent. The highest average value of ROE is of Sanima Bank Limited which is 18.13 and Prabhu Bank Limited has the lowest average value of ROE which is 9.58

Structure and Patterns of Non-Performing Loan

The trends of independent variable Non-performing loan according to selected commercial banks are shown and described using tables and figures as under.

The mean value of non-performing loan of 20 Nepalese commercial Banks from the period of FY 2074/75 to 2078/79.The average non-performing loan of Nepalese Commercial Banks was highest in FY 2076/77 which is 1.75 percent and lowest in the year 2077/78 which is 1.34 percent. The highest average value of NPL is of Rastriya Banijya Bank which is 3.75 and Sanima Bank Limited has the lowest average value of NPL which is 0.20.

Structure and Patterns of Number of Branches

This section attempts to analyze the structure and pattern of number of branches of Nepalese commercial banks over the period of 2074/75 to 2078/79.

The mean value of number of branches of 20 Nepalese commercial Banks from the period

of FY 2074/75 to 2078/79. The average number of branches of Nepalese Commercial Banks is in increasing trend. The number was highest in FY 2078/79 which is 159.15 and lowest in the year 2074/75 which is 95.75. The highest average value of number of branches is of Agriculture Development Bank which is 237 and Standard Chartered Bank has the lowest average number of branches which is 12.

In addition, the number of branches of Nepalese commercial banks is in increasing trend. Global IME has the highest number of branches with 289 branches whereas Standard Chartered Bank has the lowest number of branches with 12 branches.

Structure and Pattern of Interest Rate

This section attempts to analyze the structure and pattern of interest rate provided by Nepalese commercial banks on different saving and fixed deposit products over the period of 2074/75 to 2078/79.

The mean value of saving interest rate of 20 Nepalese commercial Banks from the period of FY 2074/75 to 2078/79.The average value of saving interest rate of Nepalese Commercial Banks was highest in FY 2078/79 with interest rate of 7.51and lowest in the year 2077/78 with rate of 4.40. The highest average value of saving interest rate is of Sanima Bank Limited which is 6.72 and Nabil Bank has the lowest average value of saving interest rate which is 5.06.

Structure and Pattern of Interest Rate Up to 6 Months

The mean value of interest rate up to 6 months of 20 Nepalese commercial Banks from the period of FY 2074/75 to 2078/79.The average value of fixed deposit interest rate up to 6 months of Nepalese Commercial Banks was highest in FY 2078/79 with interest rate of 10.93 and lowest in the year 2077/78 with rate of 6.47. The highest average value of interest rate up to 6 months is of Kumari Bank limited and Sunrise Bank with interest rate of 9.32 and Nabil Bank has the lowest average value of interest rate up to 6 months which is 7.26.

Structure and Pattern of Interest Rate Up to 1 Year

The structure and pattern of interest rate on saving products offered by selected Nepalese commercial banks over the period of 2074/75 to 2078/79 shows the mean value of fixed deposit interest rate up to 1year of 20 Nepalese commercial banks. The average value of interest rate up to 1 year of Nepalese Commercial Banks was highest in FY 2078/79 with interest rate of 10.98 and lowest in the year 2077/78 with rate of 7.25. The highest average value interest rate up to 1 year is of Nabil Bank which is 9.66 and Rastriya Banijya Bank has the lowest average value of interest rate up to 1year which is 8.08.

Structure and Pattern of Interest Rate above 2 Years

The mean value of fixed deposit interest rate above 2 years of 20 Nepalese commercial Banks from the period of FY 2074/75 to 2078/79. The average value of interest rate above 2 years of Nepalese Commercial Banks was highest in FY 2078/79 with interest rate of 10.98 and lowest in the year 2077/78 with rate of 7.27. The highest average value of fixed above 2 years was of Global IME Bank Limited which is9.41 and Rastriya Banijya Bank has the lowest average value of interest rate above 2 years which

Structure and Pattern of Liquidity

This section attempts to analyze the structure and pattern of liquidity of Nepalese Commercial Banks over the period of 2074/75 to 2078/79. The liquidity of Nepalese Commercial Banks is measured or considered through the current ratio and quick ratio maintained by the banks.

The mean value of current ratio of 20 Nepalese commercial Banks from the period of FY 2074/75 to 2078/79. The average value of current ratio of Nepalese Commercial Banks shows fluctuating trend over the years. The average value of current ratio was highest in FY 2074/75 with current ratio of 1.16 and lowest in the year 2076/77 with current ratio of 1.05. The highest average value of current

ratio was of Rastriya Banijya Bank and Everest Bank Limited with current ratio of 1.23 and NMB Bank has the lowest average value of Current ratio of 0.33.

