



Guideline

Title	Liquidity Adequacy Requirements (LAR) (2023) Chapter 6 – Liquidity Monitoring Tools
Category	Capital Adequacy Requirements
Date	January 31, 2022
Sector	Banks Trust and Loan Companies
Effective Date	April 1, 2023

Chapter 6 – Liquidity Monitoring Tools

1. This chapter is drawn from the Basel Committee on Banking Supervision's (BCBS) Basel III framework, *Basel III: The Liquidity Coverage Ratio and liquidity risk monitoring tools* (January 2013 - Part 2, Monitoring tools). For reference, the Basel Consolidated Framework text paragraph numbers that are associated with the text appearing in this chapter are indicated in square brackets at the end of each paragraph¹.
2. In addition to the LCR (Chapter 2) and the NSFR (Chapter 3), which are to be used as standards, and the NCCF (Chapter 4) and Operating Cash Flow Statement (Chapter 5), which are supervisory tools, this section outlines a set of additional metrics to be used as consistent monitoring tools. These metrics capture specific information related to an institution's cash flows, balance sheet structure, available unencumbered collateral and certain market indicators. [Basel Framework, SRP 50.1]
3. The suite of liquidity monitoring tools described in this chapter are not standards and thus do not have defined minimum required thresholds. However, OSFI reserves the right to set supervisory requirements for any of the suite of liquidity metrics as required.
4. These metrics, together with the standards and supervisory tools mentioned above, provide the cornerstone of information that aids OSFI in assessing the liquidity risk of an institution. In utilising these metrics, OSFI will take action when potential liquidity difficulties are signaled through a negative trend in the metrics, or when a



deteriorating liquidity position is identified, or when the absolute result of the metric identifies a current or potential liquidity problem. Examples of actions that OSFI can take are outlined in the BCBS *Sound Principles*² (paragraphs 141 to 143). [Basel Framework, SRP 50.2]

OSFI Notes

Although the metrics outlined in this chapter are useful tools to monitor various aspects of the liquidity risk faced by institutions, the scope of application is limited to Domestic Systemically Important Banks (DSIBs) and Category I and Category II institutions, as described in OSFI's *Capital and Liquidity Requirements for Small and Medium-Sized Deposit-Taking Institutions Guideline*. In addition, the Institution-specific information in Section 6.5 generally only applies to DSIBs. OSFI will notify individual Category I or Category II institutions if reporting of this data is required.

5. The metrics discussed in this section include the following:

1. Contractual maturity mismatch;
2. Concentration of funding;
3. Available unencumbered assets;
4. LCR by significant currency;
5. Market-related monitoring tools; and
6. Liquidity Activity Monitor.

6.1. Contractual maturity mismatch

OSFI Notes

OSFI will utilize the Net Cumulative Cash Flow (NCCF) metric, as outlined in Chapter 4, to provide such a maturity mismatch metric.

Non-DSIBs must provide a forecast of future operational expenses and non-interest income mapped to the NCCF time bands. Forecasting capabilities should be build up so that institutions are able to call on these numbers quickly, should OSFI require these figures as part of enhanced monitoring. Expectations with regard to the scope and granularity of these forecasted items will be discussed with OSFI.

6.2. Concentration of funding

A. Objective

6. This metric is meant to identify those sources of wholesale funding that are of such significance that withdrawal of this funding could trigger liquidity problems. The metric thus encourages the diversification of funding sources recommended in the BCBS *Sound Principles* and OSFI's *Guideline B-6: Liquidity Principles*.

[Basel Framework, SRP 50.14]

B. Definition and practical application of the metric

A. Funding liabilities sourced from each significant counterparty as a % of total liabilities

B. Funding liabilities sourced from each significant product/instrument as a % of total liabilities

C. List of asset and liability amounts by significant currency

1. Calculation of the metric

7. The numerator for A and B is determined by examining funding concentrations by counterparty or type of instrument/product. Both the absolute percentage of the funding exposure, as well as significant increases in concentrations should be monitored. [Basel Framework, SRP 50.15]

