

TAMILNADU URBAN FINANCE AND
INFRASTRUCTURE
DEVELOPMENT CORPORATION LIMITED

AMENDED
LIQUIDITY RISK MANAGEMENT
POLICY

1. Preamble

Tamil Nadu Urban Finance and Infrastructure Development Corporation Limited (the “Company”), being a deposit taking non-banking financial company with asset size of 100 crore and above and a Government company as defined under clause (45) of Section 2 of the Companies Act, 2013 (Act 18 of 2013) is accordingly required to put such Liquidity Risk Management Framework as a Policy in place.

The Liquidity Risk Management Policy prepared by the Company was approved by the Board of Directors at its meeting held on September 6, 2021.

2. Background

- The management of company have to base their business decisions on a dynamic and integrated risk management system and process, driven by corporate strategy. The company is exposed to several major risks in the course of their business. It is, therefore, important that the company introduce effective risk management systems that address the issues relating to interest rate and liquidity risks.
- Measuring and managing liquidity needs are vital for effective operation of company. The importance of liquidity transcends individual institutions, as liquidity shortfall in one institution can have repercussions on the entire system.

3. Scope

- TUFIDCO recognizes that Liquidity Risk management is one of the key principles of effective Corporate Governance.
- This policy is aimed at establishing internal systems, processes and controls to managed the assets and liabilities of the Company judiciously and prudently so as to proactively identify measure, manage and mitigate the key risks - liquidity and interest rate risks by monitoring the same at regular intervals.
- All relevant employees must be thoroughly familiar or made familiar with it and make use of the material contained in this Policy.

4. Objective

The objective of the Policy is to minimize unfavorable impact on its business and enhance stakeholder value.

The objectives of this Policy are:

- To continuously thrive for available risks in the Organisation which directly or indirectly effect the functioning of the Organisation.

- To ensure the protection of rights and values of Shareholders by establishing a well-organized Liquidity Risk Management Framework.
- Selecting, maintaining and enhancing the risk management tools used by the Program to provide analyses that inform and support the investment actions of the entire Organisation.

5. **Definitions**

- (a) “Act” means the Companies Act, 2013;
- (b) “ALCO” means the Asset Liability Management Committee
- (c) "Bank" means the Reserve Bank of India constituted under section 3 of the Reserve Bank of India Act, 1934
- (d) “Board” means Board of Directors of the Company for the time in force;
- (e) “Companies in the group” means an arrangement involving two or more entities related to each other through any of the following relationships: Subsidiary - parent (defined in terms of AS 21), Joint venture (defined in terms of AS 27), Associate (defined in terms of AS 23), Promoter-promotee [as provided in the SEBI (Acquisition of Shares and Takeover) Regulations, 1997] for listed companies, a related party (defined in terms of AS 18), common brand name, and investment in equity shares of 20 percent and above.
- (f) “Company” or “TUFIDCO” means “Tamil Nadu Urban Finance and Infrastructure Development Corporation Limited”;
- (g) “Liquidity” means TUFIDCO’s capacity to fund the increase in assets and meet both expected and unexpected cash and collateral obligations at reasonable cost and without incurring unacceptable losses.
- (h) “Liquidity Risk” means inability of the company to meet such obligations as they become due without adversely affecting TUFIDCO’s financial condition. Effective liquidity risk management helps ensure TUFIDCO’s ability to meet its obligations as and when they fall due and reduces the probability of an adverse situation developing.
- (i) “Policy” means the Liquidity Risk Management Policy
- (j) "Short term" means less than one year.

6. **Liquidity Risk Management Framework**

The guidelines deal with following aspects of Liquidity Risk Management framework.

