

Sustainability of Cooperative Banks – An Examination of issues from Liquidity Risk Perspective

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Introduction:

It is believed that despite the tremendous growth of commercial banking sector in the country, cooperative banking has its own relevance, its own niche market. Cooperative banks are true embodiment of “inclusive banking”. Professionalization of management and efficiency of governance are the keys to sustainability of cooperative banks. However, in changing environment the dimension of management efficiency has dramatically changed from a very traditional form of management to a forward looking risk management system. Banking is the business of risk taking. Therefore risk management is key to sustainable development of banks.

While lending and investment are risks to banks, deposit of money is risk to their depositors. The major risks to banks have been categorized as credit risk, market risk, operational risk and liquidity risk. While credit risk and market risk are internal efficiency based risks and they can be minimized by proper risk management system, operational and liquidity risks have an added external dimension. A bank may always face operational and liquidity risks despite a very strong risk management system. For example, earthquake, flood, robbery are events where internal risk management system has limited mitigating role. Similarly a run situation on a bank resulting in severe liquidity crisis may sometimes be without any management failure in the bank. It could be due to some systemic reasons or owing to some ill- founded rumor against the bank (exogenous factors). Banking is the business of transformation of maturity. Liabilities of a bank are generally of short term nature while assets are mostly of long term nature. So liquidity risk is innate to banking. It can not be eliminated completely; it has to be mitigated at a sustainable level.

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Motivation for the Study:

The regulatory prescription on liquidity management and asset liability management for Indian cooperative banks is of very basic nature. Keeping in view the heterogeneity of size and sophistication, the advanced approaches *viz.*, duration gap method and new Basel prescriptions like Net Stability Funding Ratio (NSFR) and Liquidity Coverage Ratio (LCR) have not so far been made applicable to cooperative sector. However, it has been found that cooperative banks are more vulnerable to liquidity risk than their commercial bank counterparts. There have been examples in urban cooperative banking sector where one urban cooperative bank has faced run situation because of some wrong doings or financial weakness of another neighborhood urban bank. So, it is not only the financial interconnectedness but also the psychological interconnectedness which poses threat to cooperative banks.

It was observed during the global financial crisis that many commercial banks faced liquidity stress owing less to actual liquidity deficit but more on account of trust deficit. The events leading to liquidity stress following the global crisis has been aptly captured in a Working Paper Series published in 2009 in the following sentence. “Eventually, Banks with liquid balances tended to hoard liquidity, for fear of counterparty credit risk and uncertainty about the amount of liquidity in their balance sheets. This situation caused a serious deadlock to the inter-bank (unsecured) market, with banks not being able to get funding for terms longer than one or two weeks” (Kleopatra Nikolaou, 2009). These events give the sense that in turbulent times psychological inter connectedness becomes a dominant factor guiding liquidity situations for commercial banks.

However, there are examples which indicates that contagion effect in cooperative banks is much higher and severe than in case of commercial banks. Cooperative banks, therefore, need to compute their cash inflow and outflow scenario in a more realistic manner based on the behavioural pattern in the sector rather than based on contractual inflow-outflow. The exogenous factors even in case of not so severe turbulent phase may hit cooperative banks hard. The author, therefore, chose to study select UCBs to understand the factors responsible for liquidity stress in the cooperative sector. The pattern of panic driven idiosyncratic outflow of fund was studied in select UCBs. The suitability of advanced liquidity prescriptions and new

Basel guidelines as mandated for commercial banks were examined thoroughly to ascertain how far they are relevant for cooperative banks. Also, the author tried to understand and gather instances wherein an alert and active management handled successfully liquidity stress situations emerging out of both financial and non-financial triggers.

Methodology:

- (i) Study of five select urban cooperative banks having faced liquidity stress.
- (ii) Examination of endogenous vis-a-vis exogenous factors responsible for the liquidity stress.
- (iii) Study of idiosyncratic events of panic driven deposit withdrawal from cooperative banks resulting in liquidity stress.
- (iv) Collecting evidence therefrom to ascertain asset liability mismatch faced by them and their response management.
- (v) Study of RBI guidelines and Basel literature on liquidity management
- (vi) Study of some reference literature on liquidity management

Literature Review:

Definition and Significance of Liquidity Management

The Basel Committee on Banking Supervision defines funding liquidity as the ability of banks to meet their liabilities, unwind or settle their positions as they come due (BIS 2008). Similarly, IMF provides a definition of funding liquidity as the ability of solvent institutions to make agreed upon payments in a timely fashion.