(i) Significant counterparties

8. The numerator for counterparties is calculated by aggregating the total of all types of liabilities to a single counterparty or group of connected or affiliated counterparties, as well as all other direct borrowings, both secured and unsecured, which the institution can determine arise from the same counterparty³ (such as for overnight commercial paper / certificate of deposit (CP/CD) funding). [Basel Framework, SRP 50.16]
9. A "significant counterparty" is defined as a single counterparty or group of connected or affiliated counterparties accounting in aggregate for more than 1% of the institution's total balance sheet, although in some cases there may be other defining characteristics based on the funding profile of the institution. A group of connected counterparties is, in this context, defined in the same way as in the "Large Exposure" regulation of the host country in the case of consolidated reporting for solvency purposes. Intra-group deposits and deposits from related parties should be identified specifically under this metric, regardless of whether the metric is being calculated at a legal entity or group level, due to the potential limitations to intra-group transactions in stressed conditions. [Basel Framework, SRP 50.17]

(ii) Significant instruments / products

10. The numerator for type of instrument/product should be calculated for each individually significant funding instrument/product, as well as by calculating groups of similar types of instruments/products. [Basel Framework, SRP 50.18]
11. A "significant instrument/product" is defined as a single instrument/product or group of similar instruments/products that in aggregate amount to more than 1% of the institution's total balance sheet. [Basel Framework, SRP 50.19]

(iii) Significant currencies

12. In order to capture the amount of structural currency mismatch in an institution's assets and liabilities, institutions are required to provide a list of the amount of assets and liabilities in each significant currency. [Basel Framework, SRP 50.20]

OSFI Notes

Institutions will not need to provide separate information on asset and liability categories where significant currencies relate to CAD, USD, GBP and EUR as this information will be provided through reporting of individual currency balance sheets and individual currency liquid assets in the NCCF. Institutions are, however, required to provide information on the NCCF asset and liability categories in currencies other than the four listed above, to the extent they are above the significant currency threshold described in paragraph 13.

13. A currency is considered "significant" if the aggregate liabilities denominated in that currency amount to 5% or more of the institution's total liabilities. [Basel Framework, SRP 50.21]

(iv) Time buckets

14. The above metrics should be reported separately for the time horizons of less than one month, 1-3 months, 3-6 months, 6-12 months, and for longer than 12 months. [Basel Framework, SRP 50.22]

C. Utilisation of the metric

15. In utilising this metric to determine the extent of funding concentration to a certain counterparty, the institution must and OSFI will recognise that currently it is not possible to identify the actual funding counterparty for many types of debt.⁴ The actual concentration of funding sources, therefore, could likely be higher than this metric indicates. The list of significant counterparties could change frequently, particularly during a crisis. OSFI will consider the potential for herding behaviour on the part of funding counterparties in the case of an institution-specific problem. In addition, under market-wide stress, multiple funding counterparties and the institution itself may experience concurrent liquidity pressures, making it difficult to sustain funding, even if sources appear well diversified. [Basel Framework, SRP 50.23]
16. In interpreting this metric, one must recognise that the existence of bilateral funding transactions may affect the strength of commercial ties and the amount of the net outflow.⁵ [Basel Framework, SRP 50.24]

17. These metrics do not indicate how difficult it would be to replace funding from any given source. [Basel Framework, SRP 50.25]
18. To capture potential foreign exchange risks, the comparison of the amount of assets and liabilities by currency will provide OSFI with a baseline for discussions with institutions about how they manage any currency mismatches through swaps, forwards, etc. It is meant to provide a base for further discussions with the institution rather than to provide a snapshot view of the potential risk. [Basel Framework, SRP 50.26]

6.3. Available unencumbered assets

A. Objective

19. These metrics provide OSFI with data on the quantity and key characteristics, including currency denomination and location, of institutions' available unencumbered assets. These assets have the potential to be used as collateral to raise additional high quality liquid assets (HQLA) or secured funding in secondary markets or are eligible at central banks and as such may potentially be additional sources of liquidity for the institution. [Basel Framework, SRP 50.27]

B. Definition and practical application of the metric

Available unencumbered assets that are marketable as collateral in secondary markets

and

Available unencumbered assets that are eligible for central banks' standing facilities

20. An institution is to report the amount, type and location of available unencumbered assets that could serve as collateral for secured borrowing in secondary markets at prearranged or current haircuts at reasonable costs. [Basel Framework, SRP 50.28]

