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February 21, 2012

The Chairmen and Managing Directors / Chief Executive Officers of
All Commercial Banks (Excluding RRBs and LABs)

Madam/Dear Sir,

**Liquidity Risk Management and Basel III Framework on Liquidity Standards –
Draft Guidelines**

The recent global financial crisis re-emphasised the importance of sound liquidity risk management framework to the functioning of financial institutions and markets. The reversal in market conditions illustrated how quickly liquidity can evaporate and that illiquidity can last for an extended period of time. It also demonstrated that liquidity risk management at many banks/financial institutions needed improvement.

2. Deficiencies which were witnessed in liquidity risk management during the recent crisis included inadequate liquidity risk management governance, failure to address funding concentrations, lack of meaningful cash flow projections to assess the liquidity position, insufficient holdings of high quality liquid assets, gaps in stress testing and inappropriate linkage of the contingency plans with stress tests, etc. The crisis, thus, highlighted the need for banks to have adequate levels of liquidity and robust liquidity risk management systems.

3. To address these deficiencies and to strengthen liquidity risk management in banks, the Basel Committee on Banking Supervision (BCBS) published “*Principles for Sound Liquidity Risk Management and Supervision*” in September 2008. This was followed by

the publication of “*Basel III: International framework for liquidity risk measurement, standards and monitoring*” in December 2010 i.e., the Basel III rules text on liquidity prescribing two minimum global regulatory standards viz., liquidity coverage ratio (LCR) and net stable funding ratio (NSFR) for liquidity risk and a set of five monitoring tools.

4. The Reserve Bank, being a member of the BCBS, is fully committed to the objective of the Basel III reform package and, therefore, intends to implement these proposals for banks operating in India. Accordingly, draft guidelines on *Liquidity Risk Management and Basel III Framework on Liquidity Standards* have been prepared which are furnished as **Annex**. The draft guidelines have been presented in two sections viz., Section I and II. Section I consolidates the various instructions/guidance on liquidity risk management that the Reserve Bank of India has issued from time to time in the past and where appropriate, harmonizes and enhances these instructions/guidance in line with the BCBS’s *Principles for Sound Liquidity Risk Management and Supervision*. Section II covers the Basel III guidelines on liquidity risk as will be applicable to the Indian banks. Two minimum global regulatory standards viz., LCR and NSFR as set out in the Basel III rules text will become binding from 1 January 2015 and 1 January 2018, respectively. Till then, these guidelines have been issued for compliance on best effort basis. Banks are expected to submit the liquidity returns under the Basel III framework to the Reserve Bank from the month /quarter ending June 2012.

5. Banks are required to forward their comments on the draft guidelines to the Chief General Manager-in-Charge, Department of Banking Operations and Development, 12th Floor, Central Office, Reserve Bank of India, Fort, Mumbai - 400001 by [e-mail](#) latest by March 21, 2012.

Yours faithfully,

(Deepak Singhal)
Chief General Manager in-Charge

Encl: As above

Draft Guidelines on Liquidity Risk Management and Basel III Framework on Liquidity Standards

Section I

Liquidity Risk Management

Introduction

Liquidity is a bank's capacity to fund increase in assets and meet both expected and unexpected cash and collateral obligations at a reasonable cost. Liquidity risk is the inability of a bank to meet such obligations as they become due, without adversely affecting the bank's financial condition. Effective liquidity risk management helps ensure a bank's ability to meet its obligations as they fall due and reduces the probability of an adverse situation developing. This assumes significance on account of the fact that liquidity crisis, even at a single institution can have systemic implications.

2. Liquidity risk for banks mainly manifests on account of the following:

- (i) **Funding Liquidity Risk** – the risk that a bank will not be able to meet efficiently the expected and unexpected current and future cash flows and collateral needs without affecting either its daily operations or its financial condition.

- (ii) **Market Liquidity Risk** – the risk that a bank cannot easily offset or eliminate a position at the prevailing market price because of inadequate market depth or market disruption.

3. After the global financial crisis, in recognition of the need for banks to improve their liquidity risk management, the Basel Committee on Banking Supervision (BCBS) published "*Principles for Sound Liquidity Risk Management and Supervision*" in September 2008. These are furnished in **Appendix I**. The sound principles *inter alia* provide detailed guidance on management of liquidity risk and broadly envisage that:

- i) A bank should establish a robust liquidity risk management framework.
- ii) The Board of Directors (BOD) of a bank should be responsible for sound management of liquidity risk and should clearly articulate a liquidity risk tolerance appropriate for its business strategy and its role in the financial system.
- iii) The BOD should develop a strategy, policies and practices to manage liquidity risk in accordance with the risk tolerance and ensure that the bank maintains sufficient liquidity. The BOD should review the strategy, policies and practices at least annually.
- iv) Top management/ALCO should continuously review information on bank's liquidity developments and report to the BOD on a regular basis.
- v) A bank should have a sound process for identifying, measuring, monitoring and controlling liquidity risk, including a robust framework for comprehensively projecting cash flows arising from assets, liabilities and off-balance sheet items over an appropriate time horizon.
- vi) A bank should incorporate liquidity costs, benefits and risks in internal pricing, performance measurement and new product approval process for all significant business activities.
- vii) A bank should actively monitor and manage liquidity risk exposure and funding needs within and across legal entities, business lines and currencies, taking into account legal, regulatory and operational limitations to transferability of liquidity.
- viii) A bank should establish a funding strategy that provides effective diversification in the source and tenor of funding, and maintain ongoing presence in its chosen funding markets and counterparties, and address inhibiting factors in this regard.
- ix) A bank should actively manage its intraday liquidity positions and risks.
- x) A bank should actively manage its collateral positions.
- xi) A bank should conduct stress tests on a regular basis for short-term and protracted institution-specific and market-wide stress scenarios and use stress test outcomes to adjust its liquidity risk management strategies, policies and position and develop effective contingency plans.
- xii) A bank should have a formal contingency funding plan (CFP).
- xiii) A bank should maintain a cushion of unencumbered, high quality liquid assets to be held as insurance against a range of liquidity stress scenarios.
- xiv) A bank should publicly disclose its liquidity information on a regular basis that enables market participants to make an informed judgment about the soundness of its liquidity risk management framework and liquidity position.

Certain critical issues in respect of the bank's liquidity risk management systems and the related guidance are as follows:

Governance of Liquidity Risk Management

4. Successful implementation of any risk management process has to emanate from the top management in the bank with the demonstration of its strong commitment to integrate basic operations and strategic decision making with risk management. Ideally, the organisational set up for liquidity risk management should be as under:

- * The Board of Directors (BOD)
- * The Risk Management Committee of the Board
- * The Asset-Liability Management Committee (ALCO)
- * The Asset Liability Management (ALM) Support Group

5. The BOD should have the overall responsibility for management of liquidity risk. The Board should decide the strategy, policies and procedures of the bank to manage liquidity risk in accordance with the liquidity risk tolerance/limits as detailed in paragraph 14. The risk tolerance should be clearly understood at all levels of management. The Board should also ensure that it understands the nature of the liquidity risk of the bank including liquidity risk profile of the subsidiaries, associates and the overseas branches/subsidiaries/affiliates, periodically reviews information necessary to maintain this understanding, establishes executive-level lines of authority and responsibility for managing the bank's liquidity risk, enforces management's duties to identify, measure, monitor, and manage liquidity risk and formulates/reviews the contingent funding plan.

6. The Risk Management Committee of the Board consisting of Chief Executive Officer (CEO)/Chairman and Managing Director (CMD) and heads of credit, market and operational risk management committee should be responsible for evaluating the overall risks faced by the bank including liquidity risk. The potential interaction of liquidity risk with other risks should also be included in the risks addressed by the risk management committee.

7. The Asset-Liability Management Committee (ALCO) consisting of the Bank's top management including CEO/CMD, should 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 bank in line with bank's decided risk management objectives and risk tolerance.

8. To ensure commitment of the top management and timely response to market dynamics, the CEO/CMD or the ED should head the Committee. The Chiefs of Investment, Credit, Resources Management or Planning, Funds Management/treasury (forex and domestic), International Banking and Economic Research can be members of the Committee. In addition, the Head of the Technology Division should also be an invitee for building up of MIS and related computerization. Some banks may even have Sub-Committees and Support Groups. The size (number of members) of ALCO would depend on the size of each institution, business mix and organizational complexity.

9. The role of the ALCO with respect to the liquidity risk should include, *inter alia*, the following:-

- i. Deciding on desired maturity profile and mix of incremental assets and liabilities.
- ii. Deciding 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 v/s retail deposits, money market vs capital market funding, domestic v/s foreign currency funding, etc. ALCO should be aware of the composition, characteristics and diversification of the bank's assets and funding sources and should regularly review the funding strategy in the light of any changes in the internal or external environments.
- iii. Determining the structure, responsibilities and controls for managing liquidity risk and for overseeing the liquidity positions of all legal entities, branches and subsidiaries in which a bank is active, and outline these elements clearly in the bank's liquidity policy.
- iv. Ensuring operational independence of Liquidity Risk Management function, with adequate support of skilled and experienced officers.
- v. Ensuring adequacy of cash flow projections and the assumptions used.

- vi. Reviewing the stress test scenarios including the assumptions as well as the results of the stress tests and ensuring that a well documented Contingency Funding Plan is in place which is reviewed periodically.
- vii. Deciding the transfer pricing policy of the bank and making liquidity costs and benefits as an integral part of bank's strategic planning.
- viii. Regularly reporting to the Board of Directors and Risk Management Committee on the liquidity risk profile of the bank.

10. ALCO should have a thorough understanding of the close links between funding liquidity risk and market liquidity risk, as well as how other risks including credit, market, operational and reputational risks affect the bank's overall liquidity risk strategy. Liquidity risk can often arise from perceived or actual weaknesses, failures or problems in the management of other risk types. It should, therefore, identify events that could have an impact on market and public perceptions about its soundness and reputation.

