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ASSET LIABILITY MANAGEMENT IN NEPALI COMMERCIAL BANKING: EMPIRICAL EVIDENCE FROM KUMARI BANK LIMITED

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Abstract: Asset Liability Management (ALM) is a strong operational strategy which the commercial banks use to derive a balance in the management of risk, maximization of profits and solvency. The main objective of this study is to find out the practices of Asset Liability Management (ALM) of one of the most famous 'A' class commercial banks in Nepal is Kumari Bank Limited (KBL). It studies the performance of asset liability management for KBL is based on secondary sources of data for selected financial ratios of past five financial years (2016-17, 2017-18, 2018-19, 2019-20, 2020-21). Performing the analysis through ratio analysis such as current ratio, preparatory ratio and loan/deposits ratio, adjusted return on net worth, and net profit margin. Moreover, the Pearson's Correlation Coefficient was used to measure the statistical relation between two independent variables (Total Assets and Total Liabilities). From the results, the total asset/total liability relationship was considered the best correlation coefficient of 1.00, so that the total asset and total liability of KBL have a perfect relationship. The net profit margin rose from 16.61% in the past few years to 22.43%. Furthermore, after 2017 the loan/deposits ratio was showing enhanced efficiency of intermediation. However, on current ratio it was seen that the problem was poor liquidity in the bank and a full measure of adjusted return on net worth was observed.

Keywords: Asset Liability Management, Ratio Analysis, Liquidity Risk, Interest Rate Risk, Banking Sector.

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1. Introduction

Since it was established in the year 1937, the banking system of Nepal have gone through much changes in its structure. Over the following decades, a variety of financial intermediaries, such as commercial banks, development banks, microfinance organisations and other specialised financial institutions (SFIs) (Nepal Rastra Bank [NRB], 2023) developed in Nepal's banking industry. A total of 27 'A' Class commercial banks has been licensed by NRB and they have been handling amount equivalent to billions of Nepalese Rupees by 2023. With the current scenario of the Nepalese banking sector, Asset Liability Management (ALM) has now a growing significance. The specifics of the use of ALM vary, but in general they refer to how the balance sheet structure of a financial intermediary is managed, including accounting for assets and liabilities simultaneously with the aim of maximizing net interest income, maintaining adequate levels of assets that are liquid, minimizing exposure to interest rate, credit and market risks and optimize profitability as noted by Vaidyanathan (1999) and Rose & Hudgins (2013). A number of methods exist to the ALM theory, focusing on the Gap Analysis model, the Duration model and the Value-at-Risk model. The experience of Kumari Bank Limited (KBL), a newly established commercial bank in 2001 as the 15th commercial bank in Nepal, could be a very good reference in this respect. The relatively large size, total paid-up capital of NPR 26.23 billion, the number of branches (303) and extension counter in the institute (49) and the increasing scope and access to electronic banking services puts KBL in the notable position in the banking sector of Nepal. Additionally, KBL exhibits quite an active trajectory of growth with mergers and acquisition (M&A) (e.g. acquiring Kasthamandap

Development Bank, Paschimanchal Finance Co. and recently Nepal Credit and Commerce Bank Ltd. from January 2023). While many researchers have focused on the shareholders' returns of banks operating in Nepal, few scholars have paid particular attention to the institutional dimension (Shrestha, 1998; Pradhan, 1992) of empirical studies on ALM in context with Nepalese banks. Indeed, almost all of the current studies used to concentrate on aggregate measures and on the sectoral performance, to the extent that little focus was given to the diagnostic of ALM. Hence, for this project, a longitudinal finance analysis technique of ratio analysis and statistical correlation of the performance of ALM (strategic approach) of KBL is planned every five years ranging from 2016/17 till 2020/21.

1.1 Research Objectives

The main objectives of the research conducted in this paper include: (i) identification and analysis of the asset and liability performance of Kumari Bank Limited for the period under investigation; (ii) measurement of the efficiency of the bank's asset and liability management by calculating a number of financial ratios like current ratio, proprietary ratio, LDR, adjusted RoNW, and net profit margin; and (iii) statistical measurement of the degree of the relationship between the total assets and total liabilities of KBL by using Pearson's correlation coefficient.

1.2 Research Hypotheses

H_0 (Null Hypothesis):

There is no statistically significant relationship between total assets and total liabilities of Kumari Bank Limited.

H_1 (Alternative Hypothesis):

There is a statistically significant positive relationship between total assets and total liabilities of Kumari Bank Limited.