21. Likewise, an institution should report the amount, type and location of available unencumbered assets that are eligible for secured financing with relevant central banks at prearranged (if available) or current haircuts at reasonable costs, for standing facilities only (i.e. excluding emergency assistance arrangements). This would include collateral that has already been accepted at the central bank but remains unused. For assets to be counted in this metric, the institution must have already put in place the operational procedures that would be needed to monetise the collateral. [Basel Framework, SRP 50.29]
22. An institution should report separately the customer collateral received that the institution is permitted to deliver or re-pledge, as well as the part of such collateral that it is delivering or re-pledging at each reporting date. [Basel Framework, SRP 50.30]
23. In addition to providing the total amounts available, an institution should report these items categorised by significant currency. A currency is considered "significant" if the aggregate stock of available unencumbered collateral denominated in that currency amounts 5% or more of the associated total amount of available unencumbered collateral (for secondary markets or central banks). [Basel Framework, SRP 50.31]
24. In addition, an institution must report the estimated haircut that the secondary market or relevant central bank would require for each asset. In the case of the latter, an institution would be expected to reference, under business as usual, the haircut required by the central bank that it would normally access (which likely involves matching funding currency – e.g. ECB for euro-denominated funding, Bank of Japan for yen funding, etc.). [Basel Framework, SRP 50.32]
25. As a second step after reporting the relevant haircuts, an institution should report the expected monetised value of the collateral (rather than the notional amount) and where the assets are actually held, in terms of the location of the assets and what business lines have access to those assets. [Basel Framework, SRP 50.33]

C. Utilisation of the metric

26. These metrics are useful for examining the potential for an institution to generate an additional source of HQLA or secured funding. They will provide a standardised measure of the extent to which the LCR can be

quickly replenished after a liquidity shock either via raising funds in private markets or utilising central bank standing facilities. The metrics do not, however, capture potential changes in counterparties' haircuts and lending policies that could occur under either a systemic or idiosyncratic event and could provide false comfort that the estimated monetised value of available unencumbered collateral is greater than it would be when it is most needed. OSFI is aware that these metrics do not compare available unencumbered assets to the amount of outstanding secured funding or any other balance sheet scaling factor. To gain a more complete picture, the information generated by these metrics should be complemented with the maturity mismatch metric and other balance sheet data. [Basel Framework, SRP 50.34]

6.4. LCR by significant currency

A. Objective

27. While the LCR is required to be met in one single currency, in order to better capture potential currency mismatches, institutions should and OSFI will also monitor the LCR in significant currencies. This will allow both the institution and OSFI to track potential currency mismatch issues that could arise. [Basel Framework, SRP 50.35]

B. Definition and practical application of the metric

28. The definition of the stock of high-quality foreign exchange assets and total net foreign exchange cash outflows should mirror those of the LCR for common currencies.⁶ [Basel Framework, SRP 50.36]
29. A currency is considered "significant" if the aggregate liabilities denominated in that currency amount to 5% or more of the institution's total liabilities. [Basel Framework, SRP 50.37]
30. As the foreign currency LCR is not a standard but a monitoring tool, it does not have an internationally defined minimum required threshold. Nonetheless, OSFI could set minimum monitoring ratios for the foreign exchange LCR, below which OSFI should be alerted. In this case, the ratio at which OSFI should be alerted would depend on the stress assumption. OSFI will evaluate institutions' ability to raise funds in foreign currency markets and the ability to transfer a liquidity surplus from one currency to another and across

jurisdictions and legal entities. Therefore, the ratio should be higher for currencies in which OSFI evaluates an institution's ability to raise funds in foreign currency markets or the ability to transfer a liquidity surplus from one currency to another and across jurisdictions and legal entities to be limited. [Basel Framework, SRP 50.38]

C. Utilisation of the metric

31. This metric is meant to allow the institution and OSFI to track potential currency mismatch issues that could arise in a time of stress. [Basel Framework, SRP 50.39]

6.5. Market-related monitoring tools

A. Objective

32. High frequency market data with little or no time lag can be used as early warning indicators in monitoring potential liquidity difficulties at institutions. [Basel Framework, SRP 50.40]

B. Definition and practical application of the metric

33. While there are many types of data available in the market, OSFI will monitor data at the following levels to focus on potential liquidity difficulties:
- a. Market-wide information
 - b. Information on the financial sector
 - c. Institution-specific information

[Basel Framework, SRP 50.41]

