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Empirical Examination of Deposit Structure and Its Effect on the Operational Income of Commercial Banks in Afghanistan

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Abstract

This study shifted the focus from the overall financial performance of banks toward examination of deposits and their influence on core activities, particularly operational income. Accordingly, a Least Squares Dummy Variable (LSDV) fixed-effects regression model was used to identify the impact of Current Deposit Ratios (CDR), savings deposit ratios (SDR), Term Deposit Ratios (TDR), and Margin Deposit Ratios (MDR) as independent variables on Net Operating Margin ratio (NOM), the dependent variable. At the same time, the model controlled for the Loan-To-Deposit Ratio (LDR), Capital Adequacy Ratio (CAR), and Liquid Asset Ratio (LAR), and accounted for both bank and year fixed effects. Secondary data were collected from the disclosed financial reports of six sampled banks over the period 2017-2025. The findings indicated a positive and statistically significant effect of SDR on NOM. In contrast, the association of TDR and MDR was insignificant. By design, CDR was excluded from the model due to severe multicollinearity. Among controlled variables, LAR emerged as the strongest and most significant predictor of operating income. Notably, substantial portion of deposits in the sampled banks of Afghanistan were in the form of current accounts, which do not incur interest expenses and provide an abundant pool of low-cost funds. The study contributed ratio-specific evidence of deposit behavior and bank profitability, assisting bank managers to identify the most efficient deposit category and supporting deposit-base diversification strategies.

Major Findings: However, current accounts constituted the largest portion of deposits, providing banks with a low-cost funding base. According to the results, deposit composition outweighed volume, as SDR was the only variable with a significant, positive impact on NOM, and LAR was the strongest predictor.

Keywords: Afghanistan, Commercial Banks, Deposits, Deposit Structure, Net Operating Margin, Operational Income

1. Introduction

A bank is a financial institution that profoundly serves the economic development of a country. The efficient and effective operation of the banking sector is vital for the stability of the financial system. Banks accept deposits from the public, and these funds constitute the major part of the national money supply (Sharifi, 2019). Deposits are sums of money that depositors put into commercial banks for both safekeeping and the purpose of earning interest, and these funds are the basis of the operations of banks (Choudhry, 2011).

The banking sector in Afghanistan has been affected by economic and political conditions for a long time. Despite the considerable efforts by the government and international allies in the past two decades for the expansion of bank operations in the country, only 7.5%

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of the population is dealing with the sector (Arslan *et al.*, 2020). Similarly, a financial sector shock started following the freeze of the central bank's foreign assets by the United States, which led to a loss of confidence in the banking sector, and depositors ran to withdraw their money. The depositors began withdrawing their savings from banks as a precaution even before the political crisis in the country (World Bank, 2022, p. 5,7). This study gathered data from a sample of six banks that have disclosed details of deposits in their financial reports. By applying a Least Squares Dummy Variable (LSDV) fixed-effects model, the research examined how maintaining different types of deposits affected the core activities of banks measured by operational income. This study is expected to assess bank management in making informed strategic financial decisions regarding the identification of the most efficient deposit types. Focusing on deposits, the research contributes to efficient financial performance and enhances overall earning capacity in commercial banks of Afghanistan.

The study followed the objective of assessing the contribution of various categories of deposits to the total deposits of the sample banks. Evaluating the volatility patterns of different deposit categories to identify the most reliable funding sources. Assessing the utilisation of financial resources relative to deposits in lending, investment, and placements, and analysing the statistical effect of various deposit categories on the operating income.

1.1 Economic and Political Context of the Study Period (2017-2025)

The study period covered the most challenging phases in the emerging banking sector of Afghanistan when total deposits experienced substantial disruption during the political transition of August 2021. Due to the turbulent situation in the financial sector of the country, a sudden loss of public confidence triggered deposit withdrawals amounting to an estimated 41% of total deposits of commercial banks, equivalent to roughly 1.5 billion US dollars. This sudden reduction in total deposits occurred despite of limitation on the withdrawal of the depositors in the banks (Faeeq, 2023). The banking sector was further under pressure due to the freezing of DAB foreign reserves by the United States of America (World Bank, 2022). This fragile situation affected the operation of banks and caused severe liquidity stress, which reduced access to international correspondent banking relationships. The banking sector in Afghanistan was suffering restricted lending capacity, as at the beginning of 2018, mismanagement by the central bank, Da Afghanistan Bank, which is also known as DAB, limited the capacity of the banking sector to lend more than 15% of their total deposits (Bashiri *et al.*, 2023).

2. Literature Review

Conducting a literature review is an essential part of the study process as it establishes the foundation for a better understanding of the topic under investigation. This study identified how different types of deposits and their allocation to lending and investment activities affected the operating income in the selected commercial banks of Afghanistan. Accordingly, some of the relevant research is reviewed as follows.