1. Liquidity Risk Management Policy, Strategies and Practices
2. Management Information System (MIS)

3. Internal Controls
4. Maturity profiling
5. Liquidity Risk Measurement - Stock Approach
6. Currency Risk
7. Managing Interest Rate Risk
8. Liquidity Risk Monitoring Tools

6.1. Liquidity Risk Management Policy, Strategies and Practices

In order to ensure a sound and robust liquidity risk management system, the Board of the company shall frame a liquidity risk management framework which ensures that it maintains sufficient liquidity, including a cushion of unencumbered, high quality liquid assets to withstand a range of stress events, including those involving the loss or impairment of both unsecured and secured funding sources. It shall spell out the entity-level liquidity risk tolerance; funding strategies; prudential limits; system for measuring, assessing and reporting/reviewing liquidity; framework for stress testing; liquidity planning under alternative scenarios/formal contingent funding plan; nature and frequency of management reporting; periodical review of assumptions used in liquidity projection; etc.

Key elements of the liquidity risk management framework are as under:

6.1.1. Governance of Liquidity Risk Management

Successful implementation of any risk management process has to emanate from the top management in the company with the demonstration of its strong commitment to integrate basic operations and strategic decision-making with risk management. The Chief Risk Officer appointed by the company shall be involved in the process of identification, measurement and mitigation of liquidity risks. A desirable organizational set up for liquidity risk management should be as under:

6.1.1.1. Board of Directors

The Board shall have the overall responsibility for management of liquidity risk. The Board shall decide the strategy, policies and procedures of the company to manage liquidity risk in accordance with the liquidity risk tolerance/limits decided by it.

6.1.1.2. Asset-Liability Management Committee (ALCO)

The ALCO consisting of the company's top management shall be responsible for ensuring adherence to the risk tolerance/limits set by the Board as well as implementing

the liquidity risk management strategy of the company. The CEO/ MD or the Executive Director (ED) should head the Committee. The Chiefs of Investment, Credit, Resource Management or Planning, Funds Management/ Treasury (forex and domestic), Economic Research may be members of the Committee. The role of the ALCO with respect to liquidity risk should include, inter alia, decision on desired maturity profile and mix of incremental assets and liabilities, sale of assets as a source of funding, the structure, responsibilities and controls for managing liquidity risk, and overseeing the liquidity positions of all branches.

6.1.1.3. Asset-Liability Management (ALM) Support Group

The ALM Support Group consisting of the operating staff shall be responsible for analysing, monitoring and reporting the liquidity risk profile to the ALCO.

6.1.2. Liquidity risk Tolerance

The Company shall have a sound process for identifying, measuring, monitoring and controlling liquidity risk. It should clearly articulate a liquidity risk tolerance that is appropriate for its business strategy and its role in the financial system. Senior management should develop the strategy to manage liquidity risk in accordance with such risk tolerance and ensure that the company maintains sufficient liquidity.

6.1.3. Liquidity Costs, Benefits and Risks in the Internal Pricing

The Company should endeavour to develop a process to quantify liquidity costs and benefits so that the same may be incorporated in the internal product pricing, performance measurement and new product approval process for all material business lines, products and activities.

6.1.4. Off-balance Sheet Exposures and Contingent Liabilities

The process of identifying, measuring, monitoring and controlling liquidity risk should include a robust framework for comprehensively projecting cash flows arising from assets, liabilities and off-balance sheet items over an appropriate set of time horizons.

6.1.5. Funding Strategy- Diversified Funding

The Company shall establish a funding strategy that provides effective diversification in the sources and tenor of funding. It should maintain an ongoing presence in its chosen funding markets and strong relationships with fund providers to promote effective diversification of funding sources. The Company should regularly gauge its capacity to raise funds quickly from each source. There should not be over-reliance on a single source of funding. Funding strategy should also take into account the qualitative dimension of the

concentrated behaviour of deposit withdrawal in typical market conditions and over-reliance on other funding sources arising out of unique business model.

6.1.6. Collateral Position Management

The company shall actively manage its collateral positions, differentiating between encumbered and unencumbered assets. It should monitor the legal entity and physical location where collateral is held and how it may be mobilised in a timely manner. Further, the company should have sufficient collateral to meet expected and unexpected borrowing needs and potential increases in margin requirements over different timeframes.