Structure and Pattern of Quick Ratio

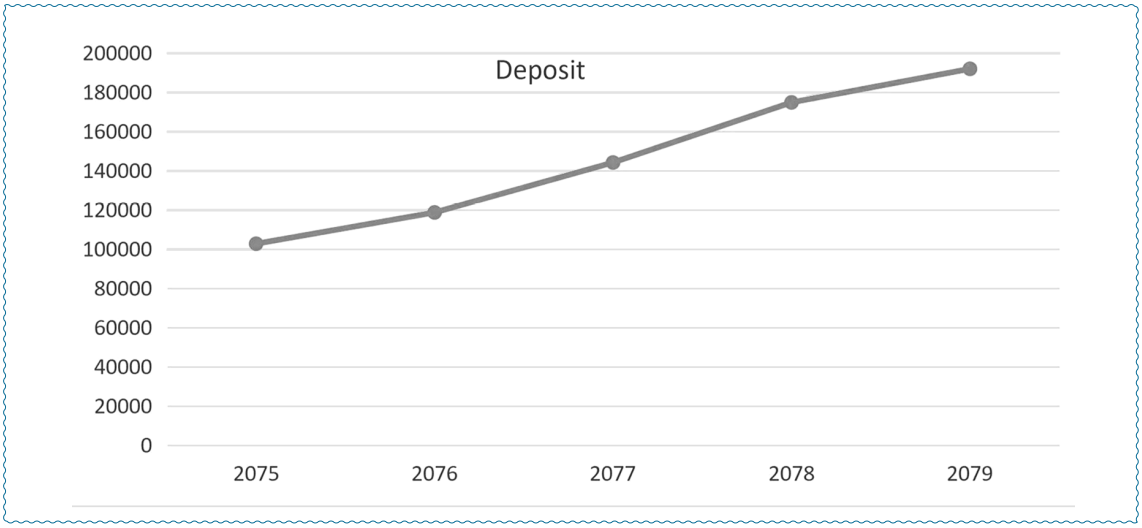
The mean value of quick ratio of 20 Nepalese commercial Banks from the period of FY 2074/75 to 2078/79. The average value of quick ratio of Nepalese Commercial Banks shows fluctuating trend over the years. The average value of quick ratio was highest in FY 2076/77 and 2078/79 with quick ratio of 0.36 and lowest in the consecutive year 2074/75 and 2075/76 with quick ratio of 0.34. The highest average value of quick ratio was of Everest Bank Limited with quick ratio of 0.81 and the lowest average value of Quick ratio was 0.26 which was maintained by Sanima Bank, Siddhartha Bank and Machhapuchare Bank Limited.

Trend Analysis

Trend analysis involves the collection of information from multiple periods and plotting the information on a horizontal line for further review. This analysis intends to spot actionable patterns in the presented information.

Figure 2

Average Deposit of Nepalese Commercial Banks



From Figure 2 it is observed that the average deposit of Nepalese commercial Bank is on increasing trend. The average bank deposit was around NPR 102,614 million in FY2074/75 which gradually increased to NPR 118,565 million of FY 2075/76. Similarly, the average bank deposit increased to NPR 144,039 million in FY 2076/77, NPR 174689 millions in FY 2077/78 and NPR 191,812 million in FY 2078/79.

Average Capital of Nepalese Commercial Banks

It is observed that the average capital of Nepalese commercial Bank is on increasing trend in line with the growth respectively. The average bank capital was around NPR 8,920.25 million in Fiscal Year 2074/75 which gradually increased to NPR 9,367.35 million of Fiscal year 2075/76. Similarly, the average bank deposit increased to NPR 11,058.50 million in FY 2076/77.The capital maintained by banks rapidly increased to NPR 12,457.30 million and NPR 14,511.70 millions in FY 2077/78 and FY 2078/79 respectively with changes in NRB guidelines.

Average Profitability of Nepalese Commercial Banks

The average profitably in return of Nepalese Commercial Banks over the period of Fiscal year

2074/75 to 2078/79. The profitability is represented by Return on Assets and Return on Equity of the banks respectively. Both average value of return on assets and return on equity shows fluctuating trend over the period of years. The return on assets (ROA) was 1.81% in FY 2074/75 which slightly increased to 1.84% in 2075/76. In 2076/77 the average value of ROA decreased to 1.39% which gradually increased to 1.41% in corresponding year 2077/78. The average value of ROA showing fluctuating trend decreased to 1.24% in 2078/79.