The primary function of banks as financial intermediaries is to collect funds from depositors and then mobilise those funds to borrowers. Additionally, banks also provide other financial services. According to financial terms, the deposits represent liabilities for the banks, and the loans are their assets. Banks accept deposits and lend the same, where the profit is the difference between the rates at which they borrow and lend money after consideration of all expenses. Banks also earn income from investments and fees charged on various services (Gup, 2011, bks. 51–52). Da Afghanistan Bank DAB or the Central Bank of Afghanistan, found that deposits are the main source of funds for the banking sector in the country and make up a significant portion of liabilities, including customers and interbank accounts (Da Afghanistan Bank, 2020, p. 87). Meanwhile, a study revealed that the banks in Afghanistan mostly functioned as intermediaries, relying significantly on deposits, rather than financing activities such as lending and investment. Meanwhile, there was a huge difficulty for the banks in case of default by borrowers, as the validity of collateral, such as land titles, is often

disputed in courts (Disli *et al.*, 2023). According to Gopi and Raj (2015), lending is more challenging compared to maintaining deposits in the commercial banks of Afghanistan. Deposits involve no risk because banks are required to return the deposits upon request from clients. In contrast, since there is no assurance of repayment, lending carries a considerable risk. Furthermore, Naseri and Sharofiddin (2020) revealed that Banks failed to mobilise deposit funds toward the investment side of the balance sheet efficiently in Afghanistan. This liquidity constraint was not new, as Bashiri *et al.* (2023) trace it back to central bank mismanagement beginning in 2018, which had already limited the sector's lending capacity well before the 2021 crisis discussed in Section 1.1.

On the other side, the concentration of deposits was not proportionate in the banking system, as there were two banks, jointly holding 55% of the total deposits in the banking sector of Afghanistan (Faeeq, 2023). Banking systems consist of private and public sectors in the country, where the private banks have performed far better based on the loan-to-deposit ratio (Mohammady, 2019). More specifically, Bank-e-Milliie Afghan has the highest loan-to-deposit ratio among the public sector banks (Sharifi, 2019). A study on the financial inclusion aspect showed that banking facilities are not accessible in all provinces of the country equally; it is focused only in a few cities, for instance, 75% of loans are given in Kabul (Arslan *et al.*, 2020). Furthermore, among every 1000 adults, only 103 have a deposit account with a commercial bank (Frotan & Imran, 2023). The low number of depositors and borrowers is the main challenge confronted by the banking sector in the country (Naseri & Sharofiddin, 2021). Beyond the Afghanistan context, recent international evidence continues to link deposit composition with bank efficiency and profitability.

(Lamothe *et al.*, 2024) find that efficiency, asset quality, and interest margin are strongly associated with how banks organise and use their deposit base, consistent drivers of profitability across world regions, in a global sample of more than 2,000 commercial banks in 110 countries. In the Indian context, Akhtar *et al.* (2024) employed Data Envelopment Window Analysis and the Malmquist Productivity Index with panel regression on 46 banks (2011-2023) and demonstrated that the degree to which banks convert deposits into productive assets impacts both efficiency scores and profitability outcomes, with public banks achieving the highest efficiency scores and foreign banks excelling in productivity growth. (Chand *et al.*, 2024) studied seven banks in Fiji over the period 2000-2021, a setting similar to Afghanistan as a small developing economy, and showed that net interest margin, non-interest income, and capital adequacy are significant determinants of bank profitability, even after controlling for institutional and macroeconomic shocks, and these determinants are affected by deposit mix and mobilisation. At the macro level, Chen *et al.* (2024), in an IMF study of more than 2,500 European banks, found that the slower pass-through of policy rate hikes to deposit rates (compared to loan rates) widened net interest margins and led to a temporary spike in bank profits. This shows that the pricing and structure of deposits, not just their volume, is a first-order determinant of operating income even in mature banking.

Collectively, these studies confirm that the deposit efficiency- profitability relationship identified in developed and other emerging markets is highly context-dependent, varying with market structure, regulatory environment, and macroeconomic conditions, reinforcing the need for setting-specific evidence from fragile and underbanked markets such as Afghanistan.

2.1 Research Gap

The literature reviewed showed that the deposit structure and its allocation to financial activities were among the main factors of the bank's profitability in the banking sector of Afghanistan (Naderi, 2021; Najimi *et al.*, 2022; Sharifi, 2019) and internationally (Lamothe *et al.*, 2024; Akhtar *et al.*, 2024; Chand *et al.*, 2024; Chen *et al.*, 2024). Depending on the regulatory environment, the efficiency of the banking sector, and macroeconomic stability, deposits can also contribute to profitability in one country, while having a different effect on

profitability in another country. Despite this body of research studying different types of deposit categories like current, savings, term, and margin accounts and their effect on profitability remained unexplored. The existing literature in the context of the banking industry of Afghanistan has been limited to general aspects like asset-liability management (Najimi *et al.*, 2022) or CAMEL-based performance evaluation (Sharifi, 2019). This study addressed the mentioned research gap by examining deposit types and their corresponding utilisation against operating income of sampled banks in Afghanistan, providing more granular, ratio-specific evidence.