6.1.7. Stress Testing

The Company should conduct stress tests on a regular basis for a variety of short-term and protracted company-specific and market-wide stress scenarios (individually and in combination). In designing liquidity stress scenarios, the nature of the company's business, activities and vulnerabilities should be taken into consideration so that the scenarios incorporate the major funding and market liquidity risks to which the company is exposed.

6.1.8. Public Disclosures

The Company shall publicly disclose information (Appendix I) on a quarterly basis on the official website of the company and in the annual financial statements as notes to account that enables market participants to make an informed judgment about the soundness of its liquidity risk management framework and liquidity position.

6.2. Management Information System (MIS)

The Company shall have a reliable MIS designed to provide timely and forward-looking information on the liquidity position of the company, both under normal and stress situations. It should capture all sources of liquidity risk, including contingent risks and those arising from new activities, and have the ability to furnish more granular and time-sensitive information during stress events.

6.3. Internal Controls

The Company shall have appropriate internal controls, systems and procedures to ensure adherence to liquidity risk management policies and procedure. Management should ensure that an independent party regularly reviews and evaluates the various components of the TUFIDCO's liquidity risk management process.

6.4. Maturity Profiling

For measuring and managing net funding requirements, the use of a maturity ladder and calculation of cumulative surplus or deficit of funds at selected maturity dates is adopted as a standard tool. The Maturity Profile should be used for measuring the future cash flows of the

company in different time buckets. The Maturity Profile as given in Appendix 1 could be used for measuring the future cash flows of company in different time buckets. The time buckets shall be distributed as under:

- (i) 1 day to 7 days
- (ii) 8 days to 14 days
- (iii) 15 days to 30/31 days (one month)
- (iv) Over one month and upto 2 months
- (v) Over two months and upto 3 months
- (vi) Over 3 months and upto 6 months
- (vii) Over 6 months and upto 1 year
- (viii) Over 1 year and upto 3 years
- (ix) Over 3 years and upto 5 years
- (x) Over 5 years

The Company would be holding in their investment portfolio, securities which could be broadly classifiable as 'mandatory securities' (under obligation of law) and other 'nonmandatory securities'. The surplus securities (held over and above the requirement), shall fall in the category of 'non-mandatory securities'.

The company may be given freedom to place the mandatory securities in any time buckets as suitable for them. The listed non-mandatory securities may be placed in any of the "1 day to 7 days, 8 days to 14 days, 15 days to 30/31 days (One month)", "Over one month and upto 2 months" and "Over two months and upto 3 months" buckets depending upon the defeasance period proposed by the company. The unlisted non-mandatory securities (e.g., equity shares, securities without a fixed term of maturity etc.) may be placed in the "Over 5 years" buckets, whereas unlisted non mandatory securities having a fixed term of maturity may be placed in the relevant time bucket as per residual maturity. The mandatory securities and listed securities may be marked to market for the purpose of the ALM system. Unlisted securities may be valued as per prudential norms directions.

Alternatively, the company may also follow the concept of Trading Book which is as follows:

- (i) The composition and volume are clearly defined;
- (ii) Maximum maturity/duration of the portfolio is restricted;
- (iii) The holding period not to exceed 90 days;
- (iv) Cut-loss limit prescribed;

(v) Defeasance periods (product-wise) i.e., time taken to liquidate the position on the basis of liquidity in the secondary market are prescribed;

The Board/ALCO of the company shall approve the volume, composition, holding/ defeasance period, cut loss, etc. of the 'Trading Book'. The remaining investments shall also be classified as short term and long term investments as required under prudential norms.

Within each time bucket, there could be mismatches depending on cash inflows and outflows. While the mismatches up to one year would be relevant since these provide early warning signals of impending liquidity problems, the main focus shall be on the short-term mismatches, viz., 1-30/ 31 days. The net cumulative negative mismatches in the Statement of Structural Liquidity in the maturity buckets 1-7 days, 8-14 days, and 15-30 days shall not exceed 10 percent, 10 percent and 20 percent of the cumulative cash outflows in the respective time buckets. The Company, however, is expected to monitor their cumulative mismatches (running total) across all other time buckets upto 1 year by establishing internal prudential limits with the approval of the Board.

