

Are Deposits a Stable Source of Funding for Microfinance Institutions?

Poor people save. The conventional view is that low-income depositors transact more frequently than holders of larger accounts and are more prone to income disruptions from natural disasters, health issues, crime, and other factors. This perception makes financial institutions stepping into the under-served low-income space worry about whether they can use small deposits to fund their lending operations. But new research finds that under normal circumstances, aggregate balances for low-income accounts move gradually, and they are not prone to abrupt month-by-month swings. This should make liquidity management easier because it gives the institutions enough time to adjust to changes in deposit supply over several months.

Of course, financial institutions cannot take for granted that any of their deposits are stable, long-term sources of funds until they have carefully analyzed typical savings patterns in their portfolio of deposit products. This analysis informs their liquidity management and their funding strategy. Deposit-taking MFIs should use the same type of analysis on their deposit products, and refine their liquidity planning and funding operations accordingly.

Research study

CGAP commissioned the Frankfurt School of Finance and Management to study the stability of small deposits as a source of funds in five institutions.¹ The study examined the actual behavior of deposits raised from poor individuals, and asked the following:

1. Are there recurring seasonal savings patterns?
2. How volatile or predictable are the aggregate balances of demand and term deposits?
3. How do external events (e.g., natural disasters, political turmoil, war) affect deposits?

Methodology

Five financial institutions were studied: Allied Bank (Pakistan), VTB (Georgia), BPR Kebomas (Indonesia), Equity Bank (Kenya), and Banco Sol (Bolivia). They were chosen because they represented large markets of under-served poor people, and all but one (BPR Indonesia) maintained large deposit volumes from low-income savers.

“Small balance” deposits were defined by analyzing account sizes by product and customer demographics, matched against the poverty line and per capita income in the country.

Each institution’s deposit base was analyzed in terms of long-term trend, seasonal patterns, annualized daily volatility, and average life of demand deposits, as well as peculiar patterns, trend interruptions, and outlier values. Banks usually track these and other indicators for the purpose of asset and liability management and reporting.

¹ The full report, *The Stability of Small Balance Deposits*, is available at www.cgap.org. In addition to data from a diverse group of five low-income deposit operations, the paper provides analytical tools that will help even small MFIs to start modeling deposit supply.

Small Balance Demand Deposits Provide Relatively Stable Aggregate Balances

Table 1 summarizes the main findings, along with reference data from a bank in Germany. The estimated volatility figures from the large German bank are in line with what conventional wisdom would predict for deposit behavior in a country with fully developed financial markets. Current accounts are the most volatile: they are primarily used for transaction reasons, so transactions are frequent. Savings deposits are the bedrock of funding, with very low volatility and low interest cost. Term deposits are more volatile than savings accounts because of their higher concentration, or “lumpiness,” as they come and go in relatively large amounts.

Equity Bank and Allied Bank conformed to this expected pattern, but in VTB, BPR Kebomas, and BancoSol, ordinary savings accounts turned out to be more volatile than term deposits. This may have something to do with the fact that in the latter three institutions, aggregate term deposits are several times larger than the total balance supplied by ordinary savings. This suggests that bank staff pay particular attention to raising term deposits and cultivating the smaller circle of “elite” depositors, to manage the volatility of term deposits. In many developing countries there is anecdotal evidence that small traders use savings accounts instead of current accounts for short-term safekeeping of relatively large amounts of cash that are deposited and withdrawn several times a week. Such atypical use of savings accounts may distort the volatility in institutions with a micro-enterprise focus, such as BPR Kebomas and BancoSol. In general, the stability or volatility of the deposits depends on the size and frequency of transactions, institutional reputation, and interest rates. Also, the way the institution markets its savings products may help explain the unusual volatility

performance of these deposits. The examples from these five financial institutions show that neither savings nor term deposits are inherently more or less volatile as products, but the specific combination of these elements will determine in the end whether savings accounts or term deposits are more volatile.

Deposit Balances Are Not Seasonal

The data show only weak seasonality in all five institutions, which is good news for liquidity management. The only marginally significant seasonal pattern was a recurring savings decline at the beginning of Ramadan at Allied Bank in Pakistan. However, money moved out of savings was often moved into current accounts or banker’s checks, so there was little liquidity impact on the institution.

Deposits Are Not Very Sensitive to External Macro Events

The study found that natural disasters had no effect on deposit balances in any of the institutions. Deposits dropped during some sociopolitical crises in some countries, but certainly not all.