11. The ALM Support Group consisting of operating staff should be responsible for analysing, monitoring and reporting the liquidity risk profile to the ALCO. The group should also prepare forecasts (simulations) showing the effect of various possible changes in market conditions on the bank's liquidity position and recommend action needed to be taken to maintain the liquidity position/adhere to bank's internal limits.

Liquidity Risk Management Policy, Strategies and Practices

12. The first step towards liquidity management is to put in place an effective liquidity risk management policy, which inter alia, should spell out the 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. The Policy should also address liquidity separately for individual currencies, legal entities, and business lines, when appropriate and material, and should allow for legal, regulatory, and operational limits for the transferability of liquidity as well.

13. The BOD or its delegated committee of board members should oversee the establishment and approval of policies, strategies and procedures to manage liquidity risk, and review them at least annually.

Liquidity Risk Tolerance

14. Banks should have an explicit liquidity risk tolerance set by the Board of Directors. The risk tolerance should define the level of liquidity risk that the bank is willing to assume, and should reflect the bank's financial condition and funding capacity. The tolerance should ensure that the bank manages its liquidity in normal times in such a way that it is able to withstand a prolonged period of, both institution specific and market wide stress events. The risk tolerance articulation by a bank should be explicit, comprehensive and appropriate as per its complexity, business mix, liquidity risk profile and systemic significance. They may also be subject to sensitivity analysis. The risk tolerance could be specified by way of specifying tolerance level for various ratios under stock approach or by way of fixing the tolerance levels for various maturities under flow approach depending upon the bank's liquidity risk profile. Risk tolerance may also be expressed in terms of minimum survival horizons (without Central Bank or Government intervention) under a range of severe but plausible stress scenarios, chosen to reflect the particular vulnerabilities of the bank. The key assumptions may be subject to a periodic review by the Board.

Strategy for Managing Liquidity Risk

15. The strategy for managing liquidity risk should be appropriate for the nature, scale and complexity of a bank's activities. In formulating the strategy, banks/banking groups should take into consideration its legal structures, key business lines, the breadth and diversity of markets, products, jurisdictions in which they operate and home and host country regulatory requirements, etc. Strategies should identify primary sources of funding for meeting daily operating cash outflows, as well as expected and unexpected cash flow fluctuations.

Management of Liquidity Risk

16. A bank should have a sound process for identifying, measuring, monitoring and mitigating liquidity risk as enumerated below:

Identification

17. A bank should define and identify the liquidity risk to which it is exposed for each major on and off-balance sheet position, including the effect of embedded options and other contingent exposures that may affect the bank's sources and uses of funds and for all currencies in which a bank is active.

Measurement – Stock Approach

18. Liquidity can be measured through stock and flow approaches. Certain critical ratios, their significance and indicative benchmarks in respect of these ratios are given in the **Table below**. These benchmarks¹ are based on 4 or 5 years average for the banking system and are purely indicative. Banks may, therefore, based on their liquidity risk management capabilities and experience, fix a lower or higher benchmark.

Table

SI No	Ratio	Significance	Indicative benchmark (in %)
1.	$\frac{\text{(Volatile liabilities}^2 \text{ - Temporary Assets}^3)}{\text{(Earning Assets}^4 \text{ - Temporary Assets)}}$	Measures the extent to which hot money supports bank's basic earning assets. Since the numerator represents short-term, interest sensitive funds, a high and positive number implies some risk of illiquidity.	40
2.	$\frac{\text{Core deposits}^5}{\text{Total Assets}}$	Measures the extent to which assets are funded through stable deposit base.	50
3.	$\frac{\text{(Loans + mandatory SLR + mandatory CRR + Fixed)}}{\text{Total Assets}}$	Loans including mandatory cash reserves and statutory liquidity	80

¹ The final benchmarks in respect of these ratios will be communicated by the Reserve Bank in due course. Banks may for the time being use these indicative benchmarks for the purpose of fixing their own internally laid down benchmarks in respect of ratios under stock approach.

² **Volatile Liabilities:** (Deposits + borrowings and bills payable upto 1 year). Letters of credit – full outstanding Component-wise Credit Conversion Factor of other contingent credit and commitments Swap funds (buy/ sell) upto one year. Current deposits (CA) and Savings deposits (SA) i.e. (CASA) deposits reported by the banks as payable within one year (as reported in structural liquidity statement) are included under volatile liabilities. Borrowings include from RBI, call, other institutions and refinance.

³ **Temporary assets** = Cash + Excess CRR balances with RBI + Balances with banks + Bills purchased discounted upto 1 year + Investments upto one year + Swap funds (sell/ buy) upto one year.

⁴ **Earning Assets** = Total assets – (Fixed assets + Balances in current accounts with other banks + Other assets excluding leasing + Intangible assets)

⁵ **Core deposits** = All deposits (including CASA) above 1 year + net worth

	Assets)/Total Assets	investments are least liquid and hence a high ratio signifies the degree of 'illiquidity' embedded in the balance sheet.	
4.	(Loans + mandatory SLR + mandatory CRR + Fixed Assets) / Core Deposits	Measure the extent to which illiquid assets are financed out of core deposits. Greater than 1 (purchased liquidity). Less than 1 (stored liquidity).	150
5.	Temporary Assets/Total Assets	Measures the extent of available liquid assets. A higher ratio could impinge on the asset utilisation of banking system in terms of opportunity cost of holding liquidity.	40
6.	Temporary Assets/ Volatile Liabilities	Measures the cover of liquid investments relative to volatile liabilities. A ratio of less than 1 indicates the possibility of a liquidity problem.	60
7.	Volatile liabilities/Total Assets	Measures the extent to which volatile liabilities fund the balance sheet.	60

Measurement – Flow Approach

19. This involves comprehensive tracking of cash flow mismatches. For measuring and managing net funding requirements, the format prescribed by the RBI i.e. the statement of structural liquidity under ALM System for measuring cash flow mismatches at different time bands should be adopted. The cash flows are required to be placed in different time bands based on the residual maturity of the cash flows or the projected future behaviour of assets, liabilities and off-balance sheet items. The difference between cash inflows and outflows in each time period thus becomes a starting point for the measure of a bank's future liquidity surplus or deficit, at a series of points of time.

20. Presently, banks are required to prepare domestic structural liquidity statement (Rupee) on a daily basis and report to RBI on a fortnightly basis. Further, structural liquidity statements in respect of overseas operations are also reported to RBI on quarterly basis. The structural liquidity statement has been revised and the revised formats of the statement and the guidance for slotting the future cash flows of banks in the time buckets are furnished as [Appendix II \(Refer Liquidity Return-1, Part A1\)](#) and **Appendix IVA**, respectively. The revised formats of statements of Structural Liquidity include five parts, viz. (i) 'Domestic Currency – Indian Operations', (ii) 'Foreign Currency – Indian Operations', (iii) 'Consolidated Indian Operations – Domestic and Foreign

Currency', (iv) 'Overseas Operations – Country-Wise' and (v) 'For Consolidated Bank Operations'.

21. Banks should analyse the behavioural maturity profile of various components of on / off-balance sheet items on the basis of assumptions and trend analysis supported by time series analysis. The behavioural analysis, for example, may include the proportion of maturing assets and liabilities that the bank can rollover or renew, the behavior of assets and liabilities with no clearly specified maturity dates, potential cash flows from off-balance sheet activities, including draw down under loan commitments, contingent liabilities and market related transactions. Banks should undertake variance analysis, at least once in six months to validate the assumptions used in the behavioral analysis. The assumptions should be fine-tuned over a period which facilitate near reality predictions about future behaviour of on / off-balance sheet items.

22. Banks should also track the impact of prepayments of loans, premature closure of deposits and exercise of options built in certain instruments which offer put/call options after specified times. Thus, cash outflows can be ranked by the date on which liabilities fall due, the earliest date a liability holder could exercise an early repayment option or the earliest date contingencies could be crystallised.

23. As assumptions play critical role in projections of cash flows and measuring liquidity risk, assumptions used should be reasonable, appropriate and adequately documented. They should be transparent to the Board/Risk Management Committee and periodically reviewed.

Monitoring

24. While the mismatches in the structural liquidity statement upto one year would be relevant since these provide early warning signals of impending liquidity problems, the main focus should be on the short-term mismatches viz. say, upto 28 days. Banks, however, are expected to monitor their cumulative mismatches (running total) across all time buckets by establishing internal prudential limits with the approval of the Board / Risk Management Committee. The net cumulative negative mismatches in the domestic and overseas structural liquidity statement (**Refer Appendix II - Part A1 and**

Part B of Liquidity Return -1) during the next day, 2-7 days, 8-14 days and 15-28 days bucket should not exceed 5%, 10%, 15%, 20% of the cumulative cash outflows in the respective time buckets.

25. In order to enable banks to monitor their short-term liquidity on a dynamic basis over a time horizon spanning from 1-90 days, banks are required to estimate their short-term liquidity profiles on the basis of business projections and other commitments for planning purposes as per the indicative format on estimating Short-Term Dynamic Liquidity prescribed by the RBI in its circular DBOD. No. BP.BC. 8/21.04.098/99 dated February 10, 1999 on ALM system read with the circular DBOD.No.BP.BC. 38/21.04.098/2007-08 dated October 24, 2007 on ALM system amendments. The Short-Term Dynamic Liquidity Statement is now required to be reported to RBI at monthly intervals. This statement is also required to be furnished in respect of overseas operations both jurisdiction-wise and consolidated position. (Refer **Appendix II, Liquidity Return-2**). While estimating the liquidity profile in a dynamic way, due importance may be given to the:

- i. Seasonal pattern of deposits/loans; and
- ii. Potential liquidity needs for meeting new loan demands, unavailed credit limits, potential deposit losses, investment obligations, statutory obligations, etc.

Monitoring of Liquidity Standards under Basel III

26. Banks are also required to report compliance on best effort basis the liquidity standards under Basel III which are covered under **Section II** in detail.