2.2 Contribution of the Study

This study contributes to the existing literature in three specific ways. First, unlike prior studies, this study disaggregated deposits into distinct categories and models each one's individual impact on the operating income, offering ratio-specific evidence rather than a single composite measure. Second, it jointly linked this disaggregated deposit structure to the corresponding fund-utilisation channels, an integrated deposit-to-deployment perspective that has not previously been applied to the banking sector in Afghanistan. Third, it extends the international deposit profitability literature (Lamothe *et al.*, 2024; Akhtar *et al.*, 2024; Chand *et al.*, 2024; Chen *et al.*, 2024), which has largely examined stable or mature banking systems, to a fragile, underbanked, and politically volatile market, offering evidence on how deposit composition and profitability interact.

3. Research Methodology

Since using the absolute values of operational income and deposits introduces bank size bias, ratio-based measures are adopted to address this limitation. To examine the impact of deposit composition on the NOM of banks, this study employed the Least Squares Dummy Variable (LSDV) fixed-effects model. The LSDV specification augments an ordinary least squares regression with bank-specific and year-specific dummy variables, thereby controlling for unobserved, time-invariant heterogeneity across banks. In this model, the primary variables were the components of deposit structure such as the CDR, SDR, TDR, and MDR. Including all four types of deposits (CDR + SDR + TDR + MDR ≈ 1) simultaneously as regressors in the model induces exact multicollinearity. As high multicollinearity was confirmed empirically by a Variance Inflation Factor (VIF) of 260,697.48 for CDR, which far exceeded the conventional threshold of 10, it was therefore removed from the model.

Furthermore, four control variables were also considered to capture other bank-level factors influencing operational income. These control variables were bank size, measured as the natural logarithm of total assets (LnSize); the Loan-to-Deposit Ratio (LDR); the Capital Adequacy Ratio (CAR); and the Liquid Asset Ratio (LAR). Testing revealed that LnSize also exhibited a high degree of multicollinearity with other model regressors and was therefore excluded from the final specification. The final estimated LSDV model is specified as:

$$NOM_{it} = \beta_0 + \beta_1 SDR_{it} + \beta_2 TDR_{it} + \beta_3 MDR_{it} + \beta_4 LDR_{it} + \beta_5 CAR_{it} + \beta_6 LAR_{it} + \sum_j \delta_j Bank_j + \sum_t \gamma_t Year_t + \varepsilon_{it}$$

where subscripts i and t denote bank and year, respectively; Bank $_j$ denotes the retained bank dummy variables, and Year $_t$ (t = 2018, …, 2025) are year dummy variables with 2017 as the reference year.

3.1 Data Preparation and Regression Diagnostic Tests

The audited financial statements are presented in a manner that assumes that unreported deposit categories are zero. Nothing was explicitly disclosed in the annual reports that the omitted balances were zero. No separate amounts were disclosed. The methodology adopted ensured a balanced panel data set, while maintaining consistency across banks and years. This assumption was uniformly applied for all banks and years and is a known limitation of the dataset.

3.2 Time Frame of the Study

Considering the sufficient accessibility of data in the financial reports of banks, the study covered nine years between 2017 and 2025.

3.3 Nature and Sources of Data

The research fully relied on secondary data, which was gathered from archived financial reports of sampled commercial banks in Afghanistan.

3.4 Selection of Sample Banks

Among the twelve commercial banks currently operating in the country (Da Afghanistan Bank, 2025), those banks that reported details of their deposits were selected for the purpose of the investigation. Table 1 demonstrates the sampled banks and type of their ownership details.

Table 1. Composition of sampled banks by sector (public and private)

No	Name of Sampled Banks	Type of Bank
1	Bank Millie Afghan	State-Owned Commercial Bank
2	Pashtany Bank	State-Owned Commercial Bank
3	Afghanistan International Bank	Private Commercial Bank
4	The First Micro Finance Bank	Private Commercial Bank
5	Ghazanfar Bank	Private Commercial Bank
6	Afghan United Bank	Private Commercial Bank

4. Data Analysis and Interpretation

4.1 Deposit Structure

The banking sector is the primary channel of financial intermediation in Afghanistan in the absence of an active stock market (Saddique & Anwar, 2019), and the sector has accumulated a substantial volume of customer, business, and institutional funds across four deposit categories: current, savings, term, and margin accounts. Figure 1 shows that current deposits form the largest share of this base across the sampled banks. Because current accounts are non-interest-bearing, this composition gives banks a structural, low-cost funding advantage. This advantage, however, is only realised if the resulting low-cost funds are deployed productively. Section 4.3 shows that banks in the sample have in fact allocated a considerable share of resources away from higher-yielding loans and toward lower-yielding investments and placements, and the fixed-effects results in Section 4.5 confirm that current deposits show no distinguishable positive statistical effect on NOM. The dominance of current deposits observed here should therefore be read as an underexploited structural advantage rather than a guaranteed driver of profitability, a point developed further in Section 4.5.2.