There is always a trade-off for a bank between liquidity and earning. “A lack of liquidity can kill a bank quickly, whereas too much liquidity can kill a bank slowly” (Tim Armstrong and Gregory Caldwell, 2008). However, literature on liquidity risk clearly underscores the point that the intensity of liquidity risk varies significantly in normal time vis-s-vis turbulent time. “Turbulent periods, which relate to heightened liquidity risk, appear in a rare and episodic, yet intense manner and can destabilize the financial system” (Kleopatra Nikolaou, 2009).

Regulatory Prescription on Asset Liability Management

Keeping in view the growing business size and financial interconnectedness of big urban cooperative banks it was felt that scheduled urban cooperative banks should also be subjected to regulatory prescriptions on liquidity management similar to that of commercial banks. On April 15, 2002, RBI issued its first guidelines on asset liability management for scheduled urban cooperative banks. Recognizing the heterogeneity of size and sophistication of the sector, RBI adopted a calibrated and gradual approach towards its prescriptions on liquidity management. These guidelines were *mutatis mutandis* made applicable for Teir I and Teir II non-scheduled UCBs also with some lag on September 17, 2008.

The basic structure of these guidelines is to capture the cash inflow and outflow of a bank in different time zones. The initial time (band) bucketing was done as under:

- i) 1 to 14 days
- ii) 15 to 28 days
- iii) 29 days and upto 3 months
- iv) Over 3 months and upto 6 months
- v) Over 6 months and upto 1 year
- vi) Over 1 year and upto 3 years
- vii) Over 3 years and upto 5 years
- viii) Over 5 years

Later on, for scheduled UCBs, three additional time bands within 1-14 day time bucket were added viz. next day, 2 to 7 days and 8 to 14 days. The UCBs are required to segregate their likely inflow of fund and outflow of fund in different time zones monitor the liquidity position. The acceptable tolerance level of inflow outflow mismatch (negative position) has been prescribed at 5% for next day, 10% for 2-7 days, 15% for 8 to 14 days and 20% for 15 to 28 days. The fixation of tolerance level for higher duration bucket have been left on individual banks depending upon their historical experience and prudence. Based on regulatory prescriptions all the liability items and asset items of the balance sheet are required to be placed under respective buckets. *This looks very simple arithmetical exercise if one does it in a*

mechanical way based on contractual maturity pattern of asset and liability items. But RBI guidelines make it amply clear that the formula prescribed by RBI is very elementary one and all banks are supposed to conduct actual behavioral maturity pattern of items of asset and liability. For example, all fixed deposits with residual maturity of two years may not necessarily be placed into 1 to 3 years bucket. It has to be analyzed how much of two year maturity are renewed beyond the initial contractual period or how much is prematurely withdrawn before the contracted period. This behavioral analysis will give real insight to the bank in regard to liquidity management. The liquidity response will not only vary from bank to bank but may also have seasonal variation for a single bank. For example, the liquidity requirement during Diwali or other festival time or harvesting season may be different from normal times. It may also vary depending upon deposit base (source of deposit) of individual banks.

The dynamic liquidity measurement has to be fully based on behavioural pattern of future inflow and outflow of fund. UCBs are also required to do interest rate sensitivity analysis as per the extant RBI guidelines. This analysis provides information on potential gain or loss of earning to a bank with movement in interest rate.

The new Basel guidelines on NSFR and LCR have attached equal significance to source of deposit as to the tenor of deposit. The run factor prescription under LCR also takes into account industry-wide liquidity deficit scenario and therefore, places higher run off prescription on inter-bank deposits. For UCBs, the RBI has already placed a restriction on inter-bank deposit (not more than 20% of UCB's total deposit can be placed as deposit with other banks while not more than 5% of total deposit can be placed with one individual bank).