27. In addition, banks are required to adhere to the following regulatory limits prescribed to reduce the extent of concentration on the liability side of the banks.

(i) Inter-bank Liability (IBL) Limit

Currently, the IBL of a bank should not exceed 200% of its net worth as on 31st March of the previous year. However, individual banks may, with the approval of their BODs, fix a lower limit for their inter-bank liabilities, keeping in view their business model. The banks whose Capital to Risk-weighted Assets Ratio (CRAR) is at least 25% more than the minimum CRAR (9%), i.e. 11.25% as on March 31, of the previous year, are allowed

to have a higher limit up to 300% of the net worth for IBL. The limit prescribed above will include only fund based IBL within India (including inter-bank liabilities in foreign currency to banks operating within India). In other words, the IBL outside India are excluded. The above limits will not include collateralized borrowings under Collateralized Borrowing and Lending Obligation (CBLO) and refinance from NABARD, SIDBI etc.

(ii) Call Money Borrowing Limit

The limit on the call money borrowings as prescribed by RBI for Call/Notice Money Market Operations will operate as a sub-limit within the above limits. At present, on a fortnightly average basis, such borrowings should not exceed 100% of bank's capital funds. However, banks are allowed to borrow a maximum of 125% of their capital funds on any day, during a fortnight.

(iii) Call Money Lending Limit

Banks are also required to ensure adherence to the call money lending limit prescribed by RBI for Call/Notice Money Market Operations, which at present, on a fortnightly average basis, should not exceed 25% of its capital funds. However, banks are allowed to lend a maximum of 50% of their capital funds on any day, during a fortnight.

28. Banks having high concentration of wholesale deposits are expected to frame suitable policies to contain the liquidity risk arising out of excessive dependence on such deposits. Banks should also evolve a system for monitoring high value deposits (other than inter-bank deposits) say Rs.1 crore or more to track the volatile liabilities, both in normal and stress situation.

Off-balance Sheet Exposures and Contingent Liabilities

29. The management of liquidity risks relating to certain off-balance sheet exposures on account of special purpose vehicles, financial derivatives, and guarantees and commitments may be given particular importance due to the difficulties that many banks have in assessing the related liquidity risks that could materialise in times of stress. Thus, the cash flows arising out of contingent liabilities in normal situation and the scope for an increase in cash flows during periods of stress should also be estimated and

monitored.

30. In case of securitization transactions, an originating bank should monitor, at the inception and throughout the life of the transaction, potential risks arising from the extension of liquidity facilities to securitisation programmes. A bank's processes for measuring contingent funding risks should also consider the nature and size of the bank's potential non-contractual obligations; as such obligations can give rise to the bank supporting related off-balance sheet vehicles in times of stress. This is particularly true of securitisation programmes where the bank considers such support critical to maintaining ongoing access to funding. Similarly, in times of stress, reputational concerns might prompt a bank to purchase assets from money market or other investment funds that it manages or with which it is otherwise affiliated.

31. Where the bank provides contractual liquidity facilities to an SPV, or where it may otherwise need to support the liquidity of an SPV under adverse conditions, the bank needs to consider how the bank's liquidity might be adversely affected by illiquidity at the SPV. In such cases, the bank should monitor the SPV's inflows (maturing assets) and outflows (maturing liabilities) as part of the bank's own liquidity planning, including in its stress testing and scenario analyses. In such circumstances, the bank should assess the liquidity position of the bank with the SPV's liquidity draws (but not its liquidity surplus) included.

32. With respect to the use of securitization SPVs as a source of funding, a bank needs to consider whether these funding vehicles will continue to be available to the bank under adverse scenarios. A bank experiencing adverse liquidity conditions often will not have continuing access to the securitization market as a funding source and should reflect this appropriately in its prospective liquidity management framework.

Collateral Position Management

33. A bank should have sufficient collateral to meet expected and unexpected borrowing needs and potential increases in margin requirements over different timeframes, depending upon the bank's funding profile. A bank should also consider the potential for operational and liquidity disruptions that could necessitate the pledging or delivery of

additional intraday collateral.

34. A bank should have proper systems and procedure to calculate all of its collateral positions in a timely manner, including the value of assets currently pledged relative to the amount of security required and unencumbered assets available to be pledged and monitor them on an ongoing basis. A bank should also be aware of the operational and timing requirements associated with accessing the collateral given its physical location.

Intraday Liquidity Position Management

35. A bank's failure to effectively manage intraday liquidity could lead to default in meeting its payment obligations in time, which may affect not only its own liquidity position but also that of its counterparties. In the face of credit concerns or general market stress, counterparties may view the failure to settle payments as a sign of financial weakness and in turn, withhold or delay payments to the bank causing additional liquidity pressures. Given the inter-dependencies that exist among systems, this may lead to liquidity dislocations that cascade quickly across many systems and institutions. As such, the management of intraday liquidity risk should be considered as a crucial part of liquidity risk management of the bank.

36. A bank should develop and adopt an intraday liquidity strategy that allows it to monitor and measure expected daily gross liquidity inflows and outflows and ensure that arrangements to acquire sufficient intraday funding to meet its intraday needs is in place and it has the ability to deal with unexpected disruptions to its liquidity flows. An effective management of collateral is essential component of intraday liquidity strategy.

37. A bank should have policies, procedures and systems to support the intraday liquidity risk management in all of the financial markets and currencies in which it has significant payment and settlement flows, including when it chooses to rely on correspondents or custodians to conduct payment and settlement activities.

Incorporation of Liquidity Costs, Benefits and Risks in the Internal Pricing

38. A scientifically evolved internal transfer pricing model by assigning values on the basis of current market rates to funds provided and funds used is an important component for

effective implementation of Liquidity Risk Management System. The liquidity costs and benefits should therefore be an integral part of bank's strategy planning.

39. Banks should endeavor 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. This will help in aligning the risk taking incentives with the liquidity risk exposure and Board approved risk tolerance of individual business lines.

Funding Strategy - Diversified Funding

40. A bank should 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. A bank should regularly gauge its capacity to raise funds quickly from each source. It should identify the main factors that affect its ability to raise funds and monitor those factors closely to ensure that estimates of fund raising capacity remain valid. These factors may also be incorporated in the bank's stress test scenario and contingent funding plan.

41. Over-reliance on a single source of funding should be avoided. Funding strategy should also take into account the qualitative dimension of the concentrated behavior of deposit withdrawal in typical market conditions and overdependence on non-deposit funding sources arising out of unique business model. Funding diversification may be implemented by way of placing limits (say by tenor, counterparty, secured versus unsecured market funding, instrument type, currency wise, geographic market wise, and securitization, etc.).

Stress Testing

42. Stress testing should form an integral part of the overall governance and liquidity risk management culture in banks. A stress test is commonly described as an evaluation of the financial position of a bank under a severe but plausible scenario to assist in decision making within the bank. Stress testing alerts bank's management to adverse unexpected outcomes as it provides forward looking assessment of risk and facilitates better planning

to address the vulnerabilities identified. The Reserve Bank has issued guidelines to banks on stress testing in June 2007 (Ref. DBOD. No. BP.BC. 101/21.04.103/2006-07 dated June 26, 2007), which requires banks to have in place a Board approved “stress testing framework”. Banks should ensure that the framework as detailed in the guidelines and as specified below is put in place.

Scenarios and Assumptions

43. A bank should conduct stress tests on a regular basis for a variety of short term and protracted bank specific and market wide stress scenarios (individually and in combination). In designing liquidity stress scenarios, the nature of the bank’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 bank is exposed. These include risks associated with its business activities, products (including complex financial instruments and off-balance sheet items) and funding sources. The defined scenarios should allow the bank to evaluate the potential adverse impact these factors can have on its liquidity position. While historical events may serve as a guide, a bank’s judgement also plays an important role in the design of stress tests.

44. The bank should specifically take into account the link between reductions in market liquidity and constraints on funding liquidity. This is particularly important for banks with significant market share in, or heavy reliance upon, specific funding markets. It should also consider the insights and results of stress tests performed for various other risk types when stress testing its liquidity position and consider possible interactions with these other types of risk.

45. A bank should recognise that stress events may simultaneously give rise to immediate liquidity needs in different currencies and multiple payment and settlement systems. It should consider in the stress tests, the likely behavioural response of other market participants to events of market stress and the extent to which a common response might amplify market movements and exacerbate market strain as also the likely impact of its own behaviour on that of other market participants. The stress tests should consider how the behaviour of counterparties (or their correspondents and custodians) would affect the timing of cash flows, including on an intraday basis.

46. Based on the type and severity of the scenario, a bank needs to consider the appropriateness of a number of assumptions which are relevant to its business. The bank's choice of scenarios and related assumptions should be well thought of, documented and reviewed together with the stress test results. A bank should take a conservative approach when setting stress testing assumptions.

47. Banks should conduct stress tests to assess the level of liquidity they should hold, the extent and frequency of which should be commensurate with the size of the bank and their specific business activities/liquidity for a period over which it is expected to survive a crisis. For example, a stress test may include a sudden substantial withdrawal of funding over a 5 day period and for 30 days period. Assumptions for deposit withdrawal over a 5 day period could be: retail deposits – daily 3% for current accounts, 5% for savings accounts and 2% for term deposits. For wholesale deposits – daily 10% for CDs, 5% for inter-bank deposits, 20% for foreign currency deposits. For 30 days period, the assumption could be 26% deposit withdrawal on average. Banks are encouraged to have stress tests for longer survival horizon i.e. for 2 months, 3 months, etc.

Use of Stress Test Results

48. Stress tests outcomes should be used to identify and quantify sources of potential liquidity strain and to analyse possible impacts on the bank's cash flows, liquidity position, profitability and solvency. The results of stress tests should be discussed thoroughly by ALCO. Remedial or mitigating actions should be identified and taken to limit the bank's exposures, to build up a liquidity cushion and to adjust the liquidity profile to fit the risk tolerance. The results should also play a key role in shaping the bank's contingent funding planning and in determining the strategy and tactics to deal with events of liquidity stress.