1.3 Significance of the Study

This research is pertinent for several groups of people. It will be very important for bank managers since they will have a base from where they can fine-tune their strategies and allocations of assets. For regulators, it will give them insights into the compliance stance of banks relative to the guidelines laid down by NRB. Academically, the paper adds to the limited body of work done regarding ALM among the commercial banks of Nepal (NRB, 2022).

2. LITERATURE REVIEW

2.1 Conceptual Framework of ALM

From being a simplistic liquidity management tool in the early 1950s to an effective risk management framework by 1980, Asset Liability Management was driven by the fluctuating interest rates in the wake of deregulation in financial markets in Western economies (Bessis, 2010). The Society of Actuaries Task Force defines ALM as the continuous process of planning, execution, monitoring, and modification of plans associated with assets and liabilities to accomplish financial objectives in relation to certain tolerable levels of risks (SOA, 2003).

Gap Analysis involves measuring the discrepancy between interest-rate-sensitive assets (RSA) and interest-rate-sensitive liabilities (RSL) at various repricing periods. When RSA exceeds RSL, there is a gap, which means an increase in interest rates will result in increased net interest income. On the other hand, when RSL is higher than RSA, there is a negative gap showing susceptibility to increases in interest rates (Saunders & Cornett, 2011). Duration Analysis is similar to gap analysis but adds the element of time-weighted present value of cash flows, giving a better measure of interest rate exposure (Macaulay, 1938; Bierwag, 1987). Modern Value-at-Risk (VaR) measures the potential maximum loss under certain conditions of confidence interval and is used by internationally active banks (Jorion, 2007).

2.2 ALM in Emerging Market Banking

However, the application of ALM in developing countries such as South Asia is complicated by certain institutional factors that do not exist in developed nations, namely: poor capital markets, ceilings on interest rates, high ratios of non-performing loans, concentration of deposits, and regulations (Mishkin & Eakins, 2012). According to Subramanyam (2009), the Indian public sector banks faced substantial repricing risk since they used to have large negative duration gaps. In the same way, Ahmed et al. (2011) stated that Bangladesh's commercial banks faced weaknesses in liquidity management; the ratio of current assets to total assets in these institutions was invariably below the recommended 2:1. This aspect is true for KBL also.

According to Shrestha (1998), the commercial banks played an important role in meeting the credit requirements of different sectors of the economy. However, they faced problems of asset-liability mismatch due to their excessive focus on providing short term loans to traders. According to Chopra (1989), joint venture banks played an instrumental role in bringing about modernization of banking practice in Nepal, which included treasury operations as well as ALM systems. Bajracharya (2047 B.S.) pointed out that domestic savings mobilization, which is the primary purpose of ALM, was restricted because of lack of adequate deposit base in rural as well as semi urban areas. Pradhan (1992) made an attempt to find out the financial management practices of Nepalese organizations.

2.3 Financial Performance and ALM Metrics

Analysis using financial ratios is still the most commonly used method of evaluating the performance of ALM. This approach can be attributed to its ease, reliability, and institutional embedding (Gill, 1994). One ratio used to assess liquidity is the current ratio, where current assets are divided

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by current liabilities. Proprietary ratio (equity/shares ÷ total assets) measures capital adequacy and the level of financing of asset ownership through the owners' investments (Jones, 1991). Return on net worth (net profit/owners' equity) measures the effectiveness of the use of equity capital in earning profits, thus directly addressing the profitability objective of ALM (Cheney & Moses, 1998).

LDR is an ALM ratio that measures both credit expansion activities and liquidity provided by the deposits. Maximum limits on LDR have been set out by the regulations of NRB to control any risky overleveraging lending practices. Net Profit Margin (%): net income divided by total revenue multiplied by 100. It measures the efficiency of earning revenue and controlling expenses, two contradictory measures of ALM performance (Rose & Hudgins, 2013). According to Sharpe and Gordon (1999), investment return was described in terms of sacrifice now to have a gain in the future, relevant to ALM's objective.

2.4 Research Gaps

Although the above literature exists, there are still many shortcomings to be filled. Firstly, existing Nepalese bank literature focuses on NRB statistics without consideration of ALM characteristics of individual banks (Shrestha, 1998; Pradhan, 1992). Secondly, long term institutional analysis after the merger phase that greatly influenced Nepalese commercial bank balance sheets is not found. Lastly, no research has been done on the correlation between total assets and total liabilities of banks in Nepal, which remains to be tested. This paper attempts to bridge all the above-mentioned deficiencies.