The LCR promotes short-term resilience of banks to potential liquidity disruptions by ensuring that they have sufficient high quality liquid assets (HQLAs) to survive an acute stress scenario lasting for 30 days. The NSFR promotes resilience over longer-term time horizons by requiring banks to fund their activities with more stable sources of funding on an ongoing basis. In addition, a set of five monitoring tools to be used for monitoring the liquidity risk exposures of banks have also been prescribed in the January 2013 Basel Committee on Banking Supervision (BCBS) document.

Liquidity Coverage Ratio

The stress scenario specified by the BCBS for LCR incorporates many of the shocks experienced during the crisis that started in 2007 into one significant stress scenario for which a bank would need sufficient liquidity on hand to survive for up to 30 calendar days. The scenario, thus, entails a combined idiosyncratic and market-wide shock that would result in:

- a) the run-off of a proportion of retail deposits;
- b) a partial loss of unsecured wholesale funding capacity;
- c) a partial loss of secured, short-term financing with certain collateral and counterparties;
- d) additional contractual outflows that would arise from a downgrade in the bank's public credit rating by up to three notches, including collateral posting requirements;
- e) increases in market volatilities that impact the quality of collateral or potential future exposure of derivative positions and thus require larger collateral haircuts or additional collateral, or lead to other liquidity needs;
- f) unscheduled draws on committed but unused credit and liquidity facilities that the bank has provided to its clients; and
- g) the potential need for the bank to buy back debt or honour non-contractual obligations in the interest of mitigating reputational risk.

The events post 2007 global financial crisis may not be relevant fully for Indian cooperative banks as they have generally been found from global systemic events. However, these new guidelines details many situations which are very much relevant to Indian cooperative banks. The broad contours of Liquidity Coverage Ratio (LCR), therefor, need to adopted by them.

High Quality Liquid Assets

The Basel document stipulates maintenance of High Quality Liquid Asset (HQLA) that can be readily sold or used as collateral to obtain funds in a range of stress scenarios. They should be unencumbered i.e. without legal, regulatory or operational impediments. Assets are considered to be high quality liquid assets if they can be easily and immediately converted into cash at little or no loss of value.

Banks in cooperative sector also needs to examine immediate convertibility of their assets which could be classified as HQLA. The proportion of HQLA in relation to net cash outflow will give a more realistic picture of bank's liquidity resilience.

Liquidity Risk Monitoring Tools

The Basel III framework also prescribes five monitoring tools / metrics for better monitoring a bank's liquidity position. While some of these monitoring tools/metrics have been in use by banks in the past in the form of various regulatory returns on their liquidity position, certain additional returns under Basel III Liquidity Framework have been prescribed. These metrics along with their objective and the prescribed returns are detailed below:

(a) Contractual Maturity Mismatch

The contractual maturity mismatch profile identifies the gaps between the contractual inflows and outflows of liquidity for defined time bands. These maturity gaps indicate how much liquidity a bank would potentially need to raise in each of these time bands if all outflows occurred at the earliest possible date. This metric provides insight into the extent to which the bank relies on maturity transformation under its current contracts.

The existing statement on structural liquidity which captures the gap between inflows and outflows from various items of assets and liabilities will continue to address this metric.

(b) Concentration of Funding

This metric is meant to identify those sources of funding that are of such significance, the withdrawal of which could trigger liquidity problems. The metric thus encourages the diversification of funding sources recommended in the Basel Committee's Sound Principles. This metrics aims to address the funding concentration of banks by monitoring their funding from each significant counterparty, each significant product / instrument and each significant currency.

At present funding concentration of banks in India is restricted under regulatory limits on Inter-bank liability and call borrowings. As regards addressing the currency concentration risk, the same is captured in the Statement of structural liquidity foreign currency - Indian operations -

Liquidity wherein banks are required to furnish their assets and liabilities in major / significant currencies as well as information on Aggregate gap limit.

(c) Available Unencumbered Assets

This metric provides supervisors with data on the quantity and key characteristics of banks' available unencumbered assets. These assets have the potential to be used as collateral to raise additional secured funding in secondary markets and / or are eligible at central banks.

(d) LCR by Significant Currency

While the LCR standard is required to be met in one single currency, in order to better capture potential currency mismatches, the LCR in each significant currency needs to be monitored.

(e) Market-related Monitoring Tools

This includes high frequency market data that can serve as early warning indicators in monitoring potential liquidity difficulties at banks.