4.2 Stability Assessment of Deposit Patterns

Beyond composition, the stability of each deposit category over time determines how reliable a funding

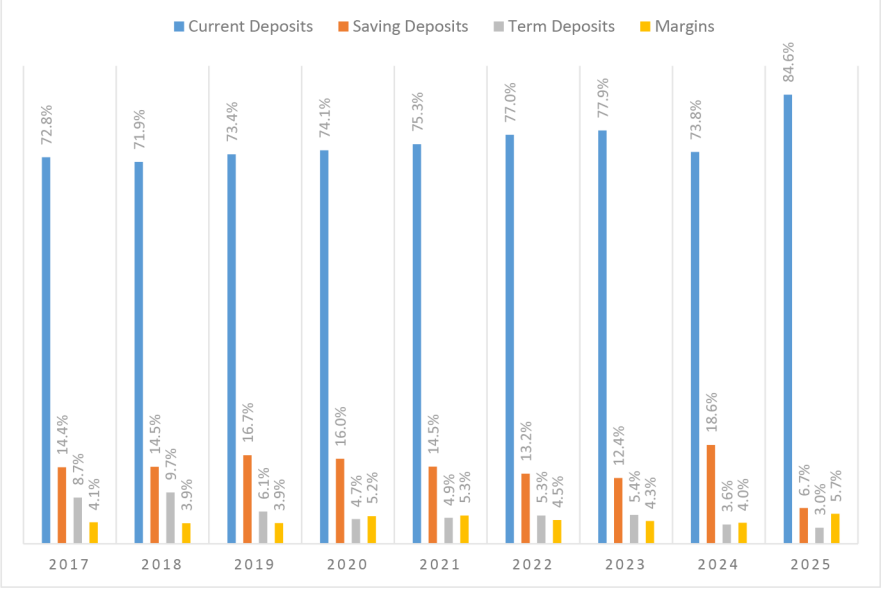


Figure 1. Proportional contribution of deposit categories (2017-2025).

source it is for planning purposes. This section presents a year-wise growth-rate analysis of the four deposit components, shown graphically in Figure 2, to evaluate the relative volatility of each category and to identify the periods in which instability was most pronounced.

4.2.1 Current Account Deposits

Deposits made at the bank, such as current accounts, have no set maturity date and are available on demand. They are technically referred to as 'non-interest-bearing liabilities' because the bank pays no or very low rates of interest on them, making them practically free funds. The balance of these funds can fluctuate during the day without prior notice, but it is generally stable (Choudhry, 2011, bk. 198). Figure 2 shows that, contrary to this expectation, current account deposits exhibited substantial fluctuation and a negative growth rate across much of the study period. This instability is consistent with the confidence shock reported in Section 1.1 and the literature review. After the political transition of August 2021, depositors withdrew approximately 41% of total deposits within weeks (Faeeq, 2023), and the subsequent freeze of the foreign assets of the central bank further eroded confidence in the banking sector (World Bank, 2022).

4.2.2 Savings Account Deposits

Savings accounts are intended to encourage saving habits; hence, organisations with a business motive are not permitted to open such accounts. In these accounts, interest is paid every half-year. Each bank has its own set of minimum balance requirements (Suresh & Justin, 2017, bk. 887). Figure 2 shows a pattern of instability broadly similar to current deposits, indicating that savings balances were equally exposed to the sector-wide confidence pressures described above rather than following the more predictable, gradually accumulating pattern typically associated with this deposit type. Despite this volatility, the fixed-effects regression in Section 4.5 identified SDR as the only deposit category with a statistically significant, positive effect on NOM. This suggested that even a volatile funding source can remain a meaningful driver of operating income, provided the underlying account relationships persist through periods of instability.

4.2.3 Term Account Deposits

Interest-bearing bank accounts with a set maturity are called time or term deposits. They are typically available with maturities ranging from one month to five years, with longer-dated deposits earning more interest (Choudhry, 2011, bk. 308). Figure 2 indicates significant instability most of the year, with negative records in term deposit growth rate. This situation suggests reduced customer confidence in long-term deposits, which limited banks' access to stable funding sources. Banks may suffer from inefficient liquidity planning, asset allocation, inability to generate consistent operational income from long-term financial resources.

Figure 2 indicates pronounced instability and a negative growth rate for term deposits across most of the study period - a more severe pattern than either current or savings deposits. This is consistent with the nature of term deposits themselves: because they require depositors to commit funds for a fixed period, they are the deposit category most sensitive to a loss of confidence in banking-sector stability, since depositors under confidence stress prioritise immediate access to funds over the higher returns that locked-in deposits offer. The result is reduced access to a stable, longer-term funding source for banks, with consequences for liquidity planning, asset allocation, and the ability to generate consistent operational income from long-duration financial resources, constraints that help explain why TDR does not register as a statistically significant driver of NOM in Section 4.5.