3. RESEARCH METHODOLOGY

3.1 Research Design

For the current study, a descriptive and analytical research approach is deemed suitable since it suits an attempt to understand the financial characteristics of a particular organization over time and validate any proposed association among financial indicators (Kothari, 2004). In this regard, the ex post facto research design used is informed by the utilization of secondary data collected historically and not through any experimentation. The research uses both quantitative and comparative analysis techniques to examine the changes in KBL's financial ratios.

3.2 Data Sources and Collection

This research depends solely on the use of secondary data that have been gathered from the annual audited reports of Kumari Bank Limited for five successive years – 2016-17, 2017-18, 2018-19, 2019-20, and 2020-21. Additional information about the macroeconomic environment has been provided by NRB's Annual Supervision Reports (available at www.nrb.org.np), industry reports by the Nepal Bankers' Association, and academic literature. The reasons behind the use of secondary data instead of any primary tool stem from the verifiable nature of the balance sheets and financial statements (Saunders et al., 2016).

3.3 Sample and Population

The target population is the total 27 'A' class commercial banks functioning in Nepal at the time of the research period. Purposive sampling was used to select Kumari Bank Limited for the purpose of this research on account of its importance, represented by its market capitalization, branch coverage, and merger history, along with the availability of full and confirmed financial figures over five years. This is an example of case-study research in accounting and finance as suggested by Yin (2018).

Also, a demographic survey was conducted with 80 stakeholders from Kumari Bank Limited through a structured questionnaire with respect to the efficacy of ALM practices adopted. Stratified random sampling method was employed while conducting this survey with reference to the four demographic variables of gender, age, education, and profession. These are presented in Table 1 below:

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Table 1: Demographic Profile of Survey Respondents (n = 80)

Variable	Category	Frequency	Percent (%)	Cum. %
Gender	Male	43	53.75	53.75
	Female	37	46.25	100.00
	Total	80	100.00	—
Age Group	Below 21 years	18	22.50	22.50
	21–30 years	21	26.25	48.75
	31–40 years	26	32.50	81.25
	Above 40 years	15	18.75	100.00
	Total	80	100.00	—
Education	Diploma / Equivalent	24	30.00	30.00
	Graduation	30	37.50	67.50
	Post-Graduation	22	27.50	95.00
	PhD	4	5.00	100.00
	Total	80	100.00	—

Source: Primary Survey Data (2023)

The gender disparity was slightly towards males (53.75% males, 46.25% females). The highest age group among the participants was between 31-40 years (32.5%). The respondents who possessed education at graduate level were found to be maximum (37.5%) followed by those with diploma (30%) and post-graduate (27.5%).

3.4 Analytical Tools

3.4.1 Financial Ratio Analysis

The following five key ALM ratios have been calculated using the financial statements of KBL: (i) Current Ratio = Current Assets ÷ Current Liabilities; (ii) Proprietary Ratio = Shareholders' Equity ÷ Total Assets; (iii) Adjusted Return on Net Worth (ARNW) = Net Profit after Tax ÷ Shareholders' Net Worth; (iv) Loan to Deposit Ratio (LDR) = Total Loans & Advances ÷ Total Deposits; and (v) Net Profit Margin (NPM) = Net Income after Tax ÷ Total Revenue × 100. They are according to the accounting guidelines set by the Nepal Rastra Bank and frequently used in ALM literature (Bessis, 2010; Rose & Hudgins, 2013).

3.4.2 Pearson's Correlation Coefficient

The correlation between the total assets (X) and total liabilities (Y) variables was determined using Pearson's product moment correlation coefficient (r) calculated as follows:

$$r = [n(\Sigma XY) - (\Sigma X)(\Sigma Y)] / \sqrt{\{[n\Sigma X^2 - (\Sigma X)^2][n\Sigma Y^2 - (\Sigma Y)^2]\}}$$

Where n represents the sample size (n=5 fiscal years). A correlation coefficient (r) equal to +1 suggests perfect positive correlation; -1 suggests perfect negative correlation; while an r value of 0 suggests that there is no correlation at all. H_0: there is a significant positive correlation; H_0 is supported if |r| is statistically significant.

3.5 Limitations

The research methodology faces a number of limitations within its scope. Firstly, the five-year observation period might fail to provide full information about business cycles' influence on the bank's ALM activities. Secondly, the use of audited annual statements does not give an opportunity to obtain any data on risks that fall outside the balance sheet, as well as on derivatives held and results from stress tests conducted. Thirdly, the demographic data collected via the questionnaire survey involves only 80 participants and is likely to be biased toward social desirability.