49. The stress test results and the action taken should be documented by banks and made available to the Reserve Bank / Inspecting Officers as and when required. If the stress test results indicate any vulnerability, the same should be reported to the Board and a plan of action charted out immediately. The Department of Banking Supervision, Central Office, Reserve Bank of India should also be kept informed immediately in such cases.

Overseas Operations of the Indian Banks' Branches and Subsidiaries

50. The bank's liquidity policy and procedures should provide detailed procedures and guidelines for their overseas branches/subsidiaries to manage their operational liquidity on an ongoing basis.

51. Management of operational liquidity or liquidity in the short-term is expected to be delegated to local management as part of local treasury function. For measuring and managing net funding requirements, a statement on structural liquidity in respect of overseas operations may be prepared on a daily basis and should be reported to RBI on monthly basis. This statement will replace the existing "Report on Structural Liquidity" for overseas operations for branches/subsidiaries/joint ventures which was furnished to RBI on quarterly basis under DSB-0 returns (DSB-0-2). The format for structural liquidity statement for overseas operations is furnished under **Appendix-II (Part B-Liquidity Return-1)**. While slotting the various items of assets and liabilities in structural liquidity statement, banks may refer to the guidance for slotting the cash flows in respect of structural liquidity statement (rupee) which is furnished as **Appendix IVA**. The statement needs to be submitted country-wise. Banks should also report figures in respect of subsidiaries/joint ventures in the same format on a stand-alone basis. The tolerance limit prescribed for net cumulative negative mismatches in case of domestic structural liquidity statement i.e. 5%, 10%, 15%, 20% of the cumulative cash outflows in respect of next day, 2-7 days, 8-14 days and 15-28 days bucket would also be applicable for overseas operations (country-wise). As mentioned in paragraph 25, a Statement on Short Term Dynamic Liquidity is also required to be furnished to RBI in respect of bank's overseas operations both jurisdiction-wise and consolidated position. (Refer **Appendix II, Liquidity Return-2**).

52. Some of the broad norms in respect of liquidity management are as follows:

- i. Banks should not normally assume voluntary risk exposures extending beyond a period of ten years.
- ii. Banks should endeavour to broaden their base of long- term resources and funding capabilities consistent with their long term assets and commitments.
- iii. The limits on maturity mismatches shall be established within the following tolerance levels: (a) long term resources should not fall below 70% of long term

assets; and (b) long and medium term, resources together should not fall below 80% of the long and medium term assets. These controls should be undertaken currency-wise, and in respect of all such currencies which individually constitute 10% or more of a bank consolidated overseas balance sheet. Netting of inter-currency positions and maturity gaps is not allowed. For the purpose of these limits, short term, medium term and long term are defined as under:

Short-term : those maturing within 6 months

Medium-term : those maturing in 6 months and longer but within 3 years

Long-term : those maturing in 3 years and longer

- iv. The monitoring system should be centralised in the International Division (ID) of the bank for controlling the mismatch in asset-liability structure of the overseas sector on a consolidated basis, currency-wise. The ID of each bank may review the structural maturity mismatch position at quarterly intervals and submit the review/s to the top management of the bank.

53. Supervisory authorities in several foreign countries regulate the levels of short term funding by banks. They either require banks generally to raise long-term resources so as to reduce the levels of maturity mismatching or stipulate prudential ceilings or tolerance limits on the maturity mismatching permitted to them. In countries, where the mismatching in the maturity structures is subject to regulatory or supervisory guidelines, the same shall be controlled locally within the host country regulatory or prudential parameters. Additionally, at the corporate level (i.e. in respect of the overseas sector as a whole), the maturity mismatching should also be controlled by bank's management by establishing tolerance limits on the global asset-liability structures and monitor the mismatch in the aggregate. Relevant control should be undertaken / exercised on a centralised basis.

Maintenance of Liquidity – Centralisation Vs Decentralisation

54. Decentralisation refers to the degree of financial autonomy of a bank's branches and subsidiaries relative to the central treasury of the banking group. The fully decentralised model devolves the responsibility of funding and liquidity management to the individual local entities which, in the extreme, act as a collection of autonomous entities under common ownership. A decentralised approach sees local entities plan and raise funding for their activities and manage

the associated liquidity risks. They source funding in host countries and meet any shortfalls autonomously by accessing local sources in the host country. Central treasury has only a limited role under such approach.

55. At the other end of the spectrum, the fully centralised model concentrates funding and liquidity management at the central treasury on the group level. The central treasury distributes funding around the organisation, monitors compliance with strict centrally mandated mismatch limits and manages pools of liquid assets. The bank's foreign operations are not expected to fund their own balance sheets independent of the rest of the group. The centralised model is associated with extensive intra-group transfers (internal markets).

56. A fully centralised model is rare in practice, as the daily operations of a group's branches and subsidiaries necessitate a minimum of independence to manage local cash flows. The same can be said of the fully decentralised model.

57. In principle, the concept of (de)centralisation can be applied separately to funding and liquidity management. A model of centralised funding but decentralised liquidity management would see local entities obtaining funding from the central treasury (with any surpluses redistributed or invested via the treasury), perhaps at a predetermined rate, as a means of managing the funding of assets according to *locally determined* limits on maturity and currency mismatches and liquid asset requirements. Conversely, local responsibility for determining and executing the funding strategy could coexist with *centrally* mandated mismatch limits and with the central treasury managing liquid assets.

58. Although decentralised funding strategy may lead to a higher cost for banks, greater decentralization of funding may leave the banks less exposed to intra-group contagion and contagion across jurisdictions. It may also strengthen the local resolution regime. Evidence from the global financial crisis also supported the view that banks pursuing a more decentralised model were somewhat less affected by the funding problems than those operating a more centralised funding model.

59. In case of centralised funding strategy, there may be possible constraints on transferability of liquidity within the group, which may be operational (connectivity of

settlement systems) or due to internal limits or policies of the group or legal or regulatory constraints (say capital requirements, large exposure limits, ring fencing rules, etc). Moreover, in times of group-wide liquidity stress or systemic (market) stress, there may not be much surplus liquidity in other parts of the group for timely transfer of funds when necessary. In light of these drawbacks, centralized liquidity management should aim at a better allocation of liquidity within the group. Nevertheless, in the crisis management phase, all banks, regardless of their strategic funding model, would seem to benefit from making tactical use of intra-group transfers.

60. Indian banks should adopt decentralised model with some flexibility allowed in the form of centralization with respect to some regional centres/hubs that may fund/manage liquidity for some jurisdictions/currencies. However, regardless of the model, it is essential for institutions with multiple platforms and legal entities to have a central liquidity management oversight function. The group's strategy and policy documents should describe the structure for monitoring institution-wide liquidity risk and for overseeing operating subsidiaries and foreign branches.

Maintenance of Liquidity – Overseas Branches of Indian Banks and Branches of Foreign banks

61. The Reserve Bank of India expects banks to maintain adequate liquidity both at the solo (individual bank as a whole) and consolidated level. Irrespective of the organisational structure and degree of centralised or decentralized liquidity risk management, a bank should actively monitor and control liquidity risks at the level of individual legal entities, foreign branches and subsidiaries and the group as a whole, incorporating processes that aggregate data in order to develop a group-wide view of liquidity risk exposures and identify constraints on the transfer of liquidity within the group.

62. Indian banks' branches and subsidiaries abroad are required to manage liquidity according to the host or home country requirements, whichever is stringent. It is expected that Indian banks' branches and subsidiaries are self sufficient with respect to liquidity maintenance and should be able to withstand a range of severe but plausible stress test scenarios on its own. However, in case of extreme stress

situation, while Indian banks' branches abroad may have to rely on liquidity support from their Head office, their subsidiaries should be more self reliant.

63. Similarly, foreign banks operating in India should also be self sufficient with respect to liquidity maintenance and management. In case of extreme stress situation, parent entity/head office may be relied upon. However, the possible constraints with respect to transferability of funds from the parent entity/head office in case of market/group wide stress may be taken into account while factoring the same as a source of funds in contingency funding plan.

Liquidity Across Currencies

64. Banks should have a measurement, monitoring and control system for liquidity positions in the major currencies in which they are active. For assessing the liquidity mismatch in foreign currencies, banks are required to prepare Maturity and Position (MAP) statements according to the extant instructions. These statements have been reviewed and the reporting requirements have been revised as given in **Appendix II (Liquidity Return-1, Part A2)**. Guidance on slotting various items of inflows and outflows is given in **Appendix IVB**. In addition to assessing its aggregate foreign currency liquidity needs and the acceptable mismatch in combination with its domestic currency commitments, a bank should also undertake separate analysis of its strategy for each major currency individually by taking into account the outcome of stress testing.

65. The size of the foreign currency mismatches should take into account: (a) the bank's ability to raise funds in foreign currency markets; (b) the likely extent of foreign currency back-up facilities available in its domestic market; (c) the ability to transfer liquidity surplus from one currency to another, and across countries/jurisdictions and legal entities and (d) the likely convertibility of currencies in which bank is active, including the potential for impairment or complete closure of foreign exchange swap markets for particular currency pairs.

Management Information System (MIS)

66. A bank should have a reliable management information system (MIS) designed to provide timely and forward-looking information on the liquidity position of the bank to the

Board and ALCO, both under normal and stress situations. The MIS should cover liquidity positions in all currencies in which the bank conducts its business – both on a subsidiary / branch basis (in all countries in which the bank is active) and on an aggregate group basis. 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.

67. Liquidity risk reports should provide sufficient detail to enable management to assess the sensitivity of the bank to changes in market conditions, its own financial performance, and other important risk factors. It may include cash flow projections, cash flow gaps, asset and funding concentrations, critical assumptions used in cash flow projections, funding availability, compliance to various regulatory and internal limits on liquidity risk management, results of stress tests, key early warning or risk indicators, status of contingent funding sources, or collateral usage, etc.