With reference to the RBI circular dated November 04, 2019, the company will monitor cumulative mismatches (running total) across all other time buckets upto 1 year and the cumulative negative mismatch in the maturity buckets upto one year shall not go beyond 15%.”

The Statement of Structural Liquidity may be prepared by placing all cash inflows and outflows in the maturity ladder according to the expected timing of cash flows. A maturing liability shall be a cash outflow while a maturing asset shall be a cash inflow.

In order to enable the company to monitor their short-term liquidity on a dynamic basis over a time horizon spanning from 1 day to 6 months, TUFIDCO shall estimate their short-term liquidity profiles on the basis of business projections and other commitments for planning purposes.

6.5. Liquidity Risk Measurement - Stock Approach

The Company shall adopt a “stock” approach to liquidity risk measurement and monitor certain critical ratios in this regard by putting in place internally defined limits as approved by their Board. The ratios and the internal limits shall be based on the company’s liquidity risk management capabilities, experience and profile.

6.6. Managing Interest Rate Risk (IRR)

The immediate impact of changes in interest rates is on the company’s earnings (i.e. reported profits) by changing its Net Interest Income (Nil). A long-term impact of changing interest rates is on the company’s Net Worth as the economic value of TUFIDCO's assets,

liabilities and off-balance sheet positions get affected due to variation in market interest rates.

The Gap or Mismatch risk can be measured by calculating Gaps over different time intervals as at a given date. Gap analysis measures mismatches between rate sensitive liabilities and rate sensitive assets (including off-balance sheet positions). An asset or liability is normally classified as rate sensitive if:

- (i) within the time interval under consideration, there is a cash flow;
- (ii) the interest rate resets/reprices contractually during the interval;
- (iii) dependent on changes of the Reserve Bank in the interest rates/Bank Rate;
- (iv) it is contractually pre-payable or withdrawal before the stated maturities.

The Gap Report shall be generated by grouping rate sensitive liabilities, assets and off-balance sheet positions into time buckets according to residual maturity or next repricing period, whichever is earlier. The difficult task in Gap analysis is determining rate sensitivity. All investments, advances, deposits, borrowings, purchased funds, etc. that mature/reprice within a specified timeframe are interest rate sensitive. Similarly, any principal repayment of loan is also rate sensitive if the company expects to receive it within the time horizon. This includes final principal payment and interim instalments. Certain assets and liabilities to receive/pay rates that vary with a reference rate. These assets and liabilities are repriced at pre-determined intervals and are rate sensitive at the time of repricing. While the interest rates on term deposits are fixed during their currency, the tranches of advances portfolio are basically floating. The interest rates on advances received could be repriced any number of occasions, corresponding to the changes in Prime Lending Rate (PLR).

The Gaps may be identified in the following time buckets:

- (i) 1 day to 7 days
- (ii) 8 days to 14 days
- (iii) 15 days -30/ 31 days (one month)
- (iv) Over one month to 2 months
- (v) Over two months to 3 months
- (vi) Over 3 months to 6 months
- (vii) Over 6 months to 1 year
- (viii) Over 1 year to 3 years
- (ix) Over 3 years to 5 years
- (x) Over 5 years
- (xi) Non-sensitive

The various items of rate sensitive assets and liabilities and off-balance sheet items shall be classified as explained in Appendix III.

The Gap is the difference between Rate Sensitive Assets (RSA) and Rate Sensitive Liabilities (RSL) for each time bucket. The positive Gap indicates that it has more RSAs than RSLs whereas the negative Gap indicates that it has more RSLs than RLAs. The Gap

reports indicate whether the institution is in a position to benefit from rising interest rates by having a positive Gap ($RSA > RSL$) or whether it is in a position to benefit from declining interest rates by a negative Gap ($RSL > RSA$). The Gap can, therefore, be used as a measure of interest rate sensitivity.