4.2.4 Margin Account Deposits

Margin accounts, as per the sampled banks' archived financial reports, are security deposits typically tied to non-fund-based activities such as bank guarantees and letters of credit; they provide banks with a short-term, restricted-liquidity funding base, since the funds are held as collateral against contingent liabilities rather than being freely deployable.

Figure 2 shows a negative growth rate for this category, particularly pronounced in the later years of the study period. Unlike current, savings, and term deposits,

margin accounts are frequently tied to trade-finance and guarantee activity, so their decline plausibly reflects a broader contraction in trade-related banking activity amid the same macroeconomic and political disruptions discussed above, rather than a shift in depositor confidence. Combined with their already marginal share of the deposit base, this volatility helps explain the absence of a statistically significant relationship between MDR and NOM reported in Section 4.5, a point discussed further in Section 4.5.1.

4.3 Allocation of Financial Resources

Commercial banks in Afghanistan have allocated their financial resources primarily to loans, investments, and placements. Figure 3 presents the relevant financial ratios of these instruments in banks to show the relative weight for each. The pattern shown in Figure 3, a shift of considerable resources from loans, the highest-earning instrument, toward lower-yielding investments and placements. This preference for low-income activities was substantial till 2021; however, loans exceeded investments from 2022, but placements still maintained the highest share. This is a rational response given the operating environment documented earlier in this study by Disli *et al.* (2023) founded that the validity of collateral such as land titles is frequently disputed in courts, raising the effective risk and cost of loan recovery in case of default in the banking sector of Afghanistan. These constraints raise the relative cost of expanding loan portfolios compared to safer investment and placement instruments. Due to banks' high tendency toward low-income instruments, the banks may suffer a significant opportunity cost. A related study reached a comparable conclusion, finding that banks favoured investment activity over lending and that investment holdings had a significant effect on return on assets (Rasikh & Kamruddin, 2026).

4.4 Statistical Assessment

4.4.1 Descriptive Statistics

To provide an overview of the distribution and variability of the study variables, Table 2 presents the statistical values of variables in the study. This information offered preliminary insights into the characteristics of the panel dataset before conducting correlation and regression analyses.

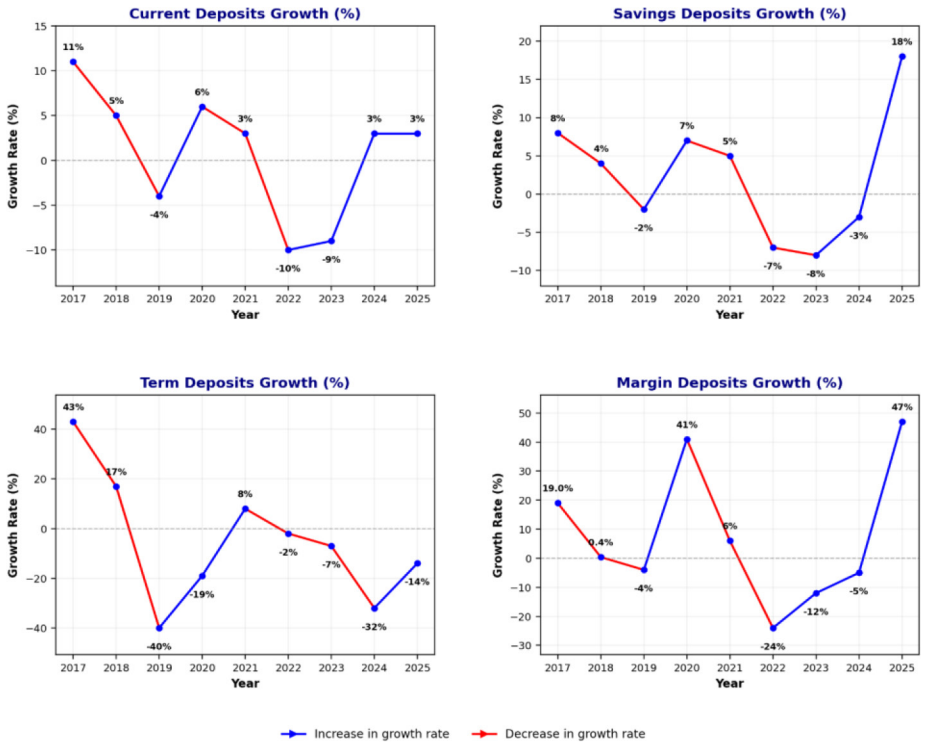


Figure 2. Annual growth rate analysis of deposit categories (2017-2025).

