

Prudential Standard FSI 6

Liquidity Risk Assessment

Objectives and Key Requirements of this Prudential Standard

This Standard sets out the calculation of the liquidity shortfall of an insurer. The liquidity shortfall is an indicator of the potential magnitude of liquidity risk an insurer may be exposed to under severe stress. The indicator has no impact on any Pillar 1 capital requirement, but provides the Prudential Authority with an indicator of the degree to which an insurer's Pillar 2 assessment must contain additional details regarding the management of liquidity risk. Where the Prudential Authority assesses the liquidity risk of an insurer to be significant or not adequately addressed, the Prudential Authority may require the insurer to take additional actions to reduce its liquidity risk.

The board of directors of an insurer is responsible for ensuring that adequate systems are in place to calculate and monitor an insurer's liquidity shortfall indicator according to this Standard, and comply with any directions imposed by the Prudential Authority on the insurer's liquidity management.

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1. Application

- 1.1. This Prudential Standard applies to all insurers licensed under the Insurance Act, 2017 (the Act), other than microinsurers, Lloyd's and branches of foreign reinsurers.
- 1.2. Unless otherwise indicated, all references to "insurer" in this Standard can be read as a reference to life insurers, non-life insurers and reinsurers. Similarly, a reference to "insurance" obligations/policies in this Standard can be read as a reference to "reinsurance" obligations/policies, unless otherwise specified.
- 1.3. This Standard does not apply to obligations where the policyholder bears the investment risk.

2. Roles and Responsibilities

- 2.1. Ultimate responsibility for the prudent management of an insurer's liquidity risk rests with the insurer's board of directors. The board of directors must ensure the insurer maintains sufficient liquid assets to meet its cash-flow obligations as and when they fall due.
- 2.2. The board of directors of an insurer is responsible for ensuring that adequate systems are in place to calculate and monitor an insurer's liquidity shortfall indicator

according to this Standard, and comply with any directions imposed by the Prudential Authority on the insurer's management of liquidity.

- 2.3. An insurer's head of actuarial function is responsible for expressing an opinion to the board of directors regarding the accuracy of the calculations and the appropriateness of the assumptions underlying the liquidity shortfall indicator.
- 2.4. An insurer's auditor, appointed under section 32 of the Act, must audit the financial soundness of an insurer in accordance with its legal and regulatory obligations. The auditor must report to the board of directors and Prudential Authority any matters identified during the performance of its responsibilities that may cause the insurer to be not financially sound.
- 2.5. The roles and responsibilities of the board of directors and the head of actuarial function are described in more detail in the Governance and Operational Standards for Insurers (GOI 3).

3. Commencement and Transition Provisions

- 3.1. This Standard commences on 1 July 2018.

Version Number	Commencement Date
1	1 July 2018

4. Purpose and Key Concepts

- 4.1. The liquidity shortfall indicator is designed to provide the Prudential Authority with an assessment of the potential magnitude of liquidity risk an insurer may be exposed to under severe stress. The liquidity shortfall indicator must be disclosed to the Prudential Authority on an annual basis, or as otherwise required by the Prudential Authority.
- 4.2. The liquidity shortfall indicator has no impact on any Pillar 1 capital requirement, nor does it form part of the valuation of technical provisions.
- 4.3. Insurers are required to assess their liquidity risk as part of their Own Risk and Solvency Assessment (ORSA) under Pillar 2. The outcomes of an insurer's liquidity shortfall indicator calculation will provide the Prudential Authority with an indication of the size of liquidity risk that should be taken into consideration in an insurer's Pillar 2 assessment. If the Prudential Authority assesses an insurer's liquidity risk to be significant, or not adequately addressed by its ORSA, the Prudential Authority may require additional actions to be taken by the insurer to reduce liquidity risk.
- 4.4. The principle underlying the calculation of the liquidity shortfall indicator is to provide an estimate of the expected shortfall of liquid assets to meet cash-flows at a 99.5% confidence interval over a one-year time horizon. This calculation is performed by comparing an insurer's available liquid assets against its cash-flow requirements after the application of prescribed stresses to both the cash-flow requirements and liquid assets. The details of this calculation, including the prescribed stresses, are set out in section 5 below.
- 4.5. Insurers that have approval from the Prudential Authority to calculate the SCR using an internal model may use the equivalent values as calculated under FSI 5

(Calculation of the SCR Using a Full or Partial Internal Model) instead of the values required for the calculations in section 5 below.