Similarly, the return on equity also shows fluctuating trend over the years. In year 2074/75, the average value of return on equity (ROE) was 13.85 % which increased to 14.65% in 2075/76. In 2076/77 the average value of ROE decreased to 11.53% which gradually increased to 12.44% in corresponding year 2077/78. The average value of ROE showing fluctuating trend decreased to 11.32% in 2078/79.

Average Non-performing loan of Nepalese Commercial Banks

The non-performing loan of overall Nepalese commercial banks is observed that the average non-performing loan of Nepalese commercial Bank shows fluctuating trend. The average non-performing loan shows increasing trend from FY 2074/75 which gradually increased till FY 2076/77. The average non-performing loan declined to 1.34% in FY 2076/77 and in FY 2078/79, the percentage of non-performing loan increased gradually to 1.41% .

Average Number of Nepalese Commercial Banks

The number of branches of Nepalese Commercial Banks is observed to have increasing trend. The average number of branches gradually increased from 96 in FY2074/75 to 107 in FY 2075/76. After 2075/76, the number of branches rapidly increased to 139 in FY2076/77, 150 in 2077/78 and reached 159 in FY 2078/79.

Average Interest Rate of Nepalese Commercial Banks

The average rate of interest provided by Nepalese Commercial Banks over different deposit products. The figure includes the trend of average interest rate on saving deposit and fixed deposit on different tenure of deposit. The banks offered different interest rate for fixed deposit up to 6 months, fixed deposit up to 1 year and fixed deposit above 2 years are shown in above figure. From figure, the average interest rate of saving and fixed deposit products appears to have fluctuating trend. The average interest rate for saving deposit increased from FY 2074/75 to FY 2075/76, which gradually kept on declining to FY 2077/78. Later in FY2078/79, the average saving interest rate inclined to 7.51%.

The average interest rate of different fixed deposit products as shown in above figure appears to have similar trend over the years. The interest rates gradually declined from FY 2074/75. The average interest rates continued to decline in 2075/76, 2076/77 and reached the minimum in FY 2077/78.After 2077/78, the interest rates rapidly increased and reached the maximum at the end of the year 2078/79.

Average Liquidity of Nepalese Commercial Banks

The average value of liquidity of Nepalese Commercial Banks over the period of Fiscal year 2074/75 to 2078/79. The liquidity is represented by Current Ratio and Quick Ratio maintained by the banks respectively. Both Current ratio and Quick ratio show fluctuating trend over the period of years. The value of current ratio observed to have more fluctuating trend than quick ratio over the years. The Current ratio observed to be 1.16 times in FY 2074/75 which slightly decreased to 1.11 times in 2075/76 and continued to decrease to 1.05 times in 2076/77. In FY 2077/78, the average value of current ratio gradually increased to 1.10 times and continued to maintain same ratio in corresponding year 2078/79.

Similarly, the quick ratio shows less fluctuating trend than current ratio over the years. In year 2074/75, the average value of current ratio observed to be 0.34 times which remained stable till 2075/76. In 2076/77 the average value of quick ratio increased to 0.36 which gradually decreased to 0.35 times in corresponding year 2077/78. Later in FY 2078/79, the average value of quick ratio showing fluctuating trend inclined to 0.36 times

Analysis through Statistical Tools

Stationary Test

Stationarity refers to a time series whose statistical properties remain constant over time. To assess the stationarity of the variables in this study, the Augmented Dickey-Fuller unit root test was employed, utilizing the Levin, Lin & Chu t* test in Eviews.

Table 2

Stationary Test Results

Variable	Level p-value	Stationarity
Deposit	< 0.05	Stationary
Capital	< 0.05	Stationary
Return on Assets	< 0.05	Stationary
Return on Equity	< 0.05	Stationary
Current Ratio	< 0.05	Stationary
Quick Ratio	< 0.05	Stationary
Non-Performing Loans	< 0.05	Stationary
Number of Branches	< 0.05	Stationary
Interest Rate (Savings)	< 0.05	Stationary
Fixed Deposit (up to 6 months)	< 0.05	Stationary
Interest Rate (up to 1 year)	> 0.05	Not Stationary
Fixed Deposit (above 2 years)	< 0.05	Stationary

The results indicate that all variables, except for the interest rate up to 1 year, are stationary at the 5% significance level. This suggests that the majority of the variables are stable over time. However, further tests could not be conducted for the non-stationary variable due to a lack of additional data.