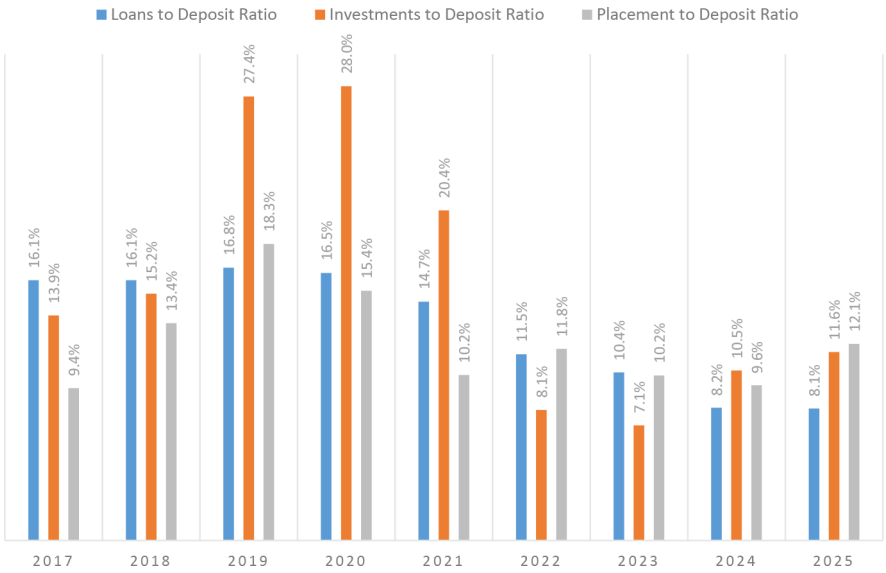


Figure 3. Deployment of financial assets with respect to deposits (2017-2025).

Table 2. Descriptive statistics of the study variables

Variables	N	Mean	Std. Deviation	Minimum	Maximum
NOM	54	43.272%	89.971%	-9.634%	549.798%
CDR	54	67.966%	15.040%	42.459%	99.968%
SDR	54	19.449%	13.348%	0.374%	44.652%
TDR	54	7.775%	6.024%	0.003%	18.590%
MDR	54	7.166%	8.326%	0.032%	30.159%
LDR	54	22.454%	21.376%	0.032%	82.097%
CAR	54	35.723%	19.045%	12.680%	79.050%
LAR	54	50.246%	13.319%	22.589%	86.427%
Total Asset	54	28.75	17.74	9.7	74.45

Note: Total assets are in Billion Afghani

Table 3. Fixed-effects regression results for NOM

Variables	Coefficient (B)	Std. Error	p-value
SDR	3.821	1.355	0.008**
TDR	-4.674	2.981	0.126
MDR	1.491	2.499	0.555
LDR (Controlled)	-0.843	0.936	0.374
CAR (Controlled)	-1.545	0.973	0.121
LAR (Controlled)	5.098	0.844	0.000***
Constant	-1.105	0.818	0.186
Bank Fixed Effects	Yes		
Years Fixed Effects	Yes		
Model Statistics			
Observations	54		
R^2	0.723		
Adjusted R^2	0.581		
F-statistic	5.080		
Model p-value	< 0.001		
Residual Std. Error	0.583		

Note: CDR excluded as reference category due to multicollinearity. ** p<0.05, *** p<0.01

4.4.2 Pearson Correlation

The correlation heatmap in Figure 4 indicated that the model had multicollinearity. The CDR is strongly negatively correlated with SDR (-0.689) and TDR (-0.614). This visually validates the extreme VIF (260,697) that forced the exclusion of CDR. It also confirms LAR (0.519) has the strongest raw relationship with NOM, matching the regression's largest significant coefficient, while TDR, MDR, and bank size show weak, near-zero relationships with NOM.

4.5 Fixed-effects Model

The overall LSDV fixed effects regression model in Table 3, demonstrated a significant share of the variation in NOM (R^2 = 0.723, Adjusted R^2 = 0.581), with the overall model being highly significant (F (18,35) = 5.080, p<0.001). Among the deposit-composition variables of interest, SDR had a positive and statistically significant relationship with NOM (B = 3.821, p = 0.008). This association indicated that a higher share of savings deposits is associated with a higher operating margin, holding bank size effects, lending, capital, liquidity, and the fixed effects constant.