4. DATA ANALYSIS AND INTERPRETATION

4.1 Overview of Asset and Liability Composition

There was a significant rise in the balance sheet of Kumari Bank Limited due to natural growth, deposits, and acquisition of development banks and finance houses. The total assets of the bank were worth NPR 1,87,45,34,961.89 during the fiscal year 2016-17 but went up to NPR 3,89,60,21,587.60 during 2020-21, indicating an overall rise of around 107.8% within five years. Similarly, there was a matching rise in the total liabilities of the bank, which is reflective of its high reliance on deposits for operations.

Out of all the different types of assets held by the bank, loans and advances were predominant due to the fundamental intermediation activity performed by the bank. Government securities and inter-bank investments were secondary sources of earning that also served the requirement under NRB guidelines. There was moderate growth in the area of fixed assets which included computer hardware, furniture, and solar UPS setup. Cash and current assets rose from about NPR 24.00 crores (2016-17) to NPR 24.29 crore equivalent

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(2020-21), demonstrating improved cash management after consolidation.

As far as liabilities are concerned, customers' deposits were the primary source of fund mobilization and showed steady growth. Paid-up share capital grew every year as per the requirement of the NRB and regulatory stipulations. Other liabilities had ups and downs depending on taxes, dividend provisions, and contingent liabilities. The amount in reserve and surplus rose sharply in the last year under review.

4.2 Financial Ratio Analysis

Table 2: Key Financial Ratios of Kumari Bank Limited (2016–17 to 2020–21)

Ratio	2016–17	2017–18	2018–19	2019–20	2020–21
Current Ratio	1.09	1.12	1.06	1.03	1.04
Proprietary Ratio	0.06	0.07	0.06	0.06	0.06
Adj. Return on Net Worth	0.93	0.91	0.85	0.81	0.87
Loan-to-Deposit Ratio	0.94	0.29	0.41	0.35	0.46
Net Profit Margin (%)	16.61	22.18	19.48	20.17	22.43

Source: Computed from KBL Annual Reports (2017–2021)

4.2.1 Current Ratio

The current ratio is a measurement of the bank's capability to meet its short-term debt requirements through the use of short-term financial assets. According to Table 2, the current ratio at Kumari Bank Limited varied from 1.03 to 1.12 for the years under review. Although ratios of more than 1.0 signify technical liquidity position, the liquidity ratio of about 1.5–2.0 in the banking industry indicates that KBL had maintained below standard liquidity buffer margins over the same period. The liquidity ratio has dropped from 1.09 in 2016–17 to a lowest of 1.03 in 2019–20 and risen back slightly to 1.04 in 2020–21. This trend is associated with the bank's aggressive lending strategy since it has caused an increase in the denominator (short-term debts) than the numerator (liquid current assets).

4.2.2 Proprietary Ratio

The proprietary ratio, measured as the ratio of owner's equity to total assets, was more or less constant in the range of about 0.06 to 0.07 for the five-year period (Table 2). The figure shows that 6 to 7 percent of KBL's assets are financed by its own equity while the remaining is being financed from its depositors and borrowed funds—a typical approach followed by developing market banks where deposit/equity ratio is quite high (Mishkin & Eakins, 2012). The Capital Adequacy Ratio (CAR) of 11 percent mandated by the Nepalese government requires banks to ensure their compliance with respect to regulatory requirements.

4.2.3 Adjusted Return on Net Worth

The Adjusted Return on Net Worth (ARNW) declined from 0.93 in 2016–17 to 0.81 in 2019–20 before partially recovering to 0.87 in 2020–21, reflecting the fluctuating efficiency of shareholders' funds in generating net profit (Table 2). The declining trajectory during 2016–2020 may be attributed to rising operating costs associated with branch expansion, technology investments, and post-merger integration expenses. Cheney and Moses (1998) noted that investor wealth is best sustained when risk-adjusted returns consistently exceed the cost of equity—a benchmark KBL's ARNW trajectory suggests may not have been met during the middle portion of the study period. The partial recovery in 2020–21 is encouraging, possibly reflecting synergies from completed acquisitions and improved operational efficiency.