Hausman Test

To determine whether to use a fixed or random effects model, the Hausman test was conducted. This test evaluates the consistency of an estimator when compared to an alternative, less efficient estimator.

Table 3

Hausman Test Results

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random effects	11.363641	11	0.4133

The p-value obtained from the Hausman test is greater than 0.05, leading to the acceptance of the null hypothesis. Therefore, the random effects model is deemed more appropriate for explaining the relationship between the dependent and independent variables in this study.

Model Adequacy

The adequacy of the model was further assessed using the Durbin-Watson statistic, which helps identify serial correlation among the variables.

Table 4

Model Adequacy Statistics

Statistics	Value
R-squared	0.806518
Adjusted R-squared	0.782332
Durbin-Watson statistic	1.151136
Prob(F-statistic)	0.000000

A Durbin-Watson statistic value less than 2 indicates positive correlation among residuals. The R-squared value of 0.806518 suggests that approximately 80.65% of the variability in deposits can be explained by the independent variables. The adjusted R-squared value of 0.782332 indicates that about 78.23% of the variability is explained after accounting for the number of independent variables.

Panel Data Regression Results

The panel data regression results are summarized in the table below, which shows the relationship between the dependent variable (Deposits) and various independent variables.

Table 5

Model Adequacy Statistics

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Capital	7.471000	1.191923	6.268022	0.0001
Return on Assets	-8.191644	8.678170	-0.943937	0.3478
Return on Equity	-2.332850	1.613416	-1.445908	0.1518
Non-Performing Loans	-1.019531	4.087666	-2.494163	0.0145
Number of Branches	3.308044	8.486961	3.897795	0.0002
Saving Interest Rate	6.005519	2.842369	2.112857	0.0374
FD Interest Rate (up to 6 months)	-3.481997	2.345297	-1.484672	0.1412
FD Interest Rate (up to 1 year)	1.587574	4.957642	0.320228	0.7496
FD Interest Rate (above 2 years)	-2.308148	4.554761	-0.506755	0.6136
Current Ratio	6.611928	1.493112	0.044283	0.9648
Quick Ratio	1.192497	4.760278	0.250510	0.8028

The regression results indicate a significant positive impact of capital, the number of branches, and the saving interest rate on bank deposits. Conversely, non-performing loans have a significant negative impact on deposits. The profitability measures (Return on Assets and Return on Equity), as well as interest rates on fixed deposits and liquidity ratios, do not show significant relationships with bank deposits.

Hypothesis Testing of Overall Commercial Banks

H1: There is a significant impact of capital on bank deposits

The first hypothesis (H1) indicates a positive relationship between capital and bank deposits. The p-value for capital is less than 0.05 ($0.001 < 0.05$), leading to the acceptance of the alternative hypothesis. This result suggests that there is a significant relationship between capital and bank

deposits, with a positive coefficient indicating that increased capital is associated with higher deposit levels. Thus, capital does impact bank deposits.

H2: There is a significant impact of return on assets on bank deposits

The second hypothesis (H2) reveals no significant relationship between return on assets (ROA) and bank deposits. The p-value for ROA is greater than 0.05 (0.3478 > 0.05), resulting in the rejection of the alternative hypothesis. Consequently, ROA does not significantly impact bank deposits.

H3: There is a significant impact of return on equity on bank deposits.

The third hypothesis (H3) also shows no significant relationship between return on equity (ROE) and bank deposits. The p-value for ROE is greater than 0.05 (0.1518 > 0.05), leading to the rejection of the alternative hypothesis. Therefore, ROE does not significantly influence bank deposits.

H4: There is a significant impact of non-performing loans on bank deposits.

The fourth hypothesis (H4) indicates a negative and significant relationship between non-performing loans (NPLs) and bank deposits. The p-value for NPLs is less than 0.05 (0.0145 < 0.05), allowing for the acceptance of the alternative hypothesis. This result suggests that higher levels of non-performing loans are associated with lower deposit levels, indicating a negative significant impact on bank deposits.

H5: There is a significant impact of the number of branches on bank deposits.

The fifth hypothesis (H5) shows a positive and significant relationship between the number of branches and bank deposits. The p-value is less than 0.05 (0.002 < 0.05), leading to the acceptance of the alternative hypothesis. This indicates that an increased number of branches positively influences bank deposits.