Each company shall set prudential limits on individual Gaps with the approval of the Board/Management Committee. The prudential limits shall have a relationship with the Total Assets, Earning Assets or Equity. The company may work out Earnings at Risk (EaR) or Net Interest Margin (NIM) based on their views on interest rate movements and fix a prudent level with the approval of the Board/Management Committee. For working out EaR or NIM any of the current models may be used.

The classification of various components of assets and liabilities into different time buckets for preparation of Gap reports (Liquidity and Interest Rate Sensitivity) as indicated in **Appendices I and II** is the benchmark.

Liquidity Risk Monitoring Tools

The following tools shall be adopted by the Board of the company for internal monitoring of liquidity requirements:

Concentration of Funding

This metric is meant to identify those significant sources of funding, withdrawal of which could trigger liquidity problems. The metric thus encourages diversification of funding sources and monitoring of each of the significant counterparty, significant product / instrument and significant currency.

Available Unencumbered Assets

This metric provides significant information on available unencumbered assets, which have the potential to be used as collateral to raise additional secured funding in secondary markets. It shall capture the details of the amount, type and location of available unencumbered assets that could serve as collateral for secured borrowing in secondary markets

Market-related Monitoring Tools

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

7. Review

The Policy would be reviewed as and when required or when there are changes in RBI guidelines, whichever is earlier.

Public disclosure on liquidity risk

- (i) Funding Concentration based on significant counterparty (both deposits and borrowings)

Sr. No.	Number of Significant Counterparties	Amount (Rs. crore)	% of Total deposits	% of Total Liabilities

- (ii) Top 20 large deposits (amount in crore and percent of total deposits)

- (iv) Funding Concentration based on significant instrument/product

Sr. No.	Name of the Instrument/product	Amount (Rs. crore)	% of Total Liabilities

- (v) Stock Ratios:

- (a) Commercial papers as a percent of total public funds, total liabilities and total assets
- (b) Non-convertible debentures (original maturity of less than one year) as a percent of total public funds, total liabilities and total assets
- (c) Other short-term liabilities, if any as a percent of total public funds, total liabilities and total assets

- (vi) Institutional set-up for liquidity risk management

Appendix II Maturity Profile - Liquidity

Heads of Accounts	Time-bucket category
A. Outflows	
1. Capital funds	
a) Equity capital, Non-redeemable or perpetual preference capital, Reserves, Funds and Surplus	In the 'over 5 years' time-bucket.
b) Preference capital - redeemable/nonperpetual	As per the residual maturity of the shares.
2. Gifts, grants, donations and benefactions	The 'over 5 years' time-bucket. However, if such gifts, grants, etc. are tied to specific end-use, then these may be slotted in the time-bucket as per purpose/end-use specified.
3. Notes, Bonds and debentures	
a) Plain vanilla bonds/debentures	As per the residual maturity of the Instruments
b) Bonds/debentures with embedded call/put options (including zerocoupon/ deep discount bonds)	As per the residual period for the earliest exercise date for the embedded option.
c) Fixed rate notes	As per the residual maturity
4. Deposits:	
a) Public deposits	As per the residual maturity.

