LIQUIDITY RISK MANAGEMENT

Introduction

1. (a) The importance of prudent management of liquidity risk has grown in recent years and has attracted much attention around the world. An increase in competition over raising deposits, changes in depositors' preferences, the increase in off-balance-sheet operations, and technological improvements have affected banking corporations' structure of funding sources and the way they manage their liquidity risk. The global financial crisis lent this trend even greater emphasis, triggering much development in international regulation concerning liquidity risk management in both qualitative and quantitative terms.

(b) A liquidity problem at a single banking corporation may have implications for the entire banking system and vice versa. For this reason, an analysis of liquidity requirements cannot be limited to the individual banking corporation but must examine how liquidity requirements may develop in various scenarios, including those in which the liquidity difficulties are more extensive than those of the bank itself.

(c) The directive relates to the liquidity position in shekels, foreign currency as a whole, and currencies in which the banking corporation conducts significant activity.

(d) This directive lays down principles for the management, monitoring, and control of liquidity that entail the development of infrastructures for liquidity management and, *inter alia*, the establishment of policy, infrastructure, information, reports, control, etc.

Scope of application

2. (a) This directive shall apply to a banking corporation as defined in the Banking (Licensing) Law, 5741-1981, with the exception of a joint service company.

(b) This directive shall also apply to an auxiliary corporation that is a credit card company, *mutatis mutandis* in respect of the type and nature of its activity.

Definitions

2a. **"Liquidity"** - A bank's ability to finance an increase in assets and meet obligations as they come due, without incurring unacceptable losses;

"Liquidity risk" - The risk to a banking corporation's profitability and stability derived from an inability to meet its liquidity needs;

"Liquid assets" - Unencumbered assets that can be converted into cash or drawn down quickly and easily even under stress conditions with no loss of value or small loss of value when management anticipates a need for additional liquidity, e.g., cash, Treasury deposits of up to one month maturity, deposits with the Bank of Israel—other than those held against statutory liquidity requirements—of up to one month maturity, deposits at banks of up to one month maturity, and marketable government bonds.
For this purpose, an unutilized balance of assets encumbered to the Bank of Israel may be considered a liquid asset.

"Liquidity cushion" - The balance of liquid assets after the application of haircuts that are adequate under the circumstances at hand, under the following conditions:

(1) Marketable Israel government bonds to more than one month maturity shall be included in the liquidity cushion under the following conditions:
   (a) Up to 25% of the average monthly turnover on the Tel Aviv Stock Exchange in the past three months: no need to apply a haircut;
   (b) More than 25% of the average monthly turnover on the Tel Aviv Stock Exchange in the past

three months: haircuts shall be applied to reflect an estimate of the expected loss of market value, provided the haircuts are no lower than the Bank of Israel haircut for *Makam* and government bonds that serve as collateral for credit.

For this purpose, the average monthly turnover on the Stock Exchange shall be calculated for each type of government bond separately. The ratio of the banking corporation's holdings to the average monthly turnover shall be assigned to each bond series according to its weight in the specific type of bond.

(2) Marketable bonds of other governments of more than one month to maturity shall be included in the liquidity cushion under the following conditions:

(a) If said bonds receive 0 percent risk weight under Proper Conduct of Banking Business Directive no. 203, no haircut need be applied.

(b) Other bonds may be included only with adequate haircuts.

"Liquidity mismatch"- A mismatch between the repayment flow of the assets and that of the liabilities in any period of time.

Policy

3. (a) A banking corporation shall have in place a comprehensive policy, anchored in writing, for the management of liquidity (hereinafter: "policy statement") that shall include at least the following:

(1) Procedures specifying the hierarchy of managerial responsibilities and authorities;

(2) Quantitative targets relating to the various aspects of liquidity management, e.g., composition of assets and liabilities, use of financial instruments, the liquidity and the ability to monetize assets. The possible implications for liquidity of other risks, including credit risks, market risks, and operational risks, shall also be taken into account.

(3) Limits and targets that are used to estimate the liquidity position, as specified in Sections 8(b), 10, 17, and 18 below, and the assumptions on which their calculations are based;

(4) The set-up for dealing with deviations from the policies and limits set forth.

(b) The banking corporation shall update the policy statement in accordance with developments in the economy and at the banking corporation.

Information system

4. A banking corporation shall have in place a suitable information system for control, measurement, monitoring, and reportage on the liquidity position, typified by the following:

(a) The system shall allow the banking corporation to calculate its overall liquidity position and in each currency in which it conducts significant activity, on a daily basis for assets and liabilities that mature within several days and for longer periods of time, and in consideration of off-balance-sheet liabilities.