H6: There is a significant impact of saving interest rates on bank deposits.

The sixth hypothesis (H6) reveals a significant and positive relationship between saving interest rates and bank deposits. The p-value is less than 0.05 (0.0374 < 0.05), allowing for the acceptance of the alternative hypothesis. This suggests that higher saving interest rates are associated with increased bank deposits.

H7: There is a significant impact of fixed deposit interest rates up to 6 months on bank deposits.

The seventh hypothesis (H7) indicates no significant relationship between fixed deposit interest rates up to 6 months and bank deposits. The p-value is greater than 0.05 (0.1412 > 0.05), leading to the rejection of the alternative hypothesis. Thus, the interest rate on fixed deposits up to 6 months does not significantly impact bank deposits.

H8: There is a significant impact of fixed deposit interest rates up to 1 year on bank deposits.

The eighth hypothesis (H8) also shows no significant relationship between fixed deposit interest rates up to 1 year and bank deposits. The p-value is greater than 0.05 (0.7496 > 0.05), resulting in the rejection of the alternative hypothesis. Therefore, the interest rate on fixed deposits up to 1 year does not significantly influence bank deposits.

H9: There is a significant impact of fixed deposit interest rates above 2 years on bank deposits.

The ninth hypothesis (H9) indicates no significant relationship between fixed deposit interest rates above 2 years and bank deposits. The p-value is greater than 0.05 (0.6136 > 0.05), leading to the rejection of the alternative hypothesis. Thus, the interest rate on fixed deposits above 2 years does not significantly impact bank deposits.

H10: There is a significant impact of the current ratio on bank deposits.

The tenth hypothesis (H10) reveals no significant relationship between the current ratio and bank deposits. The p-value for the current ratio is greater than 0.05 (0.9648 > 0.05), resulting in the rejection of the alternative hypothesis. Therefore, the current ratio does not significantly influence bank deposits.

H11: There is a significant impact of the quick ratio on bank deposits.

The eleventh hypothesis (H11) shows no significant relationship between the quick ratio and bank deposits. The p-value is greater than 0.05 (0.8038 > 0.05), leading to the rejection of the alternative hypothesis. Thus, the quick ratio does not significantly impact bank deposits.

Table 6

Summary of Hypothesis Testing Results

Hypothesis	P-value	Result
H1: Impact of Capital	0.001	Accepted
H2: Impact of Return on Assets	0.3478	Rejected
H3: Impact of Return on Equity	0.1518	Rejected
H4: Impact of Non-Performing Loans	0.0145	Accepted
H5: Impact of Number of Branches	0.002	Accepted
H6: Impact of Saving Interest Rate	0.0374	Accepted
H7: Impact of Fixed Deposit Interest Rate (up to 6 months)	0.1412	Rejected
H8: Impact of Fixed Deposit Interest Rate (up to 1 year)	0.7496	Rejected
H9: Impact of Fixed Deposit Interest Rate (above 2 years)	0.6136	Rejected
H10: Impact of Current Ratio	0.9648	Rejected
H11: Impact of Quick Ratio	0.8038	Rejected

Discussion

This study primarily focused on the impact of bank-specific factors on the deposits of Nepalese commercial banks. By considering bank deposits as the dependent variable and capital, profitability, non-performing loans, number of branches, interest rates, and liquidity as independent variables, the research aimed to identify significant relationships among these factors. The analysis was based on secondary data collected from 20 commercial banks over the period of 2074/75 to 2078/79, employing descriptive statistics and correlation analysis to derive the results. The findings revealed that capital, the number of branches, and saving interest rates have a positive and significant relationship with bank deposits. Specifically, the positive coefficient associated with capital indicates that increased capital levels are linked to higher deposits in Nepalese commercial banks. This aligns with previous research, such as Hadad (2013), which similarly found a positive correlation between capital and deposits, although it noted that the effects of paid-up capital were statistically insignificant. Furthermore, the present study's findings regarding non-performing loans (NPLs) confirmed their negative and significant impact on bank deposits, consistent with Hadad's conclusions.In contrast, the study found that profitability, as measured by Return on Assets (ROA) and Return on Equity (ROE), liquidity (current and quick ratios), and fixed deposit interest rates did not significantly influence bank deposits. This finding diverges from Hadad's (2013) study, which indicated a positive relationship between liquidity and deposits, suggesting potential contextual differences in the banking environments of Ghana and Nepal. The research conducted by Rachmawati and Syamsulhakim (2004) supports the present study's findings regarding the number of branches, noting that the number of Islamic bank branches significantly affects deposit volumes in Indonesia. Their conclusion that interest rates have no impact on deposits aligns with the current study's results, reinforcing the notion that branch accessibility plays a more critical role in attracting deposits than interest rates. Gupta's (1987) research