b) Inter Corporate Deposits	These, being institutional/wholesale deposits, shall be slotted as per their residual maturity
c) Commercial Papers	As per the residual maturity
3. Borrowings	
a) Term money borrowings	As per the residual maturity
b) From the Reserve Bank, Govt. & others	As per the residual maturity
c) Bank borrowings in the nature of WCDL, CC, etc.	Over six months and up to one year
<u>6) Current liabilities and provisions:</u>	
a) Sundry creditors	As per the due date or likely timing of cash outflows. A behavioral analysis could also be made to assess the trend of outflows and the amounts slotted accordingly.
b) Expenses payable (other than interest)	As per the likely time of cash outflow.
c) Advance income received, receipts from borrowers pending adjustment	In the 'over 5 years' time-bucket as these do not involve any cash outflow.
d) Interest payable on bonds/deposits	In respective time buckets as per the due date of payment.
e) Provisions for NPAs	The amount of provision may be netted out from the gross amount of the NPA portfolio and the net amount of NPAs be shown as an item under inflows in stipulated time-buckets.
f) Provision for Investments portfolio	The amount may be netted from the gross value of investments portfolio and the net investments be shown as inflow in the prescribed time-slots. In case provisions are not held security-wise, the provision may be shown on "over 5 years" time bucket.
g) Other provisions	To be bucketed as per the purpose/nature of the underlying transaction.
B. Inflows	
1. Cash	In 1 to 7 day time-bucket.
2. Remittance in transit	In 1 to 7 day time-bucket.
3. Balances with banks (in India only)	
a) Current account	The stipulated minimum balance be shown in 6 months to 1 year bucket. The balance in excess of the minimum balance be shown under Day 1-7 bucket
b) Deposit accounts/short term deposits	As per residual maturity
4. Investments (net of provisions)	
a) Mandatory investments	As suitable to the company
b) Non-mandatory Listed	"1 day to 30/ 31 days (One month)" Over one month and upto 2 months" and "Over two months and upto 3 months" buckets depending upon the defeasance period proposed by the company.
c) Non-mandatory unlisted securities (e.g. shares, etc.)	"Over 5 years"

d) Non-mandatory unlisted securities having a fixed term maturity	As per residual maturity
e) AIF units	In the 'over 5 year' time bucket
5. In case Trading Book is followed	
Equity shares, convertible preference shares, non-redeemable/perpetual preference shares, shares of subsidiaries/joint ventures and units in open ended mutual funds and other investments	(i) Shares classified as "current" investments representing trading book of the company may be shown in time buckets of "1 day 7 days, 8 days to 14 days, 15 days to 30 days (One month)""Over one month and upto 2 months" and "Over two months and upto 3 months" buckets depending upon the defeasance period proposed by the company.
	(ii) Shares classified as "long term" investments may be kept in over "5 years' time" bucket. However, the shares of the assisted units/companies acquired as part of the initial financing package, may be slotted in the relative time bucket keeping in view the pace of project implementation/time-overrun, etc., and the resultant likely timeframe for divesting such shares.
6. Advances (performing)	
a) Bill of Exchange and promissory notes	As per the residual usance of the discounted and rediscounted underlying bills.
b) Term loans (rupee loans only)	The cash inflows on account of the interest and principal of the loan may be slotted in respective time buckets as per the timing of the cash flows as stipulated in the original/revised repayment schedule.
c) Corporate loans/short term loans	As per residual maturity
7. Non-performing loans (May be shown net of the provisions, interest suspense held)	
a) Sub-standard	
All overdues and instalments of principal falling due during the next three years	In the 3 to 5 year time-bucket.
Entire principal amount due beyond the next three years	In the 3 to 5 year time-bucket.
b) Doubtful and loss	
i) All installments of principal falling due during the next five years as also all over dues	In the over 5 year time-bucket
ii) Entire principal amount due beyond the next five years	In the over 5 year time-bucket
8. Assets on lease	Cash flows from the lease transaction may be slotted in respective time buckets as per the timing of the cash flow.
9. Fixed assets (excluding leased assets)	In the 'over 5 year' time-bucket.
10. Other assets	
(a) Intangible assets and items not	In the 'over 5 year' time-bucket.

representing cash inflows.	
(b) Other items (such as accrued income, other receivables, staff loans, etc.)	In respective maturity buckets as per the timing of the cashflows.
C. Contingent liabilities	
(a) Letters of credit/guarantees (outflow through devolvment)	Based on the past trend analysis of the devolvment vis-a-vis the outstanding amount of guarantees (net of margins held), the likely devolvment shall be estimated and this amount could be distributed in various time buckets on judgmental basis. The assets created out of devolvment may be shown under respective maturity buckets on the basis of probable recovery dates.
(b) Loan commitments pending disbursal (outflow)	In the respective time buckets as per the sanctioned disbursement schedule.
(c) Lines of credit committed to / by other institutions (outflow / inflow)	As per usance of the bills to be received under the lines of credit

Note:

Any event-specific cash flows (e.g. outflow due to wage settlement arrears, capital expenses, income tax refunds, etc.) shall be shown in a time bucket corresponding to timing of such cash flows.