(b) It shall include information on the liquidity position relative to limits set forth and shall issue early warning about trends in the development of liquidity;

(c) It shall include information about the structure of liabilities generally and that pertaining to large depositors particularly.

Board of directors

5. A banking corporation's board of directors shall discuss and resolve on the following matters and also take the following actions:

(a) Approve the policy statement;

(b) Ensure that management has effective tools for controlling and monitoring of liquidity risk;

(c) Obtain periodic reports, at least once per quarter, about the banking corporation's liquidity position and trends in its development, within the framework of the risk report specified in Section 22 of Proper Conduct of Banking Business Directive no. 310 (Risk Management). It shall receive more frequent reports in cases of a material exposure and an immediate report in special cases.

Risk management function

6. The risk management function shall act in respect of liquidity risk as specified in Section 10(b) of Proper Conduct of Banking Business Directive no. 339 (Interest Rate and Market Risk Management).

Internal audit

7. Internal audit shall act in the matter of liquidity risk as specified in Section 21 of Proper Conduct of Banking Business Directive no. 307 (Internal Audit Function).

Banking group

8. In regard to a banking corporation that controls other banking and financial corporations:

(a) The board of directors of the banking corporation shall discuss the liquidity management policy of the banking group at large, including the group's preparedness for a liquidity crisis, and shall ensure the existence of an adequate information system.

(b) Limits and targets shall be set for the level of liquidity that must be held on a consolidated basis in an ordinary course of business scenario and under stress conditions. In setting said limits and targets, the banking corporation shall take account of operational, legal, and regulatory limits to the transferability of liquidity within the banking group.

(c) The management of the banking corporation shall ensure that each entity in the banking group that is exposed to liquidity risk, including an overseas branch, has adequate mechanisms of its own in place for the ongoing measurement and control of the liquidity position.

(d) The internal auditor of the banking corporation shall also verify the soundness of the overall liquidity management process of the banking group at large.

(e) A mechanism shall be in place for ongoing measurement and control of the liquidity position on a consolidated basis, including, *inter alia*, the elements listed in Section 9 below. The corporation shall determine the frequency of monitoring and control in accordance with the way the group is incorporated and the characteristics of its activity, provided that said frequency be no less than monthly under ordinary course of business conditions. The measurement and control mechanism shall be anchored in the liquidity risk management policy of the banking group at large.

Management, measurement, and control of the liquidity position

9. A banking corporation shall have in place a mechanism for the ongoing measurement and control of the liquidity position on a non-consolidated (solo) basis, including overseas branches, which shall include, *inter alia,* the elements specified below. The liquidity position shall be monitored in reference to the total liquidity position and the liquidity position in shekels and foreign currency separately, as appropriate.

(a) **Estimation of the liquidity position**, performed by calculating the minimum liquidity ratio on a daily basis and by using the tools and metrics specified in Section 17 below. On a periodic basis, the banking corporation shall review the assumptions that it has been using to estimate the liquidity position.

(b) **Management of funding sources—**the management of the banking corporation shall hold a periodic discussion about funding sources and funding needs and shall make decisions about the composition, characteristics, and diversification of funding sources for the purpose of diversifying liabilities. Factors that shall be taken into account are, *inter alia,* the banking corporation’s difficulties in raising funding sources that are affected by changes in the market attitude toward it, changes in its rating, development of income and profitability, etc.

(c) **Preparedness for a liquidity crisis—**a contingency plan for dealing with a liquidity crisis shall be in place, including a set of indicators for the early detection of liquidity stress; definition of various stages in the development of a liquidity crisis; specification of the process to be followed in contending with the crisis; sources to cover the liquidity mismatch; and the managerial team that shall be responsible for handling the crisis.

9a. A banking corporation shall actively manage its intraday liquidity position and intraday liquidity risks so that it can meet its payment and settlement obligations in a timely manner under both ordinary and stress conditions. Among other things, the banking corporation shall actively manage its collateral positions, distinguishing between encumbered and unencumbered assets.

Minimum liquidity ratio

10. A banking corporation shall maintain a minimum liquidity ratio equal to or greater than 1 at any time, calculated under the definitions and assumptions specified in Sections 11–15 below.

11. The minimum liquidity ratio is the ratio between:
    (a) the liquidity cushion as defined in this directive, and
    (b) expected outflows (including maturities, withdrawals, and needs) within the next one month, less expected inflows within the next one month (hereinafter: "net expected cash outflows").