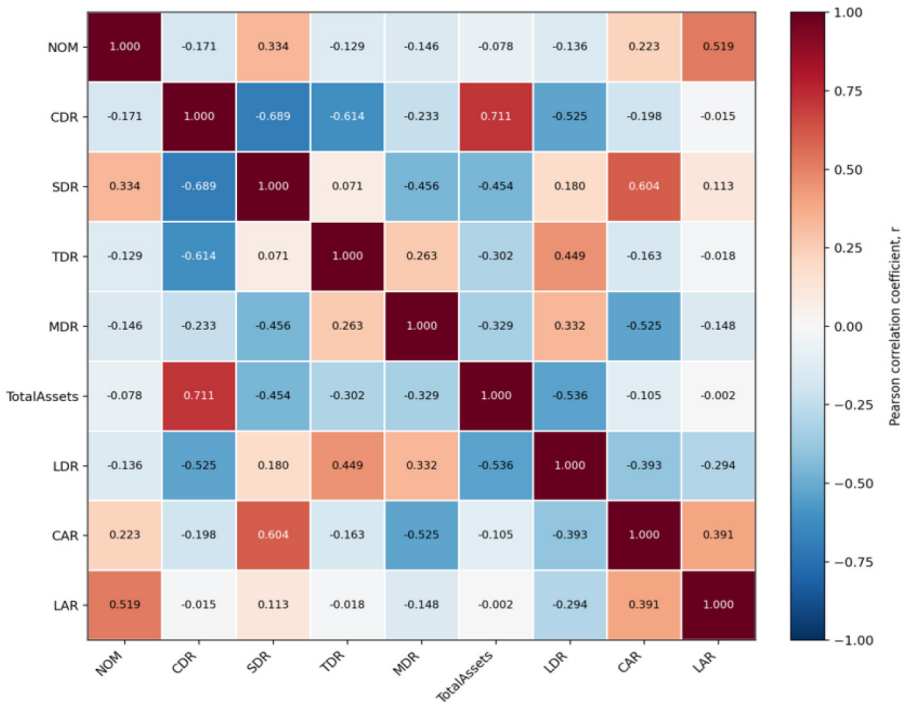


Figure 4. Pearson correlation matrix heatmap.

In contrast, TDR and MDR are not significant ($p = 0.126$ and $p = 0.555$, respectively), suggesting that controlling for bank and year-level heterogeneity, the two types of deposits do not have a distinguishable independent effect on NOM. Among the control variables in the model, the strongest and most significant predictor was the LAR ($B = 5.098$, $p<0.001$). The association of CAR and LDR with NOM was not statistically significant.

4.5.1 Explaining the Insignificant Relationships

While the SDR showed a positive and statistically significant association with NOM, consistent with Najimi *et al.* (2022), the remaining deposit categories do not. CDR constitute the largest share of the deposit base in the sampled banks (mean = 67.97%) and, being non-interest-bearing, represent the cheapest available source of funds. However, this cost advantage does not translate into higher operating margins, because the benefit of low-cost funding is only realised if it is deployed into productive, income-generating assets. As Section 4.3 of this study shows, banks in the sample followed a conservative allocation strategy, shifting a considerable share of funds away from loans and toward lower-yielding investments and placements. This trend is consistent with the findings of Naseri and Sharofiddin (2020), who found that banks in Afghanistan have struggled to effectively mobilise deposit funds to the investment side of the balance sheet and Bashiri *et al.* (2023), who document a sustained regulatory constraint on lending to the private sector to a maximum of 15% of total deposits for an extended period of time. The TDR is both a small (mean = 7.78%) and highly volatile component of the deposit base, as shown in Section 4.2.3. Term deposits require depositors to commit funds for a fixed period, and this commitment is precisely the kind of confidence in banking-sector stability. Because the return-generating mechanism for this deposit type differs structurally from conventional interest-based deposits, and its share of the balance sheet is marginal for most sampled banks, MDR does not show a statistically detectable relationship with NOM in this sample.

4.5.2 Practical Implications for Bank Managers

The regression results translate into several concrete decisions for bank management. First, because SDR is the only deposit category showing a statistically significant, positive relationship with NOM, savings-deposit mobilisation represents the clearest, most directly actionable lever available for improving

operating income; branch expansion, savings-product design, and customer-acquisition efforts should prioritise this deposit category specifically rather than treating deposit growth as a single undifferentiated target. Second, because a large current-deposit base does not translate into higher margins on its own, banks should not treat current-account growth as an end in itself: its value depends on how efficiently those low-cost funds are subsequently deployed, and Section 4.3 shows this deployment has so far been conservative, favouring investments and placements over higher-earning loans. Third, the strong, significant effect of LAR indicates that liquidity management should be treated as an active driver of profitability rather than merely a regulatory obligation; given Afghanistan's demonstrated history of sudden, confidence-driven deposit withdrawals, maintaining liquidity buffers above regulatory minimums simultaneously protects the bank and supports operating margin. Finally, the negative, near-significant coefficient on CAR suggests that capital held well beyond prudent risk-coverage levels may sit idle rather than generate income, so capital planning should be calibrated to regulatory and risk requirements rather than accumulated as a passive buffer.

4.5.3 Policy Implications

The findings also carry implications for policymakers, particularly Da Afghanistan Bank. The large negative year-fixed-effects from 2021 onward suggested that the sector-wide compression of margins during this period is due to systemic political and confidence shocks, rather than deposit strategies of banks at the individual level. Indeed, restoring macroeconomic and political stability and rebuilding depositor confidence more broadly may do more to support sector profitability than any one bank-level intervention. The government must encourage diversification into more stable, longer-term savings and term deposits, such as deposit insurance schemes, to build public confidence. This approach can help lengthen the maturity structure of bank liabilities. Finally, as only a small share of the population in Afghanistan holds a bank account (Arslan *et al.*, 2020), the government and banks should encourage more people to open and use bank accounts, especially savings accounts and term deposit accounts, rather than current accounts alone.