5. Calculation of the Liquidity Shortfall Indicator

5.1. The liquidity shortfall indicator (*LIQ*) must be calculated as:

$$LIQ = Cashflow_requirement_{Life} + Cashflow_requirement_{Non-life} + SCR_{Op} - Available_liquid_assets$$

Where:

$Cashflow_requirement_{Life}$ = The cash-flow requirement as calculated under section 5.4 below

$Cashflow_requirement_{Non-life}$ = $Cashflow_{Non-life} + SCR_{Non-life}$

$Cashflow_{Non-life}$ = The net expected non-life cash-flows equal to the adjusted net premium provisions, plus other expected cash-flows over the next 12 months not reflected in the technical provisions. The adjusted net premium provisions are an estimate of all expected cash-flows over the next 12 months, using a simplifying assumption that the book of policies remains stable over the year, i.e. no growth or decline.

$SCR_{Non-life}$ = Capital requirement for non-life underwriting risk as calculated under FSI 4.3 (Non-life Underwriting Risk Capital Requirement)

SCR_{Op} = Capital requirement for operational risk as calculated under FSI 4.4 (Operational Risk Capital Requirement)

$Available_liquid_assets$ = Value of all “liquid” assets, as calculated under sections 5.2 and 5.3 below, for assets backing obligations where the policyholder does not bear the investment risk

5.2. For the purposes of calculating *Available_liquid_assets* under this Standard, only the following assets should be considered “liquid”:

- a) All cash (or cash equivalent) assets; and
- b) All listed assets other than those classified as “Other Equity” under FSI 4.1 (Market Risk Capital Requirement).¹

5.3. *Available_liquid_assets* is the value of these liquid assets after the application of all the stresses required under FSI 4.1 (Market Risk Capital Requirement) and

¹ For example, listed preference shares and exchange-traded derivatives should be treated as liquid, while unlisted property and over-the-counter derivatives should not be treated as liquid.

aggregating the reductions in asset values for each market risk component using the aggregation methodology in FSI 4.1.

5.4. The $Cashflow_requirement_{Life}$ must be calculated as:²

$$Cashflow_requirement_{Life} = Cashflow_{Life} - NetCF_{expected}$$

Where:

$$Cashflow_{Life} = \sqrt{\sum_{r,c} CorrLife_{r,c} \cdot Cashflow@risk_{stress_r} \cdot Cashflow@risk_{stress_c}}$$

$CorrLife_{r,c}$ = The entries of the correlation matrix $CorrLife$ (as defined in FSI 4.2 (Life Underwriting Risk Capital Requirement) used to aggregate the capital requirements of the individual life underwriting risk components)

$Cashflow@risk_{stress_r},$
 $Cashflow@risk_{stress_c}$ = The change in cash-flows after applying the prescribed stress scenarios in FSI 4.2 (Life Underwriting Risk Capital Requirement) for the individual life underwriting risk components r and c set out in the rows and columns of the correlation matrix $CorrLife$. The change in cash-flows after applying the stress for risk component r must be calculated as:

$$Cashflow@risk_{stress_r} = \max(NetCF_{expected} - NetCF_{stress_r}, 0)$$

$NetCF_{expected}$ = The “net expected cash-flows” of the insurer, calculated as the discounted value of the net cash-flows expected over a one-year time horizon based on the insurer’s best estimate assumptions. Any expected investment returns must be excluded, while all non-investment return cash-flows expected in the one-year time horizon should be included.

$NetCF_{stress_r}$ = The “net stressed cash-flows” of the insurer, calculated as the discounted value of the net cash-flows expected over a one-year time horizon, after applying the stress for risk component r under FSI 4.2 (Life Underwriting Risk Capital Requirement).³ Any expected investment returns must be excluded, while all non-investment return cash-flows expected in the

² Cash in-flows should be treated as positive for the purposes of calculating all cash-flow items, while cash out-flows should be treated as negative.

³ The application of the stresses should include the impairment for counterparty default risk on risk mitigation instruments and should allow for the conditions and requirements relating to simplifications including the requirement to use the simplifications when the original contract boundary is less than one year.

one-year time horizon should be included.