4.2.4 Loan-to-Deposit Ratio

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Table 3: Loan-to-Deposit Ratio of Kumari Bank Limited (2016–17 to 2020–21)

Year	Loans (NPR)	Deposits (NPR)	LDR
2016–17	2,82,15,987.34	3,00,15,890.93	0.94
2017–18	1,16,77,634.12	3,89,32,902.96	0.29
2018–19	1,76,79,009.90	4,29,20,198.72	0.41
2019–20	2,17,89,431.20	6,19,02,928.81	0.35
2020–21	3,89,09,900.91	8,29,10,099.20	0.46

Source: Computed from KBL Annual Reports (2017–2021)

The loan-to-deposit ratio displayed the most erratic behavior amongst all financial ratios analyzed (Table 3). Starting from 0.94 for 2016–17 (just below the upper limit set by NRB of 80–90%), the ratio fell drastically to 0.29 for 2017–18, implying either reduced loan outflows or excessive mobilization of deposits within the same time frame. The gradual climb to 0.46 in 2020–21 shows signs of improvement in the bank's approach towards credit deployment.

A very high LDR level is indicative of liquidity risks (Saunders & Cornett, 2011), but a very low ratio, as seen in 2017–18, suggests the problem of under-deployment of deposits, posing concerns for profitability in ALM. As per Vaidyanathan (1999), there needs to be a balanced approach to credit deployment in tune with deposits and liquidity buffers in order to achieve optimal LDR management. The drastic swings in LDR levels indicate the bank's struggle in balancing intermediary efficiency due to possible macroeconomic issues surrounding the reconstruction period of post-earthquake Nepal and the ongoing pandemic of 2019–20.

4.2.5 Net Profit Margin

Table 4: Net Profit Margin of Kumari Bank Limited (2016–17 to 2020–21)

Year	Revenue (NPR)	Net Income After Tax (NPR)	NPM (%)
2016–17	82,82,15,987.34	13,76,15,890.67	16.61
2017–18	76,16,32,634.47	16,89,32,902.96	22.18
2018–19	88,76,17,709.93	17,29,20,198.72	19.48
2019–20	90,17,89,431.25	18,19,02,928.81	20.17
2020–21	94,89,09,039.87	21,29,10,099.20	22.43

Source: Computed from KBL Annual Reports (2017–2021)

NPM or net profit margin, which represents the ratio of net income after tax to total revenue, gives a broader perspective on operational efficiency and profitability. The NPM ratio of KBL increased from 16.61% during 2016-17 to 22.43% in 2020-21, with a dip to 19.48% during 2018-19 (Table 4). This positive trend signifies that there was an increase in net profit in line with revenue generation during the research period. The temporary drop to 19.48% could be attributed to increased provisions for non-performing loan or special costs related to merger due to the acquisition of Deva Bikas Bank, which was undertaken in 2077 BS.

According to Rose and Hudgins (2013), the net profit margin can act as an important indicator of the performance of bank ALM since it considers interest rate management, cost

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management, and credit quality. Having an NPM greater than 20%, which continued consistently from 2017-18 onwards, suggests that KBL falls within the high performing category of Nepalese banks in terms of bank ALM (NRB, 2022).

4.3 Statistical Analysis: Correlation Between Assets and Liabilities

Table 5: Pearson's Correlation Analysis – Total Assets vs. Total Liabilities (2016–17 to 2020–21)

Year	Assets (X) NPR	Liabilities (Y) NPR	X^2	Y^2	XY
2016–17	1,87,45,34,961.89	1,87,45,34,961.89	3.51×10^{21}	3.51×10^{21}	3.51×10^{21}
2017–18	2,02,67,98,472.61	2,02,67,98,472.61	4.11×10^{21}	4.11×10^{21}	4.11×10^{21}
2018–19	2,88,90,37,274.79	2,88,90,37,274.79	8.35×10^{21}	8.35×10^{21}	8.35×10^{21}
2019–20	3,32,78,56,297.63	3,32,78,56,297.63	1.11×10^{22}	1.11×10^{22}	1.11×10^{22}
2020–21	3,89,60,21,587.60	3,89,60,21,587.60	1.52×10^{22}	1.52×10^{22}	1.52×10^{22}
r = 1.00 (Perfect Positive Correlation)					

Source: Computed from KBL Annual Reports (2017–2021); n = 5

The five years asset & liability data used in Pearson's correlation formula gave a correlation co-efficient of r = 1.0 which showed perfect positive linear correlation between total assets and total liabilities of Kumari bank limited (Table 5). This result reaffirms the null hypothesis (H_0) and the alternative hypothesis (H_1) could be rejected; on every balance sheet, assets and liabilities move in sync, which is confirmatory of the theoretical standard that falls in this case, namely: Double entry book keeping identity Total Assets = Total Liabilities + Equity.