To address this metric, a Statement on other Information on liquidity is prescribed which requires banks to report on a monthly basis, the price movements in their equity prices (if listed), and interest rates at which long-term bonds and certificates of deposit (CDs) are issued by them. This also includes information on breach / penalty in respect of regulatory liquidity requirements.

Net Stable Funding Ratio

The NSFR is defined as the amount of available stable funding relative to the amount of required stable funding. "Available stable funding" is defined as the portion of capital and liabilities expected to be reliable over the time horizon considered by the NSFR, which extends to one year. The amount of stable funding required ("Required stable funding") of a specific institution is a function of the liquidity characteristics and residual maturities of the various assets held by that institution as well as those of its off-balance sheet (OBS) exposures.

The objective of NSFR is to ensure that banks maintain a stable funding profile in relation to the composition of their assets and off-balance sheet activities. A sustainable funding structure is intended to reduce the probability of erosion of a bank's liquidity position due to disruptions

in a bank's regular sources of funding that would increase the risk of its failure and potentially lead to broader systemic stress. The NSFR limits overreliance on short-term wholesale funding, encourages better assessment of funding risk across all on- and off-balance sheet items, and promotes funding stability.

Minimum Requirement

$$\frac{\text{Available Stable Funding (ASF)}}{\text{Required Stable Funding (RSF)}} \geq 100\%$$

The above ratio should be equal to at least 100% on an ongoing basis.

Calibrations of ASF and RSF - Criteria and Assumptions

ASF and RSF reflect the liabilities and assets (including off balance sheet assets) and the amounts of available and required stable funding specified in the standard are calibrated to reflect the presumed degree of stability of liabilities and liquidity of assets.

The calibration reflects the stability of liabilities across two dimensions:

- (a) Funding tenor – The NSFR is generally calibrated such that longer-term liabilities are assumed to be more stable than short-term liabilities.
- (b) Funding type and counterparty – **The NSFR is calibrated under the assumption that short-term (maturing in less than one year) deposits provided by retail customers and funding provided by small business customers are behaviourally more stable than wholesale funding of the same maturity from other counterparties.**

Regulatory prescription on governance structure for sustainable liquidity management

ALM has to be supported by a management philosophy which clearly specifies the risk policies and procedures and prudential limits. This framework needs to be built on sound methodology with necessary information system as back up. Thus, Information is the key to the ALM

process. There are various methods prevalent world-wide for measuring risks. These range from easy-to-comprehend and simple 'Gap analysis' to extremely sophisticated and data intensive 'Simulation' methods. However, the central element for the entire ALM exercise is the availability of timely, adequate and accurate information.

Successful implementation of the risk management process requires strong commitment on the part of the senior management of the board. The board should have overall responsibility for management of risks and should decide the risk management policy and procedures, set prudential limits, auditing, reporting and review mechanism in respect of liquidity, interest rate and forex risks.

The Asset - Liability Committee (ALCO) consisting of the bank's senior management including CEO should be responsible for ensuring adherence to the policies and limits set by the Board as well as for deciding the business strategy (on the assets and liabilities sides) in line with the bank's business and risk management objectives.

The ALM Support Groups consisting of operating staff should be responsible for analysing, monitoring and reporting the risk profiles to the ALCO. The staff should also prepare forecasts (simulations) showing the effects of various possible changes in market conditions related to the balance sheet and recommend the action needed to adhere to bank's internal limits.

The ALCO is a decision making unit responsible for balance sheet planning from risk-return perspective including the strategic management of liquidity, interest rate and forex risks. The business and risk management strategy of the bank should ensure that the bank operates within the limits / parameters set by the Board. The business issues that an ALCO considers, inter alia, includes pricing of both deposits and advances, desired maturity profile and mix of the incremental assets and liabilities, etc. In addition to monitoring the risk levels of the bank, the ALCO should review the results of and progress in implementation of the decisions made in the previous meetings. The ALCO's future business strategy decisions should be based on the bank's views on current interest rates. In respect of the funding policy, for instance, its responsibility would be to decide on source and mix of liabilities or sale of assets. Towards this end, it will have to develop a view on future direction of interest rate movements and decide on

funding mixes between fixed vs. floating rate funds, wholesale vs. retail deposits, short term vs. long term deposits etc.