12. A banking corporation shall separately specify and profile each of the three components of this ratio—liquidity cushion, expected outflows, and expected inflows—provided the net expected cash outflow be calculated in reference to all movements in liabilities, assets, and off-balance-sheet activity that are likely to affect cash flows during the relevant period. In particular, the following shall be examined in regard to expected outflows:
    (a) Expected maturities (including withdrawals) of funding sources during the relevant period, differentiated by their characteristics, e.g., by type of customer: retail customer, small-business, large non-financial corporation, financial entities, sovereigns, central banks, etc.; differentiation by type of relations with the customer, etc.
    (b) Expected needs during the relevant period, in accordance with their characteristics, e.g., funding needs on account of derivatives activity, unutilized

credit facilities, liquidity lines, other obligations to extend credit during the relevant period, etc.

13. Assumptions to be applied in calculating the minimum liquidity ratio:
    (a) The net expected cash outflow shall be calculated to a term of one month ahead under stress scenarios.
    (b) The stress scenarios shall reflect three types of scenarios: market-wide stress, idiosyncratic stress, and a combination of the two.
    (c) A banking corporation shall define stress scenarios so that, at the very least:
        (1) each of the three elements referenced in Section 12 shall be subjected to stress;
        (2) the stress scenarios shall be severe but plausible;
        (3) the scenarios shall be consistent with other stress scenarios that the banking corporation uses, so as to assure consistency in risk management.
    (d) The net expected outflow shall be greater than zero in all stress scenarios.
    (e) It bears emphasis that even though the minimum liquidity ratio is calculated to a term of one month ahead as stated above, the banking corporation shall ensure that the liquidity cushion that it holds is large enough to meet liquidity needs (net expected outflow) during the month as well, under various scenarios that it specifies.
14. Basis for calculating the minimum liquidity ratio:
    (a) The minimum liquidity ratio shall be calculated on a non-consolidated basis, including overseas branches.
    (b) In calculating the minimum liquidity ratio, the banking corporation shall take into account, *inter alia*, liquidity needs flowing from (contractual) obligations to provide liquidity to subsidiaries in the group and from other kinds of liquidity support that it may provide them where necessary.
    (c) When an overseas branch holds adequate liquid resources of its own in accordance with regulatory requirements in its country of operation, the corporation may present the Supervisor with a written request to exclude this branch from the minimum liquidity ratio calculation.
15. Minimum liquidity ratio by currency:

(a) The minimum liquidity ratio shall be calculated for the entirety of the banking corporation's activity and for that in foreign currencies separately.

(b) It shall be taken into account that the ability to swap currencies generally, and between shekels and foreign currency particularly, may be significantly impaired in stress situations and that significant changes in exchange rates are liable to affect the size of the liquidity cushion.

(c) In calculating the minimum liquidity ratio in foreign currency, reliance on future ability to swap between shekels and foreign currency shall not be allowed.

(d) When calculating the minimum liquidity ratio in foreign currency, exposures to the Government of Israel denominated in foreign currency that the government may settle in shekels if it finds it difficult to raise foreign currency, and exposures to the Bank of Israel denominated in foreign currency that the Bank of Israel may, based on an agreement with or unilateral notice from the banking corporation, settle in shekels if it finds it difficult to raise foreign currency at the time they fall due, shall not exceed, cumulatively, 20% of the liquidity cushion in the market-wide stress and the combined stress scenarios.

Stable funding ratio

16. A banking corporation shall monitor the ratio of its total stable funding sources, i.e., existing funding sources that are of high probability to be available to the corporation to a horizon of one year (and more), to its total long-term assets, i.e., existing assets that the bank is expected to have to continue funding to a horizon of one year (and more) (hereinafter: "stable funding ratio").

(a) A banking corporation shall determine suitable definitions of "stable funding sources" and "long-term assets," assumptions to be used in calculating them under scenarios of ordinary course of business and stressed conditions, and a stable funding ratio target that will take account of the banking corporation's activity profile and liquidity needs.

(b) A banking corporation shall also monitor a stable funding ratio that takes account of its business plans to a horizon of one year ahead in order to determine how its business plans will affect its liquidity profile.