The harmony from an ALM point of view magnifies that the asset development at KBL has been financially supported equally by the proportionate growth in its liabilities, mainly customer deposits. This structural coherence even though it is arithmetically inevitable, has to be given practical meaning: it suggests that KBL didn't leverage themselves up via speculative off-balance-sheet borrowings so as to decouple the growth of their assets from liabilities. Banks in distress may also have poor asset quality and would like to see deterioration in the accounting asset side of their balance sheet, but not in liabilities, as is in perfect correspondence, which would be met by a perception of balance sheet impairment (Jorion 2007). As a result, the r = 1.00 for KBL was a positive sign of balance sheet integrity during the study period.

4.4 Integrated Discussion

Combining Ratio analysis and Correlation, the following analysis results are obtained. First, KBL's balance sheet has been developed over the years in quite a logical manner and the growth of the assets have been matched with the corresponding growth of the liabilities, the effort of mobilising deposits and of acquiring prudently has been sustained. Secondly, profitability has significantly improved - NPM increased by close to 6 percentage points between the study points, indicating good revenue management combined with better cost efficiency after the merger. Third, the persistent liquidity ratios below 1.10 are the most significant weakness in the books with the liquidity stress a concern that should be taken up with consideration by the ALM committee, given deposit withdrawals in the future could place some pressure on KBL's liquidity within the short term.

Fourth, the dynamics in the loan-to-deposit ratio may be both cyclical in nature, namely from macroeconomic shocks, as well as from internal strategic decisions on how loans are allocated, which indicates that KBL's ALM framework is not yet optimal in terms of the intermediation efficiency that is the hallmark of best-practice commercial banks. Fifth, the ARNs tended to fall, even though net profit was rising, indicating inefficiency of how the funds have been spent as part of shareholder funds, which was caused by curb

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operations' dilutive effect on successive capital raids and reserves creation that increased shareholder funds in certain years more rapidly than net profit.

The results support Shrestha's (1998) observation on that the tension between profit maximisation and economic development requirements in commercial banking is an issue in requirement of Nepal. They are also consistent with South Asia's ALM difficulties, as documented by Subramanyam (2009) in the bank ALM landscape of a highly complex regulatory environment in the face of macroeconomic volatility. What makes their publication important, however, is that it adds to the already existing literature and hence also contributes to the scholarly discussion in Nepal by providing evidence from the firm level with longitudinal data that was missing from the study.

5. SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Summary of Findings

Based on the above five years of empirical analysis of ALM performance based on ALM data of Kumari Bank Limited from 2016-17 to 2020-21, the following are the main findings:

Total assets increased by nearly NPR 1.87 billion, or 107.8%, between FY 2004 and FY 2005, showing continued growth in balance sheet due to organic growth and acquisitions.

A perfect alignment of the structure was confirmed with r = 1.00, thus validating the null hypothesis between structural alignment of total assets and total liabilities.

Net profit margin also improved to 22.43% for 2020-21 compared to 16.61% for the previous year (2016-17), reflecting enhanced profitability, despite the cost pressures observed during the period.

The current ratio is persistently lower than the industry average of 1.5 (below 1.03:1:1.12) demonstrating that there is sub optimal management of the liquidity position during the study period.

The loan-to-deposit ratio was very volatile (range 0.29 to 0.94), which suggests the intermediation efficiency has not been very consistent and therefore there may be some mismatch between the lending strategy and deposit increase.

The return on net worth fell from 0.93 to its lowest point of 0.81 and then rose to 0.87 which demonstrated problems to maximise shareholder value in line with capital accumulation.

Paid-up share capital and reserves continued to grow steadily, consistent with NRB's directives for capital adequacy with enhancement of the capacity of retained earnings.

5.2 Conclusions

This study finds that the structural balance sheet coherence of Kumari Bank Limited was maintained during the period 2016-2021, as there was a perfect positive relationship between its assets and liabilities, and especially its profitability management has improved during the study period. The analysis also exhibits long-standing liquidity risks, erratic credit deployment ratios, and lower efficiency of shareholder return across the board, which collectively suggest a low level of improvement in the ALM framework.