Reporting to the Reserve Bank of India

68. The existing liquidity reporting requirements have been reviewed. Banks will have to submit the revised liquidity returns to the Chief General Manager-in-Charge, Department of Banking Supervision, Reserve Bank of India, Central Office, World Trade Centre, Mumbai as detailed below.

(A) Statement of Structural Liquidity (Liquidity Return-1): At present banks are furnishing statement of structural liquidity for domestic currency at fortnightly interval and statement of structural liquidity for overseas operations at quarterly interval. In addition, statement for structural liquidity for the consolidated bank under consolidated prudential returns (CPR) is prescribed at half yearly intervals. However, under the revised requirements, this statement is required to be reported in five parts viz. (i) 'for domestic currency, Indian operations'; (ii) 'for foreign currency, Indian operations'; (iii) 'for consolidated Indian operations'; (iv) 'for overseas operations' and for (v) 'Consolidated Bank Operations'. While statements at (i) to (iii) are required to be submitted fortnightly, statements at (iv) and (v) at monthly and quarterly intervals respectively. The Maturity and Position statement (MAP) submitted by the banks at monthly intervals is discontinued as the same is now addressed by statement for foreign currency, Indian operations.

(B) Statement of Short-Term Dynamic Liquidity (Liquidity Return-2): In order to enable banks to monitor their short-term liquidity on a dynamic basis over a time horizon spanning from 1-90 days, banks are, at present, required to estimate their short-term liquidity profiles on the basis of business projections/other commitments by preparing this statement on each reporting Friday and putting up the same to ALCO / Top Management within 2/3 days from the close of the reporting Friday. While these requirements would continue, the Short Term Dynamic Liquidity Statement will also be required to be submitted to RBI on a monthly basis and will also be required to be furnished in respect of overseas operations, both jurisdiction-wise and consolidated position.

69. The above mentioned returns and their corresponding periodicity are summarised below:

S.No.	Name of the Liquidity Return (LR)	Periodicity	Time period by which required to be reported
1	Structural Liquidity Statement – LR-1		
(i)	Part A1 - Statement of Structural Liquidity – Domestic Currency, Indian Operations	Fortnightly	within a week from the fortnight
(ii)	Part A2 – Statement of Structural Liquidity – Foreign Currency, Indian Operations	Fortnightly	within a week
(iii)	Part A3 – Statement of Structural Liquidity – Consolidated Indian Operations	Fortnightly	within a week
(iv)	Part B – Statement of Structural Liquidity for Overseas Operations	Monthly	within 15 days
(v)	Part C – Statement of Structural Liquidity – For Consolidated Bank Operations	Quarterly	within a month
2	Statement of Short-term Dynamic Liquidity - LR-2	Monthly	within 15 days

70. The formats of these returns are furnished as **Appendix II (Liquidity Return 1 to 2)**. Certain additional returns are also required to be furnished to RBI as part of Basel III liquidity standards reporting requirements. These are captured under Para 97 of this report.

Internal Controls

71. A bank should have appropriate internal controls, systems and procedures to ensure adherence to liquidity risk management policies and procedure as also adequacy of liquidity risk management functioning.

72. Management should ensure that an independent party regularly reviews and evaluates the various components of the bank's liquidity risk management process. These reviews should assess the extent to which the bank's liquidity risk management complies with the regulatory/supervisory instructions as well as its own policy. The independent review process should report key issues requiring immediate attention, including instances of non compliance to various guidance/limits for prompt corrective action consistent with the Board approved policy.

Section II

Basel III Framework for Liquidity Risk

73. The Basel Committee on Banking Supervision (BCBS) had issued on December 16, 2010 the Basel III rules text on liquidity – “*Basel III: International framework for liquidity risk measurement, standards and monitoring*”⁶ which presents the details of global regulatory standards on liquidity. Two minimum standards viz. Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR) for funding liquidity have been prescribed by the Basel Committee for achieving two separate but complementary objectives. The LCR promotes short-term resilience of banks to potential liquidity disruptions by ensuring that they have sufficient high quality liquid assets to survive an acute stress scenario lasting for 30 days. The NSFR promotes resilience over longer-term time horizons by creating additional incentives for banks to fund their activities with more stable sources of funding on an ongoing structural basis. In addition, a set of five monitoring tools to be used for monitoring the liquidity risk exposures of banks have been prescribed. This framework has been covered in detail in the ensuing paragraphs. The LCR and NSFR would become binding on banks from January 01, 2015 and January 01, 2018, respectively and till then, only reporting is expected from banks (please refer paragraph 97). However, banks are expected to scale up their Management Information System (MIS) to meet the Basel III requirements on liquidity standards. To start with, the Basel III framework (LCR and NSFR and monitoring tools) would be applicable for Indian banks at whole bank level only i.e. on a stand-alone basis including overseas operations through branches. However, banks should endeavor to move over to meeting these standards at consolidated level also. For foreign banks operating as branches in India, the framework would be applicable on stand-alone basis only (i.e. for Indian operations only).

Liquidity Coverage Ratio (LCR)

⁶ Basel III – International framework for liquidity risk measurement, standards and monitoring – refer <http://www.bis.org/publ/bcbs188.htm>. Also please refer to the Frequently asked questions (FAQs) on Basel III framework of liquidity available at <http://www.bis.org/publ/bcbs199.htm?q=1>

74. The LCR aims to ensure that a bank maintains an adequate level of unencumbered, high-quality liquid assets that can be converted into cash to meet its liquidity needs for a 30 calendar day time horizon under a significantly severe liquidity stress scenario specified by supervisors. At a minimum, the stock of liquid assets should enable the bank to survive until day 30 of the stress scenario, by which time it is assumed that appropriate corrective actions can be taken.

Definition of the Standard

$\frac{\text{Stock of high quality liquid assets}}{\text{Total net cash outflows over the next 30 calendar days}} * 100 \geq 100\%$

The Liquidity Coverage Ratio (LCR) should be more than or equal to 100% at all times. Banks are expected to meet this requirement continuously and hold a stock of unencumbered, high-quality liquid assets as a defence against the potential onset of severe liquidity stress.

75. 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.

Characteristics of High Quality Liquid Assets

76. Liquid assets comprise of high quality assets 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. The liquidity of an asset depends on the underlying stress scenario, the volume to be monetized and the timeframe considered. Nevertheless, there are certain assets that are more likely to generate funds without incurring large discounts due to fire-sales even in times of stress. The fundamental and market related characteristics of these assets are summarized below:

77. While the fundamental characteristics of these assets include low credit and market risk; ease and certainty of valuation; low correlation with risky assets and listed on a developed and recognized exchange market, the market related characteristics include active and sizeable market; presence of committed market makers, low market concentration and flight to quality (tendencies to move into these types of assets in a systemic crisis).

Definition of High Quality Liquid Assets

78. There are two categories of assets that can be included in the stock of high quality liquid assets viz. Level 1 and Level 2 assets. Assets to be included in each category are those that the bank is holding on the first day of the stress period.

Level 1 Assets

79. Level 1 assets of banks would comprise of the following and these assets can be included in the stock of liquid assets without any limit as also without applying any haircut:

- Cash including cash reserves in excess of required CRR.
- Government securities in excess of the SLR requirement.
- SLR securities within the mandatory requirement to the extent allowed by RBI⁷.
- Marketable securities issued or guaranteed by foreign sovereigns satisfying all the following conditions:
 - assigned a 0% risk weight under the Basel II standardized approach;

⁷ To be advised separately

- traded in large, deep and active repo or cash markets characterized by a low level of concentration;
- proven record as a reliable source of liquidity in the markets (repo or sale) even during stressed market conditions; and
- not issued by a bank/financial institution/NBFC or any of its affiliated entities.

Level 2 Assets

80. Level 2 assets can be included in the stock of liquid assets, subject to the requirement that they comprise no more than 40% of the overall stock after haircuts have been applied. The portfolio of Level 2 assets held by the bank should be well diversified in terms of type of assets, type of issuer and specific counterparty or issuer. A minimum 15% haircut should be applied to the current market value of each Level 2 asset held in the stock. Level 2 assets are limited to the following:

- i. Marketable securities representing claims on or claims guaranteed by sovereigns, Public Sector Entities (PSEs) or multilateral development banks that are assigned a 20% risk weight under the Basel II Standardised Approach for credit risk and provided that they are not issued by a bank/financial institution/NBFC or any of its affiliated entities.
- ii. Corporate bonds (not issued by a bank/financial institution/NBFC or any of its affiliated entities) which have been rated AA-⁸ or above by an Eligible Credit Rating Agency⁹.

81. As stated in para 80 above, Level 2 assets cannot exceed 40% of the overall stock of liquid assets after haircuts have been applied. For the purpose of calculation of 40% cap on Level 2 assets, any repo/reverse repo transactions undertaken in corporate bonds up to and including 30 days needs to be reversed i.e., adjusted. These adjustments are shown below:

S.No	Particulars	Amount	Factor	Adjusted Amount (Amount*Factor)

⁸ In the event of difference in ratings from two or more eligible credit rating agencies, the lower rating among the two/all may be taken. For example, if the rating assigned for an issue by Crisil is P1 and that by Fitch is F2, the lower of the two i.e. F2 may be taken for the purpose.

⁹ As specified in the RBI *Master Circular on New Capital Adequacy Framework (NCAF)*.

1	Total Level 1 Assets			100%	
2	Adjustments required:				
	(i)	Add amount lent under a reverse repo transaction undertaken for upto (and including 30 days) in corporate bonds (irrespective of whether they are Level 2 assets or not)		100%	
	(ii)	Deduct amount borrowed under a repo transaction undertaken for upto (and including) 30 days in corporate bonds (irrespective of whether they are Level 2 assets or not)		100%	
3	Total Adjusted Level 1 Assets {1 + 2 (i) – 2 ii)}				

82. Adjusted Level 1 assets are, therefore, arrived at by adding back the amount of cash lent (reverse repo) and by subtracting the amount borrowed (repo) upto 30 days against corporate bonds.