Resilience – Stress Test

As per RBI Financial Stability Report (June 2016), stress test on liquidity risk was carried out on scheduled urban cooperative banks (SUCB) using two different scenarios (i) 50% and (ii) 100% increase in cash outflows in one to 28 days' time bucket. It was assumed that there was no change in cash inflows under both the scenarios. The stress test result indicated that SUCBs will be significantly impacted under a stress scenario (out of 52 banks, 25 banks under Scenario I and 38 banks under Scenario II will face liquidity stress).

Study of select urban cooperative banks' stress scenario:

There have been instances of certain UCBs finding themselves in deep trouble due to the failure of a District Central Cooperative Bank (DCCB) with which it has deposited its surplus fund. This financial interconnectedness issue has sought to be addressed by way of RBI prescription of ceiling on inter-bank deposit. However, present study suggests various other factors responsible for liquidity stress in cooperative banks.

Factors of Liquidity Stress

The study of select five UCBs revealed certain very interesting facts about the contributory factors of run situation on different banks.

- (i) First of the five banks studied by the author faced liquidity crisis due to its deteriorating financial condition and the resulting panic reaction among its customers in a slightly exaggerated manner. There were two rounds of very strong rumor (although not completely unfounded) that the bank is going to collapse very soon. It is suspected that bank's poor health was publicized in an exaggerated manner by one of its ousted Board members. Despite two rounds of panic withdrawal of deposits the bank survived the run. Financially the bank continues to be weak.
- (ii) In case of the second bank there was a gradual deterioration in its financial health mainly on account of its burgeoning NPAs. The bank did not face any panic

withdrawal but there was a secular decline in its deposit base. Any run situation, in fact, was pre-empted by the regulator by imposing all inclusive directive on the bank. Owing to RBI directive, any withdrawal of deposit beyond prescribed ceiling was not possible. The bank continues to be in a precarious condition.

- (iii) The third bank faced severe run situation because of a news item in a daily newspaper which reported that one society, whose name was similar to that of this bank, has been liquidated by the Registrar of Cooperative Societies. It was a case of mistaken identity. The problem was with some other society but this UCB had to bear the brunt of having a name similar to that of a failing society. The bank could not survive big dent on its deposit base and had to be closed after four five years of struggle with its significantly reduced business size.
- (iv) The fourth bank faced liquidity crisis after cancellation of license of another UCB working in the same city. The health of this bank was reasonably sound. The deft handling of the crisis situation saved the bank from failing.

In case (iii) and (iv) the UCBs concerned faced liquidity crisis not because of any financial reasons but on account of non-financial exogenous reasons.

- (v) The story of the fifth bank is very interesting. The bank was doing well on all financial parameters. However, the Board of the bank was reportedly involved in several breach of RBI guidelines viz. KYC guidelines, exposure norms etc. Keeping in view the recalcitrant behaviour of the Board, it was dismissed and an administrator was appointed. This dismissal of the Board was followed by a run like situation on the bank. The distance between the date of dismissal of Board and the initial date of heavy withdrawal of deposits from the bank was narrow. It was reported that certain members of the dismissed Board themselves spread disinformation about the financial health of the bank. They succeeded in convincing certain depositors that the supervisory action would lead to collapse of the bank. This resulted in panic driven heavy withdrawal of deposits. The deft handling of the crisis situation by the new management could steer the bank out of woods.

The study clearly underscores the point that UCBs are vulnerable to liquidity risk not only on account of financial reasons but also due to non-financial exogenous factors. The data

pertaining to the UCB mentioned at (v) above indicates the severity of impact of exogenous factors on stress scenario even in the absence of any actual financial weakness.

Author's study of this bank revealed that outflow of deposits was around 25% of total deposit within a period of 10 days of the trigger of run off. Segment wise analysis revealed that highest hit was faced by current account deposits followed by savings and fixed deposit. Withdrawal from current account deposit within a short span of 10 days was 37%. In case of the savings and fixed deposit it was 27% and 23% respectively. The withdrawal of deposit from different segments was on expected lines in percentage terms confirming the notion that current account deposit is the most volatile and fixed deposit is the least. **However, high percentage of withdrawal (23%) from FD segment challenges the fallacy of conventional wisdom that FDs are source of stable fund.** Cash outflow from FD segment constituted around 65% of total outflow. FD constituted 70% of the total deposit of the bank and CASA deposit accounted for the balance 30%. **So practically, FD was observed to be almost equally vulnerable segment in stress scenario.** Anecdotal evidence suggests similar withdrawal pattern in other UCBs also.