4.5.4 Comparative Discussion with Other Emerging Economies

However, some of the findings of this study are consistent with studies reported from developing countries, but most of the findings are in contradiction with their results. This comparison helps to understand which patterns are general and which are specific to the emerging banking sector of Afghanistan. According to this research, the composition of deposits is more important than the volume of deposits in the banking sector of Afghanistan. This was indicated by a strong effect of SDR against an insignificant effect of CDR, although the latter had a much larger share of the balance sheet. The same reality was discovered by Chen *et al.* (2024), who studied more than 2,500 European banks and found that bank profitability depends on the total amount of deposits as well as the types of deposits and the interest margin. In parallel, the strong explanatory role of liquidity in this study (LAR as the single strongest predictor of NOM) is consistent with the general pattern found in Lamothe *et al.* (2024), who similarly found that balance sheet management factors, in their case asset quality and efficiency, are consistent drivers of profitability for a global sample of more than 2,000 banks in 110 countries. The comparison also shows what makes the banking sector in Afghanistan special. Chand *et al.* (2024) studied three determinants of profitability: net interest margin, non-interest income and capital adequacy in a developing economy of the South Pacific, Fiji. The study found these determinants still significant after the control of institutional and macroeconomic shocks. In the case of Afghanistan, by contrast, the year-fixed-effects results in Section 4.5 show that a single macro-political shock, the confidence crisis beginning in August 2021. This crisis was enough to weaken the statistical significance of several deposit- and capital-related variables. This suggests that in banking systems undergoing acute institutional stress, systemic shocks can temporarily overwhelm the bank-level financial-management relationships that hold in more stable emerging markets, a nuance not captured in studies of comparatively stable settings such as Fiji or India. Likewise, Akhtar *et al.* (2024) found that Indian public-sector banks led their sample in efficiency at converting deposits into productive assets; the defensive allocation pattern documented in Section 4.3

suggests banks in Afghanistan have been comparatively less efficient at this conversion, a difference plausibly rooted in the collateral-enforcement and regulatory-lending constraints specific to Afghanistan's legal and institutional environment (Disli *et al.*, 2023; Bashiri *et al.*, 2023).

Overall, this comparison suggests that the deposit-composition and liquidity-management relationships found in this study are broadly consistent with the international literature in direction, but their strength and significance are conditioned by the severity of the institutional and political instability. This reinforces the view that findings from stable emerging markets should not be generalised uncritically to fragile and post crisis banking systems such as Afghanistan.

5. Conclusion

This study shifted the analytical lens from the overall financial performance to a specialised examination of bank factors, which is deposit. The study employed a Least Squares Dummy Variable (LSDV) fixed-effects regression model, with bank- and year-fixed effects, to examine the relationship between four deposit categories and operating income of sampled banks in Afghanistan. The findings show that deposit composition matters more than deposit volume. Despite current deposits constituting the largest share of the deposit base across the sample, the SDR was the only deposit category to show a statistically significant, positive relationship with operating income, while the Term and Margin Deposit Ratios did not. Among the control variables, the LAR emerged as the strongest and most significant predictor of operating income in the model, underscoring liquidity management as a central determinant of profitability in a banking system, while the CAR showed a negative, near-significant association.

These findings extend the literature on bank performance in Afghanistan by disaggregating deposits into their constituent categories and jointly linking deposit structure to fund-deployment behaviour. The results carry direct implications for bank managers, particularly around prioritising savings-deposit mobilisation, treating liquidity management as a driver of profitability rather than solely a regulatory obligation.

6 Limitations

Several limitations should be acknowledged to properly contextualise the findings and to guide future research. First, the sample is restricted to six commercial banks over nine years because of the small number of banks that report deposit-category detail in their financial reports. Second, unreported deposit-category balances were assumed to be zero according to the presentation of audited financial statements. This assumption was applied uniformly across banks and years but could not be independently verified against underlying accounting records. Third, CDR's exclusion (Section 3) limits this study to reporting relative rather than independent deposit effects, and the same applies to bank size (LnSize), which was dropped on the same diagnostic grounds. Fourth, the study period is dominated by an extraordinary exogenous shock, the political and confidence crisis beginning in August 2021, which may itself account for much of the year-fixed-effects pattern observed; this makes it difficult to fully disentangle "normal-period" deposit-income relationships from crisis-driven effects, and findings should be interpreted with this structural break in mind. Finally, the study relies on a single measure of operating performance, the (NOM), and does not examine alternative profitability measures such as return on assets or net interest margin, nor does it account for potential reverse causality between deposit composition and operating performance.

7 Future Studies

Since a break point has been identified for the year 2021, future research can employ the modelling of pre and post-crisis subsamples, or macroeconomic factors like inflation rates, changes in exchange rate levels and remittances, to capture the effect of external disturbances as opposed to internal financial decisions made by the banks. Future research could also analyse other profit-related variables such as return on assets and net interest margin to confirm the reliability of these results, as well as combine the quantitative analysis carried out in this paper with interviews with the managers of banks.

8. References

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Author Contribution

Abdul Ameen Rasikh designed the study, collected and analyzed the data, carried out the statistical modeling and drafted the manuscript. The whole research work was supervised by Dr. Shaik Kamruddin who also checked the manuscript.