83. Similarly, following adjustments are required in Level 2 assets also:

S.No	Particulars		Amount	Factor	Adjusted Amountt (Amount*Factor)
1	Total Level 2 Assets			85%	
2	Adjustments required:				
	(i)	Add market value of Level 2 securities (corporate bonds not issued by banks/Financial Institutions/NBFCs) placed as collateral under a repo transaction undertaken for upto (and including) 30 days		85%	
	(ii)	Deduct market value of Level 2 securities (corporate bonds not issued by banks/Financial Institutions/NBFCs) acquired as collateral under a reverse repo transaction undertaken for upto (and including) 30 days		85%	
3	Total Adjusted Level 2 Assets {1 + 2 (i) – 2 ii)}				

Adjusted Level 2 assets are therefore arrived at by adding the amount of Level 2 securities placed as collateral (after applying the haircut of 15%) and by subtracting the amount of Level 2 securities acquired (after applying the haircut of 15%).¹⁰

84. The maximum amount of adjusted Level 2 assets in the stock of high-quality liquid assets of banks is equal to two-thirds of the adjusted amount of Level 1 assets after haircuts have been applied. Any excess of adjusted Level 2 assets over 2/3rd of the adjusted Level 1 assets needs to be deducted from the stock of liquid assets.

85. Thus, stock of high quality liquid assets in case of secured funding transactions (repo/reverse repo transactions) requiring adjustments = Level 1 assets + Level 2 assets (after haircut of 15%) – Max { (adjusted Level 2 assets after 15% haircut – 2/3rd of adjusted Level 1 assets), 0}.

86. For illustrative examples, banks may refer to the FAQs on Basel III framework of liquidity available at <http://www.bis.org/publ/bcbs199.htm?q1=1>

Operational Requirements

87. All assets in the stock of liquid assets must be managed as part of that pool by banks and shall be subject to the following operational requirements:

- must be available at all times to be converted into cash,
- should be unencumbered,
- should not be: co-mingled/used as hedges on trading position; designated as collateral or credit enhancement in structured transactions; designated to cover operational costs,
- should be managed with sole intent for use as a source of contingent funds,
- should be under the control of specific function/s charged with managing liquidity risk of the bank, e.g. ALCO.

¹⁰ Presently, under the accounting norms, in case of market repo, investment account is not operated i.e. the value of security acquired under reverse repo is not reflected (added) in the investment account nor is the value of security given under repo deducted from the investment account. For the purpose of liquid assets, it should be assumed that a security goes out of books when any repo is done and a security is acquired when a market reverse repo is done. Accordingly, for the purpose of calculating adjusted Level 1 and Level 2 assets, the position needs to be reversed i.e. a security given under repo needs to be added back and the security acquired under reverse repo needs to be deducted.

For the purpose of repo/reverse repo in government security where both the assets involved are Level 1 assets, banks should arrive at Level 1 assets without taking into account the repo/reverse repo transactions.

88. Banks should periodically monetize a proportion of assets through repo or outright sale to test the saleability of these assets and to minimize the risk of negative signaling during period of stress. Banks are also expected to maintain liquid assets consistent with distribution of their liquidity needs by currency.

89. If an eligible liquid asset becomes ineligible (e.g. due to downgrade), bank is allowed to keep the asset in its stock of liquid assets for an additional 30 calendar days so as to give time to the bank to adjust the stock/replace the asset.

Total net cash outflows

90. The total net cash outflows is defined as the total expected cash outflows minus total expected cash inflows for the subsequent 30 calendar days. Total expected cash outflows are calculated by multiplying the outstanding balances of various categories or types of liabilities and off-balance sheet commitments by the rates at which they are expected to run off or be drawn down. Total expected cash inflows are calculated by multiplying the outstanding balances of various categories of contractual receivables by the rates at which they are expected to flow in up to an aggregate cap of 75% of total expected cash outflows. In other words, Total net cash outflows over the next 30 days = Outflows – Min (inflows; 75% of outflows). The run-off rates and the inflow rates for various items of assets (inflow) and liabilities (outflow), the definitions of various items used in the standard are specified and furnished in [Appendix III – Basel III Liquidity Return-1 \(BLR-1\)](#).

Net Stable Funding Ratio (NSFR)

91. The NSFR is designed to ensure that long term assets are funded with at least a minimum amount of stable liabilities in relation to their liquidity risk profiles. The NSFR aims to limit over-reliance on short-term wholesale funding during times of buoyant market liquidity and encourage better assessment of liquidity risk across all on- and off-balance sheet items. In addition, the NSFR approach offsets incentives for banks to fund their stock of liquid assets with short-term funds that mature just outside the 30-day horizon for meeting LCR.

Definition of the Standard

$$\text{Net Stable Funding Ratio} = \frac{\text{Available Stable Funding (ASF)}}{\text{Required Stable Funding (RSF)}} * 100 > 100\%$$

92. “*Stable funding*” is defined as the portion of those types and amounts of equity and liability financing expected to be reliable sources of funds over a one-year time horizon under conditions of extended stress.

A. Available Stable Funding (ASF)

93. Available stable funding is defined as the total amount of a bank’s (a) capital (Tier 1 and Tier 2 after deductions); (b) preference share capital (not included in Tier 1 and Tier 2) with remaining maturity of one year or greater; (c) liabilities with effective maturities of one year or greater; (d) the portion of demand deposits / term deposits and wholesale funding with maturities less than one year which is expected to stay with the bank for an extended period in a bank-specific stress event. Banks should, based on behavioural analysis and other factors, arrive at such portion of deposits which are likely to remain with them for at least one year. The analysis should have the approval of ALCO and documented. Further, there should be periodic reviews of such analyses to see whether the assumptions hold good or need to be changed.

94. The available amount of stable funding is calculated by first assigning the carrying value of a bank’s capital and liabilities to ASF categories as specified in **Appendix III – BLR-2**. The amount assigned to each category is to be multiplied by an ASF factor specified and the total ASF is the sum of the weighted amounts.

B. Required Stable Funding (RSF)

95. The required amount of stable funding is calculated as the sum of the value of the assets held and funded by the institution, multiplied by a specific required stable funding (RSF) factor assigned to each particular asset type, added to the amount of Off-balance Sheet (OBS) activity (or potential liquidity exposure) multiplied by its associated RSF factor. The RSF factor to be applied to the reported values of each asset or OBS exposure is given in **Appendix III – BLR-2**.

Monitoring tools/metrics

96. In addition to the two liquidity standards, the Basel III framework also prescribes five monitoring tools/metrics to aid supervisors in monitoring bank's liquidity position better. Based on these metrics, certain returns under Basel III to be furnished to RBI are now prescribed. These metrics along with their objective and the prescribed returns are detailed below:

A. Contractual Maturity Mismatch

- (i) 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.
- (ii) No new return under Basel III is prescribed by RBI for analyzing contractual maturity mismatch. The existing statement on structural liquidity which captures the gap between inflows and outflows from various items of assets and liabilities will address this metric.

B. Concentration of Funding

- (i) 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.
- (ii) Presently, banks are submitting the details of top 20 depositors as part of structural liquidity statement. Further, there are regulatory limits like Inter-bank liability and call borrowings, which addresses funding concentration. While these regulatory limits continue to exist, a *statement of funding concentration (BLR-3)*

is now prescribed for capturing the funding from significant counterparties, significant instruments/products and details of funding through securitization on monthly basis. (Details of top 20 deposits as part of structural liquidity statement is now discontinued and the information on top 20 deposits is now required to be furnished under this statement. As regards addressing the currency concentration risk, the same is captured in the *Statement of structural liquidity, foreign currency – Indian operations – Liquidity Return 1–Part A2* 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

- (i) 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.
- (ii) A *Statement of Available unencumbered assets (BLR-4)* is now prescribed to address this metric. It captures the details of the amount, type and location of available unencumbered assets that could serve as collateral for secured borrowing in secondary markets and/or are eligible for borrowing from the central banks. The reporting frequency of this return is quarterly.

D. LCR by Significant Currency

- (i) While the LCR standard is required to be met in one single currency, in order to better capture potential currency mismatches, the LCR in significant currencies needs to be monitored.
- (ii) Accordingly, a *statement on LCR by significant currency (BLR-5)* needs to be furnished on monthly basis.

E. Market-related Monitoring Tools

- (i) This includes high frequency market data that can serve as early warning indicators

in monitoring potential liquidity difficulties at banks.

- (ii) To address this metric, a *statement on other Information on liquidity (BLR-6)* is prescribed which requires banks to report on 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.

97. The above mentioned returns and the corresponding frequency of submission are summarised below. Banks will be required to submit these returns to Chief General Manager in-Charge, Department of Banking Operations and Development (DBOD), Central Office, Reserve Bank of India, Mumbai from the month/quarter ending June 2012.