- (i) All overdue liabilities be shown in the 1 to 7 days and 8-14 days time buckets based on behavioral estimates
- (ii) Overdue receivables on account of interest and installments of standard loans/hire purchase assets/leased rentals shall be slotted as below:

(i)	Overdue for less than one month.	In the 3 to 6 month bucket.
(ii)	Interest overdue for more than one month but less than seven months (i.e. before the relative amount becomes past due for six months)	In the 6 to 12 month bucket without reckoning the grace period of one month.
(iii)	Principal instalments overdue for 7 months but less than one year	In 1 to 3 year bucket.

Appendix III Interest Rate Sensitivity

Heads of accounts	Rate sensitivity of time bucket
LIABILITIES	
1. Capital, Reserves & Surplus	Non-sensitive
2. Gifts, grants & benefactions	Non-sensitive
3. Notes, bonds & debentures:	
a) Floating rate	Sensitive; reprice on the roll-over/repricing date, shall be slotted in respective time buckets as per the repricing dates.

b) Fixed rate (plain vanilla) including zero coupons	Sensitive; reprice on maturity. To be placed in respective time buckets as per the residual maturity of such instruments.
c) Instruments with embedded options	Sensitive; could reprice on the exercise date of the option particularly in rising interest rate scenario. To be placed in respective time buckets as per the next exercise date.
4. Deposits	
a) Deposits/Borrowings	
i) Fixed rate	Sensitive; could reprice on maturity or in case of premature withdrawal being permitted, after the lock-in period, if any, stipulated for such withdrawal. To be slotted in respective time buckets as per residual maturity or as per residual lock-in period, as the case may be. The prematurely withdrawable deposits with no lock-in period or past such lock-in period, shall be slotted in the earliest/shortest time bucket.
ii) Floating rate	Sensitive; reprice on the contractual roll-over date. To be slotted in the respective timebuckets as per the next repricing date.
b) ICDs	Sensitive; reprice on maturity. To be slotted as per the residual maturity in the respective time buckets.
5. Borrowings:	
a) Term-money borrowing	Sensitive; reprices on maturity. To be placed as per residual maturity in the relative time bucket.
b) Borrowings from others	
i) Fixed rate	Sensitive; reprice on maturity. To be placed as per residual maturity in the relative time bucket.
ii) Floating rate	Sensitive; reprice on the roll-over/repricing date. To be placed as per residual period to the repricing date in the relative time bucket.
6. Current liabilities & provisions	
a. Sundry creditors b. Expenses payable c. Swap adjustment a/c.	Non sensitive

d. Advance income received/receipts from borrowers pending adjustment e. Interest payable on bonds/deposits f. Provisions	
7. Repos/bills rediscounted/forex swaps (Sell/Buy)	Sensitive; reprices on maturity. To be placed as per the residual maturity in respective buckets.
ASSETS:	
1. Cash	Non-sensitive.
2. Remittance in transit	Non-sensitive.
3. Balances with banks in India	
a) In current a/c.	Non-sensitive.
b) In deposit accounts, Money at call and short notice and other placements	Sensitive; reprices on maturity. To be placed as per residual maturity in respective timebuckets.
4. Investments	
a) Fixed income securities (e.g. Government securities, zero coupon bonds, bonds, debentures, cumulative, non-cumulative, redeemable preference shares, etc.)	Sensitive on maturity. To be slotted as per residual maturity. However, the bonds/debentures valued by applying NPA norms due to non-servicing of interest, shall be shown, net of provisions made, in: i) 3-5 year bucket - if sub-standard norms applied. ii) Over 5 year bucket - if doubtful norms applied.
b) Floating rate securities	Sensitive; reprice on the next repricing date. To be slotted as per residual time to the repricing date.
c) Equity shares, convertible preference shares, shares of subsidiaries/joint ventures, venture capital units.	Non-sensitive.
5. Advances (performing)	
a) Bills of exchange, promissory notes discounted & rediscounted	Sensitive on maturity. To be slotted as per the residual usance of the underlying bills.
b)Term loans/corporate loans/Short Term Loans (rupee loans only)	
i) Fixed Rate	Sensitive on cash flow/maturity.