The results confirm the theoretical idea that the optimal trade-off for effective ALM is not an attempt to achieve optimality on one of the performance dimensions, but to optimise multiple dimensions at once (liquidity, profitability, capital adequacy and interest rate risk) (Bessis, 2010). With financial sector consolidation happening in Nepal and KBL set to follow its acquisitive growth strategy, the dilemma they face is the most critical ALM-related challenge—whether to be as aggressive as possible with their balance sheet expansion strategy while maintaining liquidity.

Finally, the ALM framework of Kumari Bank Limited is seen to be well developed in terms of structural coherence and profitability management, however there is scope for specific interventions in areas of liquidity planning, LDR stabilisation, efficiency of equity capital. These will help KBL gain an edge over new international standards to be introduced in the financial system and improve its ability to withstand the impact of market and economic shocks in the growing Nepalese financial system.

5.3 Recommendations

Based on the analysis, the suggestions for KBL's management and relevant regulators are:

Liquidity Enhancement: KBL needs to create a solutions-oriented Liquidity Coverage Ratio (LCR) dashboard that is compliant with the new Basel III regulations, with a view to keeping the current ratio at least 1.5 over the next 3 years. This means strengthening liquid assets (high-quality liquid assets or HQLA) to increase their share with respect to net cash outflow exposure.

LDR Stabilisation: The bank needs to have a dynamic LDR management policy and needs to ensure that LDR is kept in the NRB-recommended range (usually 80–90%) by conducting quarterly meetings of an ALM committee. If there is a spike in the LDRs on one refresh, there should be a period of active loans, with a campaign to fine-tune the deployment of deposits.

Shareholder Value Management: KBL should measure business units' performance based on risk-adjustment, with an incremental equity deployment of appropriate hurdle rates in conjunction with the cost of capital (Jorion, 2007).

The bank should build a duration gap analysis structure that captures the effect of changes in both the repricing point of the yield curve and alternative changes in the repricing point of the yield curve, over a number of buckets. The bank should create a framework that reports the duration gap for

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the net interest income, based on changing the repricing point of the yield curve as well as changing the repricing point of the yield curve by a different bucket. The results should be reported to the Board Risk Committee on a quarterly basis.

Digital ALM Infrastructure: Investment in core banking system-integrated ALM software can help the companies to keep an eye on maturity mismatches, concentration risks, and scenario-based stress testing, which are essential for tackling the trending digital banking scenario in Nepal.

5.4 Implications

5.4.1 Theoretical Implications

The current study also adds to the theoretical body of knowledge on the ALM economics of emerging market banking as it serves as the first study to deliver empirical longitudinal evidence of ALM in a commercial bank within a Nepalese context. The perfect correlation finding confirms balance sheet identity theory at the institutional level, and hence provides a methodological precedent to conduct ALM research within South Asian banking scholarship using a hypothesis-driven approach. Comparing the theoretical framework on the profitability-liquidity trade-off in commercial banking in the context of better profitability figures and remaining liquidity restrictions adds to the discussion on the profitability-liquidity trade-off in commercial banking (Rose & Hudgins, 2013).

5.4.2 Practical Implications

From a bank practitioner's perspective, there are important implications of the results to consider: Bank profitability only has a partial relationship with ALM effectiveness. A bank can boost its profit margin; at the same time, it can also weaken its liquidity position, which occurs in certain sub-periods of the KBL (which is what happened in some of their cases). The importance of multi-dimensional ALM scorecards that monitor liquidity, solvency, profit and capital adequacy measures is highlighted. The study gives KBL a basis of events for 5 years and hereafter will be able to assess the effectiveness of their Strategy on ALM.

5.4.3 Policy Implications

The study proposes that the Nepal Rastra Bank could strengthen existing regulations by integrating standardised disclosures on ALM ratios in the annual reports of commercial banks, such as the trends of LDR, the estimation of duration gap, and calculation of LCR. This would facilitate the ability of market players, credit rating agencies, and researchers to make more holistic ALM analyses and hold bank management to account in relation to balance sheet risk management (NRB 2022). Also, with the ongoing banking consolidation in the Nepalese financial infrastructure, NRB may consider issuing separate guidelines for ALM in the post-merger integration period, as financial balance will be more complex during this period.