emphasized the influence of deposit interest rates on savings structures, indicating that higher rates lead to increased financial savings. This supports the findings of the current study regarding saving interest rates, which positively impact bank deposits. Finger and Hesse (2009) identified perceived riskiness, liquidity buffers, and non-performing loan exposure as significant factors influencing deposit preferences in Lebanon. Their findings regarding NPLs align with the current study, although they contradict the present study's results concerning liquidity. Furthermore, Ferrouhi (2017) found a positive correlation between bank size and deposit growth in Morocco, which supports the findings of the current study regarding the number of branches. Similarly, Unvan and Yakubu (2020) identified bank size, profitability, and liquidity as significant determinants of bank deposits, further corroborating the present study's conclusions about the importance of branch networks. Mishr and Aithal (2022) highlighted issue of green banking need to be further study for banking profitability.

Conclusion

The primary objective of this study was to identify the major bank-specific factors influencing deposits in Nepalese commercial banks. Through a comprehensive secondary analysis, the research investigated the impact of various bank-specific factors on deposits, utilizing data collected from 20 commercial banks over a five-year period, from 2075 to 2079, resulting in a total of 100 observations. The methodology employed included random sampling, descriptive statistics, and correlation analysis to assess the relationships between the dependent variable (bank deposits) and independent variables (capital, profitability, non-performing loans, number of branches, interest rates, and liquidity).The findings of this study are significant and provide valuable insights into the determinants of bank deposits in the Nepalese banking sector. The analysis revealed that capital, the number of branches, and saving interest rates have a positive and significant relationship with bank deposits. Specifically, the results indicate that an increase in capital levels and the number of branches correlates with higher deposit levels. This suggests that banks with a stronger capital base and a wider branch network are better positioned to attract and retain deposits. Additionally, the positive impact of saving interest rates highlights the importance of competitive interest offerings in enhancing deposit mobilization. Conversely, the study found a negative and significant relationship between non-performing loans (NPLs) and bank deposits. High levels of NPLs can undermine depositor confidence, leading to increased withdrawals as customers perceive greater financial instability within the bank. This finding underscores the critical need for effective credit risk management practices to maintain deposit levels and ensure the overall health of the banking institution. In contrast, the research found that profitability (measured by Return on Assets and Return on Equity), fixed deposit interest rates, and liquidity (current and quick ratios) did not exhibit significant relationships with bank deposits. This suggests that, within the context of Nepalese commercial banks, these factors may not play as pivotal a role in influencing deposit behavior as previously thought. The lack of significant impact from profitability and liquidity challenges some traditional assumptions about their roles in deposit attraction. The results of this study align with and contrast against existing literature. For instance, Hadad (2013) found liquidity and bank size to be positively related to deposits, while the present study did not find liquidity to be significant. However, the findings regarding capital and non-performing loans are consistent with Hadad's conclusions. Similarly, Rachmawati and Syamsulhakim (2004) emphasized the importance of branch networks in influencing deposit volumes, which supports the current study's findings regarding the positive impact of the number of branches. Moreover, the study contributes to the broader understanding of banking dynamics in Nepal by highlighting the importance of branch accessibility and competitive interest rates. The findings suggest that banks should focus on expanding their branch networks and offering attractive interest rates to enhance their deposit mobilization strategies. This is particularly relevant in an increasingly competitive banking environment where customer service and convenience are paramount. In conclusion, this

study provides empirical evidence that capital, non-performing loans, the number of branches, and saving interest rates are critical bank-specific factors influencing deposits in Nepalese commercial banks. The negative impact of non-performing loans emphasizes the need for banks to adopt robust risk management strategies to safeguard depositor confidence. Overall, the insights gained from this research can inform banking policies and strategies aimed at enhancing deposit mobilization, ultimately contributing to the stability and growth of the Nepalese banking sector. Future research could explore the impact of macroeconomic factors and the evolving landscape of digital banking on deposit behavior, providing a more comprehensive understanding of the factors influencing bank deposits in Nepal.

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