Even where there existed a potential match on the timeline between a confidence-shattering stress event and a decline in deposits, there was no guarantee that there was indeed a causal link. There were always more undulations in the deposit time series than there were stress events that could have explained them.

In addition, the study notes that a positive macro event never leads to a sudden surge in deposits. Mapping events to deposit patterns only makes sense for sudden bad news or disasters of a broad-based nature that induce large numbers of depositors to try to get their money out while they still can.

Table 1. Main Findings

	Allied Bank, Pakistan	VTB, Georgia	BPR Kebomas, Indonesia	Equity Bank, Kenya	BancoSol, Bolivia	For Comparison: German Bank
Type/charter	Fully licensed commercial bank	Fully licensed commercial bank	Rural People's Credit Bank (BPR) with limited license for savings and loan operations	Fully licensed commercial bank	Fully licensed commercial bank	Fully licensed commercial bank
Supervised/regulated by	State Bank of Pakistan	National Bank of Georgia	Bank Indonesia	Central Bank of Kenya	Superintendent of Banks and Financial Entities & Central Bank of Bolivia	German Financial Markets Regulator & Bundesbank/ European Central Bank
Total assets, Dec-2006, US\$	\$4.2 billion	\$275 million	\$641,000	\$294 million	\$231 million	Not disclosed
Customer deposits/total assets	81.7%	28.3%	59.0%	82.0%	66.4%	2002: 35%
GNI per capita (Atlas method)	\$690	\$1,350	\$1,280	\$530	\$1,010	\$34,580
Consumer price inflation % p.a. 2006	7.9%	10.0%	13.2%	10.5%	4.3%	1.7%
% of population below \$1/day	17.0%	6.5%	7.5%	22.8%	23.2%	n/a
% of population below \$2/day	73.6%	25.3%	52.4%	58.3%	42.2%	n/a
Monthly product balances	Jan-96 to Jul-04	Jan-01 to May-04	Jan-01 to May-04	Nov-01 to Dec-06	Dec-98 to Dec-05	Sep-97 to Dec-02
Weekly product balances	Aug-04 to Oct-05	Jun-04 to May-05	Jun-04 to May-05	None	None	None
Daily product balances	Nov-05 to Nov-06	Jun-05 to May-06	Jun-05 to May-06	None	None	None
Demand savings accounts	Some residual annual-cycle seasonality on all three deposit categories due to Islamic holidays and Zakat effect	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
Current accounts		n/a	n/a	n/a	n/a	Insignificant
Retail term deposits		Insignificant	Insignificant	Not tested	Not tested	Insignificant
Demand savings accounts	13.51%	27.6% (GEL accts. only)	61.24%	14.43%	24.24%	4.39%
Current accounts	40.89%	n/a	n/a	1.2012	n/a	0.1581
Retail term deposits	33.57%	6.73%	26.96%	34.50%	17.33%	11.88%
Political or socioeconomic crisis during data period?	Yes, several	Yes, several	Yes, several	Only minor political turbulence: Dec-02 general elections, constitutional referendum Dec-05	Yes, several	None, but special circumstances during euro introduction Jan-02
Large natural disaster during data period?	Yes, Kashmir earthquake Oct-05	No	Yes, Dec-04 Tsunami	Yes, drought in 2005	None	Yes, River Elbe flood Aug-02
Macro events coincide with decline in deposit supply?	Yes, May-Oct-99 Kargil (Kashmir) conflict; 9/11 & Afghanistan invasion Oct-01	Yes, Nov-03 to Mar-04 Rose Revolution	Yes, May-01 to Jul-01 President Wahid impeachment crisis; Jul-04 to Sep-04 presidential elections	No evidence found in Equity Bank data	Yes, Jul-02 liquidity crisis, Feb-03 unrest against Lozado govt, Apr-04 tax on financial transactions and gas referendum, Dec-05 presidential elections	No, however, surge of deposits in Dec-01 ahead of DM-Euro banknote conversion in Jan-02

Conclusion

The study shows that some portion of small balance deposits in any institution can be considered a stable source of funds.

Banks and microfinance institutions should invest in analyzing their particular depositor

base to determine what proportion of it can safely be used for long-term loans. The analysis should be done by broad product categories (e.g., current accounts, demand savings, and time deposits) and should include at least three years of monthly and one year of daily data points to capture long-run trends, seasonal effects and daily volatility patterns.

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