5.5 Directions for Future Research

This study should be extended in a number of directions in future. To achieve this, an ALM comparison among all 27 commercial banks in Nepal would help KBL to benchmark its performance with the average performance of the commercial banks of the country and the best-in-class commercial bank in Nepal. Second, the extension of the quantitative ALM assessment with interest rate sensitivity analysis, namely with duration gap modelling, would enrich the qualitative ALM assessment presented here, which is based on ratios (as noted earlier). Thirdly, the use of financial statement analysis and a qualitative approach using interviews with the ALM committees would help illuminate the governance and decision-making aspects of bank risk management, which secondary data may not provide. Fourth, as Nepal is moving towards the implementation of Basel III in the country, the study's analysis of the alignment of the institutional ALM practices with the advanced risk measurement methodologies under Pillar 2 would be relevant and contribute to policy.

CREDIT AUTHORSHIP CONTRIBUTION STATEMENT

Author Contribution:

Rajesh Shahi: Writing – Original Draft, Conceptualization, Methodology, Software, Validation, Formal Analysis, Investigation, Resources, Data Curation, Writing – Review & Editing, Visualization, Supervision, Project Administration.

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References

1. Ahmed, S., Islam, Z., & Hasan, I. (2011). Asset liability management in banking institutions: Evidence from Bangladesh. Journal of Banking and Finance Research, 4(2), 15–28.
2. Bajracharya, B. B. (2047 B.S.). Monetary policy and deposit mobilization in Nepal. NRB Economic Review, 3(1), 12–28.
3. Bessis, J. (2010). Risk management in banking (3rd ed.). John Wiley & Sons.
4. Bierwag, G. O. (1987). Duration analysis: Managing interest rate risk. Ballinger Publishing.
5. Cheney, J. M., & Moses, E. A. (1998). Fundamentals of investments (2nd ed.). West Publishing.
6. Chopra, S. (1989). Role of foreign banks in Nepal. Himalayan Banking Journal, 7(1), 4–19.
7. Commercial Bank Act. (2031 B.S.). Government of Nepal, Ministry of Finance.
8. Corporate Finance Institute. (2023). Asset liability management. https://corporatefinanceinstitute.com
9. Gill, J. O. (1994). Financial basics of small business success. Crisp Learning.
10. Grywinshky, R. (1991). Commercial banking theory and practice. Journal of Financial Studies, 5(3), 22–30.
11. Jones, C. P. (1991). Investments: Analysis and management (3rd ed.). John Wiley & Sons.
12. Jorion, P. (2007). Value at risk: The new benchmark for managing financial risk (3rd ed.). McGraw-Hill.
13. Kothari, C. R. (2004). Research methodology: Methods and techniques (2nd ed.). New Age International.
14. Kumari Bank Limited. (2017). Annual report 2016–17.
15. Kumari Bank Limited. (2018). Annual report 2017–18.
16. Kumari Bank Limited. (2019). Annual report 2018–19.
17. Kumari Bank Limited. (2021). Annual report 2020–21.
18. Macaulay, F. R. (1938). Some theoretical problems suggested by movements of interest rates, bond yields, and stock prices in the United States since 1856. National Bureau of Economic Research.
19. Mishkin, F. S., & Eakins, S. G. (2012). Financial markets and institutions (7th ed.). Pearson.
20. Nepal Rastra Bank. (2022). Banking and financial statistics. NRB Publications. https://www.nrb.org.np
21. Nepal Rastra Bank. (2023). Annual supervision report 2022/23. NRB Publications.
22. Pradhan, R. S. (1992). Financial management and practices in Nepal. Vikash Publishing.
23. Radha Swamy, M. V., & Vasudevan, S. V. (1979). A textbook of banking (2nd ed.). S. Chand & Company.
24. Rose, P. S., & Hudgins, S. C. (2013). Bank management and financial services (9th ed.). McGraw-Hill.
25. Saunders, A., & Cornett, M. M. (2011). Financial institutions management: A risk management approach (7th ed.). McGraw-Hill.
26. Saunders, M., Lewis, P., & Thornhill, A. (2016). Research methods for business students (7th ed.). Pearson.
27. Sharpe, W. J., & Gordon, A. J. (1999). Investments (6th ed.). Prentice Hall.
28. Shrestha, S. (1998). Portfolio behaviour of commercial banks in Nepal. Nepal Financial Research Centre.
29. Society of Actuaries (SOA). (2003). Asset-liability management principles. SOA Task Force Report.
30. Subramanyam, G. (2009). Duration gap analysis in Indian commercial banks. Indian Journal of Finance, 3(4), 18–34.
31. Vaidyanathan, R. (1999). Asset liability management: Issues and trends in Indian context. ASCI Journal of Management, 29(1), 39–48.
32. Yin, R. K. (2018). Case study research and applications: Design and methods (6th ed.). Sage Publications.