1. Market-wide information

34. OSFI will monitor information both on the absolute level and direction of major markets and consider their potential impact on the financial sector and the specific institution. Market-wide information is also crucial when evaluating assumptions behind an institution's funding plan. [Basel Framework, SRP 50.42]

35. Valuable market information to monitor includes, but is not limited to, equity prices (i.e. overall stock markets and sub-indices in various jurisdictions relevant to the activities of the supervised institutions), debt markets (money markets, medium-term notes, long term debt, derivatives, government bond markets, credit default spread indices, etc.); foreign exchange markets, commodities markets, and indices related to specific products, such as for certain securitised products (e.g. the ABX). [Basel Framework, SRP 50.43]

OSFI Notes

Institutions do not need to provide information to OSFI related to the above market-wide information tool, rather OSFI will obtain such information from its regular monitoring of major markets and the economy more broadly.

2. Information on the financial sector

36. To track whether the financial sector as a whole is mirroring broader market movements or is experiencing difficulties, information to be monitored includes equity and debt market information for the financial sector broadly and for specific subsets of the financial sector, including indices. [Basel Framework, SRP 50.44]

OSFI Notes

Institutions do not need to provide information to OSFI related to the above financial sector information tool, rather OSFI will obtain such information from its regular monitoring of indicators relevant to the financial sector.

3. Institution-specific information

37. To monitor whether the market is losing confidence in a particular institution or has identified risks at an institution, it is useful to collect information on equity prices, CDS spreads, money-market trading prices, the situation of roll-overs and prices for various lengths of funding, the price/yield of institution debenture or

subordinated debt in the secondary market. [Basel Framework, SRP 50.45]

OSFI Notes

Regarding institution-specific information, OSFI requests a number of metrics be provided – on a consolidated basis – including but not limited to:

- Timely information from institutions that details costs of unsecured and secured funding for various tenors and by specific instruments that are issued;
- Current short term secured and unsecured funding spreads (i.e. overnight, 1 week, 1 month, 3 month, 6 month, 1 year funding);
- Material balances held at central banks or other financial institutions;
- Trends in collateral flows, including gross inflows and outflows, net balances, and stress test projections; and,
- Trends in cross border flows.

C. Utilisation of the metric/data

38. Information such as equity prices and credit spreads are readily available. However, the accurate interpretation of such information is important. For instance, the same CDS spread in numerical terms may not necessarily imply the same risk across markets due to market-specific conditions such as low market liquidity. Also, when considering the liquidity impact of changes in certain data points, the reaction of other market participants to such information can be different, as various liquidity providers may emphasise different types of data. [Basel Framework, SRP 50.46]

6.6. Liquidity Activity Monitor (LAM)

A. Objective

39. The LAM provides OSFI with frequent and timely key account balances for liquidity monitoring purposes of select institutions, as determined by OSFI.

B. Definition and practical implication of the metric

40. OSFI may request that select institutions report the point-in-time balance for accounts such as:

- a. HQLA
- b. Non-operational demand deposits placed with other financial institutions
- c. Rate sensitive deposits – insured
- d. Rate sensitive deposits – uninsured
- e. Demand deposits – insured
- f. Demand deposits – uninsured
- g. Cashable guaranteed investment certificates (GIC) – insured
- h. Cashable GIC – uninsured
- i. Non-cashable GIC – insured
- j. Non-cashable GIC – uninsured

C. Utilisation of the metric

41. This balance information is useful in assessing the risk of unexpected draws on deposits in relation to the amount of an institution's liquid assets and cash surpluses available but held at other financial institutions.

- 1 Following the format: [Basel Framework, XXX yy.zz].
- 2 <http://www.bis.org/publ/bcbs144.htm>.
- 3 For some funding sources, such as debt issues that are transferable across counterparties (such as CP/CD funding dated longer than overnight, etc.), it is not always possible to identify the counterparty holding the debt.
- 4 For some funding sources, such as debt issues that are transferable across counterparties (such as CP/CD funding dated longer than overnight, etc.), it is not always possible to identify the counterparty holding the debt.
- 5 For example, where the monitored institution also extends funding or has large unused credit lines outstanding to the "significant counterparty".
- 6 Cash flows from assets, liabilities and off-balance sheet items will be computed in the currency that the counterparties are obliged to deliver to settle the contract, independent of the currency to which the contract is indexed (or "linked"), or the currency whose fluctuation it is intended to hedge.