S.No.	Name of the Basel III Liquidity Return (BLR)	Frequency of submission	Time period by which required to be reported
1.	Statement on Liquidity Coverage Ratio (LCR)– BLR-1	Monthly	within 15 days
2.	Statement on Net Stable Funding Ratio (NSFR) – BLR-2	Quarterly	within a month
3.	Statement of Funding Concentration – BLR-3	Monthly	within 15 days
4.	Statement of Available Unencumbered Assets – BLR-4	Quarterly	within a month
5.	LCR by Significant Currency – BLR-5	Monthly	within a month
6.	Statement on Other Information on Liquidity – BLR-6	Monthly	within 15 days

Transition Phase for the Liquidity Standards under Basel III

98. Both the LCR and NSFR are currently subject to an observation period by the BCBS, with a view to addressing any unintended consequences that the standards may have for financial markets, credit extension and economic growth. At the latest, any revisions would be made to the LCR by mid-2013 and to the NSFR by mid-2016. Accordingly, the LCR, including any revisions, will be introduced as on 1 January 2015 and the NSFR, including any revisions, will move to a minimum standard by 1 January 2018. The LCR and NSFR will thus become binding for the banks from 1 January 2015 and 2018, respectively i.e.

banks will have to ensure that they maintain the required LCR and NSFR at all times starting from January 2015 and January 2018, respectively. While the LCR and NSFR standards would become binding only from January 2015 and 2018, respectively, the supervisory reporting under the Basel III framework is expected from 2012. Accordingly, banks are required to furnish statements on LCR and NSFR and statements based on monitoring metrics/tools prescribed under Basel III framework (please refer paragraph 97) to Chief General Manager-in-Charge, Department of Banking Operations and Development (DBOD), Central Office, Reserve Bank of India, Mumbai on best efforts basis from the month ending /quarter ending June 2012. (Please refer **Appendix III.**)

Public Disclosure

99. Public disclosures improve transparency in financial reporting, strengthen market discipline, facilitate valuations and reduce uncertainty in the market. It is, therefore, expected that banks make an assessment of their liquidity risk through a well-defined internal process and maintain an adequate capital cushion as part of their Internal Capital Adequacy Assessment Process (ICAAP under Pillar 2 of Basel II framework). A bank should also disclose sufficient information regarding its liquidity risk management to enable relevant stakeholders to make an informed judgment about the ability of the bank to meet its liquidity needs. An illustrative list of disclosures is given in paragraph 100. The disclosures should be subjected to adequate validation and should be disclosed at least on an annual basis along with the annual financial statements.

100. At present banks are required to disclose on an annual basis the asset liability management maturity pattern of certain items of assets and liabilities in their financial statements under Notes to Accounts. In addition, banks will be required to disclose the following information:

- Organisational structure and framework for liquidity risk management (including the roles and responsibilities of ALCO, functional units and business units with regard to liquidity risk management, the degree to which treasury function and liquidity risk management function is centralized, interaction between the group's unit in case of centralized treasury and risk management functions, funding structure, limit setting systems and intra-group lending strategies structure)
- Diversification of the bank's funding sources

- Techniques used to mitigate liquidity risk
- Outline of the bank's contingency funding plans
- Bank's policy on maintaining liquidity reserves/buffers
- Regulatory restrictions on transfer of liquidity among group entities/overseas branches.

Appendix I

BCBS Principles for Sound Liquidity Risk Management and Supervision

Fundamental principle for the management and supervision of liquidity risk	
Principle 1	A bank is responsible for the sound management of liquidity risk. A bank should establish a robust liquidity risk management framework that ensures 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. Supervisors should assess the adequacy of both a bank's liquidity risk management framework and its liquidity position and should take prompt action if a bank is deficient in either area in order to protect depositors and to limit potential damage to the financial system.
Governance of liquidity risk management	
Principle 2	A bank should clearly articulate a liquidity risk tolerance that is appropriate for its business strategy and its role in the financial system.
Principle 3	Senior management should develop a strategy, policies and practices to manage liquidity risk in accordance with the risk tolerance and to ensure that the bank maintains sufficient liquidity. Senior management should continuously review information on the bank's liquidity developments and report to the board of directors on a regular basis. A bank's board of directors should review and approve the strategy, policies and practices related to the management of liquidity at least annually and ensure that senior management manages liquidity risk effectively.
Principle 4	A bank should incorporate liquidity costs, benefits and risks in the internal pricing, performance measurement and new product approval process for all significant business activities (both on- and off-balance sheet), thereby aligning the risk-taking incentives of individual business lines with the liquidity risk exposures their activities create for the bank as a whole.
Measurement and management of liquidity risk	
Principle 5	A bank should have a sound process for identifying, measuring, monitoring and controlling liquidity risk. This process 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.
Principle 6	A bank should actively monitor and control liquidity risk exposures and funding needs within and across legal entities, business lines and currencies, taking into account legal, regulatory

	and operational limitations to the transferability of liquidity.
Principle 7	A bank should 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 funds providers to promote effective diversification of funding sources. A bank should regularly gauge its capacity to raise funds quickly from each source. It should identify the main factors that affect its ability to raise funds and monitor those factors closely to ensure that estimates of fund raising capacity remain valid.
Principle 8	A bank should actively manage its intraday liquidity positions and risks to meet payment and settlement obligations on a timely basis under both normal and stressed conditions and thus contribute to the smooth functioning of payment and settlement systems.
Principle 9	A bank should actively manage its collateral positions, differentiating between encumbered and unencumbered assets. A bank should monitor the legal entity and physical location where collateral is held and how it may be mobilised in a timely manner.
Principle 10	A bank should conduct stress tests on a regular basis for a variety of short-term and protracted institution-specific and market-wide stress scenarios (individually and in combination) to identify sources of potential liquidity strain and to ensure that current exposures remain in accordance with a bank's established liquidity risk tolerance. A bank should use stress test outcomes to adjust its liquidity risk management strategies, policies, and positions and to develop effective contingency plans.
Principle 11	A bank should have a formal contingency funding plan (CFP) that clearly sets out the strategies for addressing liquidity shortfalls in emergency situations. A CFP should outline policies to manage a range of stress environments, establish clear lines of responsibility, include clear invocation and escalation procedures and be regularly tested and updated to ensure that it is operationally robust.
Principle 12	A bank should maintain a cushion of unencumbered, high quality liquid assets to be held as insurance against a range of liquidity stress scenarios, including those that involve the loss or impairment of unsecured and typically available secured funding sources. There should be no legal, regulatory or operational impediment to using these assets to obtain funding.
Public disclosure	
Principle 13	A bank should publicly disclose information on a regular basis that enables market participants to make an informed judgement about the soundness of its liquidity risk management framework and liquidity position.

The role of supervisors	
Principle 14	Supervisors should regularly perform a comprehensive assessment of a bank's overall liquidity risk management framework and liquidity position to determine whether they deliver an adequate level of resilience to liquidity stress given the bank's role in the financial system.
Principle 15	Supervisors should supplement their regular assessments of a bank's liquidity risk management framework and liquidity position by monitoring a combination of internal reports, prudential reports and market information.
Principle 16	Supervisors should intervene to require effective and timely remedial action by a bank to address deficiencies in its liquidity risk management processes or liquidity position.
Principle 17	Supervisors should communicate with other supervisors and public authorities, such as central banks, both within and across national borders, to facilitate effective cooperation regarding the supervision and oversight of liquidity risk management. Communication should occur regularly during normal times, with the nature and frequency of the information sharing increasing as appropriate during times of stress.

Liquidity Return (LR)-2

Statement of Short-term Dynamic Liquidity

Name of the Bank:

Reporting Frequency: Monthly

Position as on:

A. Domestic Operations

(Amounts in Rupees crores)

A. Outflows	Next day	2-7 days	8- 14 days	15-28 days	29-90 days
1. Net increase in loans and advances					
Net increase in investments:					
i) Approved securities					
ii) Money market instruments (other than Treasury bills)					
iii) Bonds/Debentures/shares					
iv) Others					
3. Inter-bank obligations					
4. Off balance sheet items (Repos, swaps, bills discounted, etc.)					
5. Others					
TOTAL OUTFLOWS					
B. Inflows					
1. Net cash position					
2. Net increase in deposits (less CRR obligations)					
3. Interest on investments					
4. Inter-bank claims					
5. Refinance eligibility (Export credit)					
6. Off-balance sheet items (Reverse repos, swaps, bills discounted, etc.)					
7. Others					
TOTAL INFLOWS					
C. Mismatch (B - A)					
D. Cumulative mismatch					
E. C as a % to total outflows					

B. Overseas Operations (to be furnished jurisdiction wise as also the overall overseas position)*

(Amounts in Rupees crores)

A.	Outflows	Next day	2-7 days	8- 14 days	15-28 days	29-90 days
1.	Net increase in loans and advances					
2.	Net increase in investments:					
	i) Approved securities					
	ii) Money market instruments (other than Treasury bills)					
	iii) Bonds/Debentures/shares					
	iv) Others					
3.	Inter-bank obligations					
4.	Off balance sheet items (Repos, swaps, bills discounted, etc.)					
5.	Others					
	TOTAL OUTFLOWS					
B.	Inflows					
1.	Net cash position					
2.	Net increase in deposits (less CRR obligations)					
3.	Interest on investments					
4.	Inter-bank claims					
5.	Refinance eligibility (Export credit)					
6.	Off-balance sheet items (Reverse repos, swaps, bills discounted, etc.)					
7.	Others					
	TOTAL INFLOWS					
C.	Mismatch (B - A)					
D.	Cumulative mismatch					
E.	C as a % to total outflows					

* converted into INR using relevant spot rates as published by FEDAI

Appendix IV A

Guidance for Slotting the Future Cash Flows of Banks in Liquidity Return 1, Part A1

Heads of Accounts		Classification into time buckets
A. Outflows		
1.	Capital, Reserves and Surplus	Over 5 years bucket.
2.	Demand Deposits (Current and Savings Bank Deposits)	<p>Savings Bank and Current Deposits may be classified into volatile and core portions. Savings Bank (10%) and Current (15%) Deposits are generally withdrawable on demand. This portion may be treated as volatile. While volatile portion can be placed in the Day 1, 2-7 days and 8-14 days time buckets, depending upon the experience and estimates of banks and the core portion may be placed in over 1- 3 years bucket.</p> <p>The above classification of Savings Bank and Current Deposits is only a benchmark. Banks which are better equipped to estimate the behavioural pattern, roll-in and roll-out, embedded options, etc. on the basis of past data / empirical studies could classify them in the appropriate buckets, i.e. behavioural maturity instead of contractual maturity, subject to the approval of the Board / ALCO.</p>
3.	Term Deposits	Respective maturity buckets. Banks which are better equipped to estimate the behavioural pattern, roll-in and roll-out, embedded options, etc. on the basis of past data / empirical studies could classify the retail deposits in the appropriate buckets on the basis of behavioural maturity rather than residual maturity. However, the wholesale deposits should be shown under respective maturity buckets.
4.	Certificates of Deposit, Borrowings and Bonds (including Sub-ordinated Debt)	Respective maturity buckets. Where call / put options are built into the issue structure of any instrument/s, the call / put date/s should be reckoned as the maturity date/s and the amount should be shown in the respective time buckets.
5.	Other Liabilities and Provisions	
	(i) Bills Payable	(i) The core component which could reasonably be estimated on the basis of past data and behavioural pattern may be shown under 'Over 1-3 years' time bucket. The balance amount may be placed in Day 1, 2-7 days and 8-14 days buckets, as per behavioural pattern.
	(ii) Provisions other than for loan loss and depreciation in investments	(ii) Respective buckets depending on the purpose.
	(iii) Other Liabilities	(iii) Respective maturity buckets. Items not representing cash payables (i.e. income received in advance, etc.) may be placed in over 5 years bucket.