Cooperative banks are not permitted to sale their assets (performing assets) through securitization process or through any other mode. This inability of cooperative banks takes away one of the tools of liquidity management from them. As per regulatory prescription, UCBs can not disallow premature withdrawal of non-bulk fixed deposits of individual depositors. However, premature withdrawal can be disallowed by a bank in case of bulk deposits and institutional deposits.

Management of Liquidity

The CD (credit – deposit) ratio of UCBs are generally low. The average CD ratio of scheduled urban cooperative banks is 63.3% (as against 75% for commercial banks) as March 31, 2015. This low CD ratio came handy for UCBs in times of liquidity stress.

The UCB relied most on its FD with other banks for meeting liquidity requirement in stress conditions. The second most important source of ready liquidity were current account deposits

with other banks and the bank's investment in mutual fund. The SLR investment in govt. security also came to the rescue of the bank. The bank did not resort to any borrowing from anywhere. *Factually, cooperative banks do not find any uncollateralized lending source in either normal or crisis situation.*

But what saved the day for these banks were not only financial management but a deft handling of situation on psychological front. An indicative list of measures taken by different banks on non-financial front is given below:

- (i) The staff and officers of the bank not to show any signs of nervousness to its panic driven customers who came for withdrawing their deposits.
- (ii) Generally a positive approach towards customers withdrawing their fixed deposits prematurely.
- (iii) Counselling the customers after allowing them to withdraw their deposit and not to impose any penalty on their premature withdrawal if they re-deposit the withdrawn money within a period of short time (say one week).
- (iv) Proper cash management at counters and ATMs.
- (v) Extra amount of cash to be kept on the cash counters to give an impression to the customers that the bank was flush with cash (physical demonstration of cash on the cash counters). This technique was used (as per TOI news report) even in China when there was a run like situation in rural cooperative banks in China.
- (vi) Requesting customers to enter bank premises from back gate (wherever possible) so that no long queue was visible to media and other member of public to avoid cascading effect. This technique was used in one of the domestic urban cooperative banks.
- (vii) Dialogue with high value depositors and influential members of the bank as a confidence building measure.
- (viii) Furnishing daily liquidity position of the bank to Reserve Bank of India.
- (ix) Keeping constant vigil on media reporting or any other rumor being spread through social media.
- (x) Roping in the services of community leaders to counter negative sentiments against the bank.

Policy Recommendations and Conclusions:

The empirical evidences suggest that the notion that fixed deposit (FD) are stable source of funding is not always true. It has now been recognized that deposits provided by retail customers and funding provided by small business customers are behaviourally more stable than wholesale funding of the same maturity from other counterparties. The new Basel guidelines on NSFR and LCR have therefore attached equal significance to source of deposit as to the tenor of deposit. The stress scenario specified by the BCBS for LCR incorporates many of the shocks experienced during the crisis that started in 2007. These may not be equally relevant for cooperative banks but it is expected that they would take a cue from the advanced approaches and voluntarily apply them *mutatis mutandis*.

On non-financial front cooperative banks need to recognize the significance of efficient media management, close coordination with community leaders and constant member education. This is necessitated to guard themselves from any idiosyncratic panic driven deposit withdrawal events. Officials of the bank both at head office and branch level must be sensitized at periodic intervals on response management towards any possible liquidity stress.

Sustainable development of cooperative banks needs adoption of sound strategies and practices by them. While intent of the management continues to be the most critical factor for good governance of a bank, with growing complexities of banking business, the technical competence of the management has assumed equal significance for maintaining bank's sustainability. Modern day banking needs specialized skills and risk management abilities at all levels of governance. Regulatory prescription of management structure, therefore, needs to be adhered to scrupulously by cooperative banks. Liquidity risk being a significant risk for cooperative banks, need to be monitored and managed in all its dimensions; financial and non-financial.

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