ii) Floating Rate	Sensitive only when PLR or risk premium is changed by the company. The amount of term loans shall be slotted in time buckets which correspond to the time taken by the company to effect changes in their PLR in response to market interest rates.
6. Non-performing loans: (net of provisions, interest suspense and claims received from ECGC)	
a. Sub-standard) b. Doubtful and loss)	To be slotted as indicated at item B.7 of Appendix II.
7. Assets on lease	The cash flows on lease assets are sensitive to changes in interest rates. The leased asset cash flows be slotted in the time-buckets as per timing of the cash flows.
8. Fixed assets (excluding assets on lease)	Non-sensitive.
9. Other assets	
a) Intangible assets and items not representing cash flows.	Non-sensitive.
b) Other items (e.g. accrued income, other receivables, staff loans, etc.)	Non-sensitive.
10. Reverse Repos/Swaps (Buy /Sell) and Bills rediscounted (DUPN)	Sensitive on maturity. To be slotted as per residual maturity.
11. Other (interest rate) products	
a) Interest rate swaps	Sensitive; to be slotted as per residual maturity in respective time buckets.
b) Other Derivatives	To be classified suitably as per the residual maturity in respective time buckets

Appendix IV

Stress scenarios to conduct stress testing

Stress testing is a part of risk management process. Stress testing helps in identifying low frequency events, which may occur and disrupt the operations. Stress testing is done for external and internal economic factors. The important ones are real interest rates, credit spreads, equity prices, exchange rates, or other economic variables.

In terms of degree of severity, a stress scenario can be described as

either “baseline” or “adverse”:

- a) Baseline scenario: a set of economic and financial conditions that is generally consistent with the projection of a likely path for future economic and financial conditions. The baseline scenario usually does not lead to a stressed result. It is the expected development of a number of related uncertain factors. It is a scenario that is designed to emulate the expected unfolding of events.
- b) Adverse scenario: a set of economic and financial conditions which is designed to stress the performance of the banking sector or an individual bank. The level of stress is significantly stronger than in a baseline scenario. Stress factors could be drawn from historical events or hypothetically created. It is a scenario that is designed to emulate a negative confluence of event (as seen from the perspective of the stress test designing entity)

In terms of policy objectives, a stress test can be classified as “macroprudential” or “microprudential”:

- a) Macroprudential stress test: a stress test designed to assess the system-wide resilience to financial and economic shocks, which may include effects emerging from linkages with the broader financial system or the real economy.
- b) Microprudential stress test: a stress test designed to assess the resilience of the company to macroeconomic and financial vulnerabilities and respective shocks.

In terms of who performs the exercise, a stress test can be either “top-down” or “bottom-up”:

- a) Top-down stress test: a stress test performed by a public authority using its own stress test framework (data, scenarios, assumptions and models). Either company-level or aggregated data may be used, but always in models with consistent methodology and assumptions, generally developed by the authority.
- b) Bottom-up stress test: a stress test performed by TUFIDCO using its own stress test framework as part of a system-wide exercise, or as part of a stress test where authorities provide the company with common scenario(s) and assumptions.

Finally, in terms of balance sheet projections, they can be described as “dynamic” or “static”:

- a) Dynamic balance sheet (DBS): an assumption that the size, composition or risk profile of the company’s balance sheet are allowed to vary over the stress test horizon.
- b) Static balance sheet (SBS): an assumption that the size, composition and risk profile

of the company's balance sheet are invariant throughout the stress testing time horizon.