6.	Export Refinance - Availed	Respective maturity buckets of underlying assets.
B. Inflows		
1.	Cash	Day 1 bucket
2.	Balances with RBI	While the excess balance over the required CRR / SLR may be shown under Day 1 bucket, the Statutory Balances may be distributed amongst various time buckets corresponding to the maturity profile of DTL with a time-lag of 14 days.
3. Balances with other Banks		
(i)	Current Account	(i) Non-withdrawable portion on account of stipulations of minimum balances may be shown under 'Over 1-3 years' bucket and the remaining balances may be shown under Day 1 bucket.
(ii)	Money at Call and Short Notice, Term Deposits and other placements	(ii) Respective maturity buckets.
4. Investments (Net of provisions)#		
(i)	Approved securities	(i) Respective maturity buckets, excluding the amount required to be reinvested to maintain SLR corresponding to the DTL profile in various time buckets.
(ii)	Corporate debentures and bonds, PSU bonds, CDs and CPs, Redeemable preference shares, Units of Mutual Funds (close ended), etc.	(ii) Respective maturity buckets. Investments classified as NPIs should be shown under over 3-5 years bucket (sub-standard) or over 5 years bucket (doubtful).
(iii)	Shares	(iii) Listed shares (except strategic investments) in 2-7days bucket, with a haircut of 50%. Other shares in 'Over 5 years' bucket.
(iv)	Units of Mutual Funds (open ended)	(iv) Day 1 bucket
(v)	Investments in Subsidiaries / Joint Ventures	(v) 'Over 5 years' bucket.
(vi)	Securities in the Trading Book	(vi) Day 1, 2-7 days, 8-14 days, 15-28 days and 29-90 days according to defeasance periods.
#	Provisions may be netted from the gross investments provided provisions are held security-wise. Otherwise provisions should be shown in over 5 years bucket.	
5. Advances (Performing)		
(i)	Bills Purchased and Discounted (including bills under DUPN)	(i) Respective maturity buckets.
(ii)	Cash Credit / Overdraft (including TOD) and Demand Loan component of Working Capital.	(ii) Banks should undertake a study of behavioural and seasonal pattern of availments based on outstandings and the core and volatile portion should be identified. While the volatile portion could be shown in the near-term maturity buckets, the core portion may be shown under 'Over 1-3 years' bucket.
(iii)	Term Loans	(iii) Interim cash flows may be shown under respective

		maturity buckets.
6.	NPAs (Net of provisions, interest suspense and claims received from ECGC / DICGC)	
	(i) Sub-standard	(i) Over 3-5 years bucket.
	(ii) Doubtful and Loss	(ii) Over 5 years bucket.
7.	Fixed Assets / Assets on lease	'Over 5 years' bucket / Interim cash flows may be shown under respective maturity buckets.
8.	Other Assets	
	(i) Intangible assets	Intangible assets and assets not representing cash receivables may be shown in 'Over 5 years' bucket.
C.	Off balance sheet items	
1.	Lines of Credit committed / available	
	(i) Lines of Credit committed to / from Institutions	(i) Day 1 bucket.
	(ii) Unavailed portion of Cash Credit / Overdraft / Demand loan component of Working Capital limits (outflow)	(ii) Banks should undertake a study of the behavioural and seasonal pattern of potential availments in the accounts and the amounts so arrived at may be shown under relevant maturity buckets upto 12 months.
	(iii) Export Refinance - Unavailed (inflow)	(iii) Day 1 bucket.
2.	Contingent Liabilities	
	Letters of Credit / Guarantees (outflow)	Devolvement of Letters of Credit / Guarantees, initially entails cash outflows. Thus, historical trend analysis ought to be conducted on the devolvments and the amounts so arrived at in respect of outstanding Letters of Credit / Guarantees (net of margins) should be distributed amongst various time buckets. The assets created out of devolvments may be shown under respective maturity buckets on the basis of probable recovery dates.
3.	Other Inflows / outflows	
	(i) Repos / Bills Rediscounted (DUPN) / CBLO / Swaps INR / USD, maturing forex forward contracts/futures etc. (outflow / inflow)	(i) Respective maturity buckets.
	(ii) Interest payable / receivable (outflow / inflow) - Accrued interest which are appearing in the books on the reporting day	(ii) Respective maturity buckets.
	Note :	
	(i)	Liability on account of event cash flows i.e. short fall in CRR balance on reporting Fridays, wage settlement, capital expenditure, etc. which are known to the banks and any other contingency may be shown under respective maturity buckets. The event cash outflows, including incremental SLR requirement should be reported against "Outflows - Others".

(ii)	All overdue liabilities may be placed in the Day 1, 2-7 days and 8-14 days buckets, based on behavioural estimates.
(iii)	Interest and instalments from advances and investments, which are overdue for less than one month may be placed in Day 1, 2-7 days and 8-14 days buckets, based on behavioural estimates. Further, interest and instalments due (before classification as NPAs) may be placed in '29 days to 3 months bucket' if the earlier receivables remain uncollected.
D. Financing of Gap	
	In case the net cumulative negative mismatches during the Day 1, 2-7 days, 8-14 days and 15- 28 days buckets exceed the prudential limit of 5 % ,10%, 15 % and 20% of the cumulative cash outflows in the respective time buckets, the bank may show by way of a foot note as to how it proposes to finance the gap to bring the mismatch within the prescribed limits. The gap can be financed from market borrowings (call / term), Bills Rediscounting, Repos, LAF and deployment of foreign currency resources after conversion into rupees (unswapped foreign currency funds), etc.

Appendix IV B

Guidance for Slotting the Future Cash Flows of Banks in Liquidity Return 1, Part A 2

Heads of Accounts	Classification into time buckets
A. Outflows	
1. Merchant sales, Inter-bank sales, overseas sales, sales to RBI	As per the tenor of the contract- respective maturity buckets
2. Swaps, currency futures, etc	Respective maturity buckets as per the pay-off profile
3. LCs and Guarantees	Historical trend analysis ought to be conducted on the devolvement and the amounts so arrived at in respect of outstanding LCs/Guarantees (net of margins) should be distributed amongst various time buckets.
4. Foreign currency deposit accounts such as FCNR (B), EEFC, RFC, etc.	For demand deposit accounts, the guidance for rupee outflows may be followed. For term deposits – respective maturity buckets.
5. Overdrafts in Nostro accounts	Day 1 bucket
6. Inter-bank borrowings	Respective Maturity buckets
B. Inflows	
1. Merchant purchases, inter-bank purchases, overseas purchases, purchases from RBI.	As per the tenor of the contract- respective maturity buckets
2. Swaps, currency futures and options	Respective maturity buckets as per the pay-off profile
3. Nostro balance	Day 1 bucket
4. Short term, long term investments and loans	Respective Maturity buckets.

Appendix V

List of Circulars consolidated/modified in the Guidelines

S.No.	Circular No.	Date	Relevant para of the circular	Subject
1.	D.O No. DBOD. IBS/1163/C.212 (SG)-86	June 5, 1986	1, 2, 3, Annexure A and B	Control Systems at Foreign Offices – Asset Liability Management
2.	A.D (M.A Series) Circular No. 16	May 15, 1999	-	Amendments to the Exchange Control Manual
3.	DBOD. No. BP.BC.8/21.04.098/99	February 10, 1999	1 to 5, 7 of the circular and 1 to 6 of the Annex.	Asset-Liability Management (ALM) System
4.	DBS.BC. No. OSMOS.2/33.01.001.15/ 98-99	July 17, 1999	1 to 3	Introduction of Second Tranche of DSB Returns
5.	DBOD. No. BP. (SC). BC. 98/21.04.103/99	October 7, 1999	13 of the circular and 8.2 and 9.10 of the Annex.	Risk Management Systems in Banks
6.	DBS.CO.FBC.BC.34/13.1 2.001/1999-2000	April 6, 2000	DSB (O) return II	Report of the Working Group on Supervision of foreign branches of Indian banks – Implementation
7.	DBOD.No.BP.520/21.04. 103/2002-03	October 12, 2002	2.1, 2.2 , Chapter 3	Guidance note on Market Risk Management
8.	DBOD. No. BP. BC. 72/21.04.018/2001-02	February 25, 2003	30	Guidelines for Consolidated Accounting and Other Quantitative methods to Facilitate Consolidated Supervision.
9.	DBOD. No. BP. BC. 66/21.01.002/2006-07	March 6, 2007	-	Prudential Limits for Inter-Bank Liabilities
10.	DBOD. No. BP.BC. 101/21.04.103/2006-07	June 26, 2007	-	Guidelines on Stress Testing
11.	DBOD. No. BP. BC. 38/21.04.098/2007-08	October 24, 2007	-	Guidelines on Asset-Liability (ALM) System – Amendments
12.	DBOD. No. BP.BC. 11/21.06.001/2011-12	July 01, 2011	13.7	Master Circular – Prudential Guidelines on Capital Adequacy and Market Discipline – NCAF
13.	DBOD. BP.BC. No. 16/21.04.018/2011-12	July 01, 2011	3. 6	Master Circular – Disclosure in Financial Statements – Notes to Accounts
14.	IDMD.PCD.3/14.01.01/ 2011-12	July 01, 2011	3.1	Master Circular on Call/Notice money Market Operations