Tools and metrics for monitoring of liquidity position

17. A banking corporation shall apply a range of tools and metrics for the monitoring of its liquidity position and shall not rely on any single tool or metric. The following tools and metrics shall be used, among others:
    (a) Examination of liquidity ratios under ordinary course of business conditions;
    (b) Examination of liquidity ratios calculated in a manner similar to the way the minimum liquidity ratio is calculated, under different stress scenarios and to different time horizons, including a stress scenario stretching over a horizon of more than one month and a scenario reflecting an especially high stress level to a horizon shorter than one month;
    (c) Examination of severe stress scenarios that result in a minimum liquidity ratio lower than the ratio required under Section 10 (reverse stress tests);
    (d) Examination of liquidity mismatch by terms to maturity—one day, up to one week, up to one month, up to three months, up to half a year, and up to a year—on the basis of contractual maturities and behavioral assumptions in different scenarios;
    (e) Examination of the mix and concentration of funding sources: by counterparty (including in consideration of the counterparty's "sensitivity"), by products/instruments, and by currencies in which banking corporation conducts significant activity, including examination of the mix and concentration by time buckets, e.g., one month, one to three months, three to six months, six to twelve months, and more than twelve months;
    (f) Monitoring and analysis of the extent, mix, and characteristics of the inventory of unencumbered assets that may serve as sources of liquidity when necessary;
    (g) Examination of liquidity needs in foreign currencies in which the banking corporation conducts significant activity, *inter alia* according to liquidity ratios calculated in a manner similar to the way the minimum liquidity ratio is calculated;
    (h) Monitoring of early warning indicators to detect signs of adverse changes in the liquidity position, based on market wide information, information on the financial sector, and bank-specific information.
18. A banking corporation shall set limits and/or targets for each of the main tools and metrics that it uses and shall review them regularly.

Criteria for setting liquidity limits

19. In setting liquidity limits, a banking corporation shall take into account the following criteria at least:
   (a) The banking corporation's goodwill and rating;
   (b) The extent of reliance on the trading book and the extent of its diversification, the size of the market, and the volatility of prices;
   (c) The quality of the personnel who manage this risk and the quality of the managerial reporting array;
   (d) Diversification of deposits and the share of deposits made by households;
   (e) The extent of certainty and availability of unused credit lines;
   (f) The effect of flows that are not included in the liquidity calculation (operating expenses, etc.);
   (g) The extent of the parent company's willingness (that shall be established in a binding document) and ability to supply liquidity should the need arise.

Standard minimum liquidity ratio

20. A banking corporation that obtains the Supervisor's prior written approval may refrain from maintaining a minimum liquidity ratio as required in Section 10, provided it retains a liquidity cushion, as defined in this directive, in a sum no smaller than total liabilities with a term to maturity up to one-month.
   For this purpose, the liquidity cushion may include expected receipts from repayments of up to one month of housing loans (as defined in "residential mortgage loans" in Section 231(second bullet) of Proper Conduct of Banking Business Directive no. 204 (Measurement and Capital Adequacy—IRB Approaches to Credit Risk)) that are not more than ninety (90) days in arrears as defined in the Reporting to the Public Directives.

Foreign bank

21. This directive shall apply verbatim to the branch of a foreign bank (hereinafter – "foreign branch"), *mutatis mutandis* in the following respects:
   (a) Section 5 shall apply to the management instead of the board of directors.

(b) Sections 10–16 shall not apply to a foreign branch that satisfies the conditions of Appendix 3 of Proper Conduct of Banking Business Directive 221 “Liquidity Coverage Ratio”.

(c) A foreign branch, the average annual amount of assets of which does not exceed NIS 15 billion, which belongs to a banking group in which the group’s liquidity risk, including the branch in Israel, is managed in a centralized manner by the parent bank, is permitted to rely on the parent bank for the fulfilment of some of the qualitative requirements in this Directive, provided that the following conditions are met:

(1) Written notice is sent to the Supervisor of Banks regarding the foreign branch’s choice to operate along this track, with an explanation of the choice and the allocation of work between it and the parent bank.

(2) The Comfort Letter issued by the parent bank pursuant to Appendix 3 of Proper Conduct of Banking Business Directive 221 “Liquidity Coverage Ratio” shall be supplemented with the parent bank’s undertaking to cover the branch in Israel in all aspects of liquidity management, including monitoring and control and reporting systems, and to notify the Supervisor with regard to problems concerning liquidity matters at the branch. Such notice may also be issued through the branch.

(d) If the amount of assets of the foreign branch operating pursuant to Subsection (c) exceeds NIS 15 billion, the Supervisor shall consider narrowing or cancelling the possibility of relying on the parent bank in fulfilling some of the qualitative requirements in this Directive.

(e) In exceptional cases, a foreign bank that considers that certain sections of this directive are inapplicable to it, may contact the Supervisor to coordinate the applicability of said sections and/or the manner in which they shall be applied.

Reporting to the Banking Supervision Department

22. A banking corporation shall immediately report to the Banking Supervision Department any material deviation from the limits or when any other material liquidity problem arises.

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Updates

Circular 06	**Version**	**Details**	**Date**
2114	1	Original circular	26/8/03
2277	2	Update	19/10/10
2363	3	Update	13/01/13
2432	4	Update	28/09/14