Liquidity metrics as an ancillary indicator

Level 2 Document

18 November 2022

About the IAIS

The International Association of Insurance Supervisors (IAIS) is a voluntary membership organisation of insurance supervisors and regulators from more than 200 jurisdictions. The mission of the IAIS is to promote effective and globally consistent supervision of the insurance industry in order to develop and maintain fair, safe and stable insurance markets for the benefit and protection of policyholders and to contribute to global financial stability.

Established in 1994, the IAIS is the international standard-setting body responsible for developing principles, standards and other supporting material for the supervision of the insurance sector and assisting in their implementation. The IAIS also provides a forum for Members to share their experiences and understanding of insurance supervision and insurance markets.

The IAIS coordinates its work with other international financial policymakers and associations of supervisors or regulators, and assists in shaping financial systems globally. In particular, the IAIS is a member of the Financial Stability Board (FSB), member of the Standards Advisory Council of the International Accounting Standards Board (IASB), and partner in the Access to Insurance Initiative (A2ii). In recognition of its collective expertise, the IAIS also is routinely called upon by the G20 leaders and other international standard-setting bodies for input on insurance issues as well as on issues related to the regulation and supervision of the global financial sector.

For more information, please visit http://www.iaisweb.org and follow us on LinkedIn: IAIS – International Association of Insurance Supervisors.

International Association of Insurance Supervisors
c/o Bank for International Settlements
CH-4002 Basel
Switzerland
Tel: +41 61 280 8090

This document is available on the IAIS website (www.iaisweb.org).

© International Association of Insurance Supervisors (IAIS), 2022

All rights reserved. Brief excerpts may be reproduced or translated provided the source is stated.

Content Overview

1 Introduction 7

1.1 Purpose of this document 7

1.2 Liquidity risk in insurance 8

1.2.1 Transmission channel between insurers' liquidity and financial stability 9

1.2.2 Differences between banks and insurers in terms of liquidity risk 9

2 Liquidity metrics – Types and main considerations 10

2.1 Types of metrics including own metrics 10

2.2 General and separate accounts 11

2.3 Time horizons – Various analysed types and their meaning for liquidity 11

2.4 Fungibility 12

2.5 Consideration of capital 13

3 New IIM ancillary indicator "Liquidity metrics" 15

4 Exposure approach 16

4.1 The Insurance Liquidity Ratio 16

4.1.1 Consideration of various business models in liquidity metrics 17

4.1.2 Time horizons 18

4.2 Liquidity sources 19

4.2.1 Categories of liquidity sources and their description 19

4.2.2 Factors for all types of liquidity sources 24

4.2.3 Comparison of factors with other organisations and agencies 26

4.3 Liquidity needs 27

4.3.1 Categories of liquidity needs 27

4.3.2 Insurance liquidity needs 30

4.3.3 Non-Insurance liquidity needs 38

4.3.4 Operational and cyber risk 43

5 Company projection approach 43

5.1 Objective and description 43

5.2 Categories of cash flows considered in the CPA 44

5.2.1 Operating Cash Flows (insurance related) 45

5.2.2 Investing Cash Flows 45

5.2.3 Financing Cash Flows 45

5.3 Main types of cash inflows 46

5.3.1 Operating Cash Inflows (insurance related) 46

5.3.2 Investing Cash Inflows 46

5.3.3 Financing Cash Inflows 47

5.4 Main types of cash outflows 47

5.4.1 Operating Cash Outflows (insurance related) 47

5.4.2 Investing Cash Outflows 48

5.4.3 Financing Cash Outflows 49

5.5 Setting of the CPA metrics 49

5.5.1 Cash flow projections 49

5.5.2 Liquidity stress 50

5.5.3 Haircut application 51
5.5.4 Historical cash flows and validation 51
5.5.5 Refinements of the CPA liquidity metrics 51
5.5.6 Guidance for applying the liquidity stress 52
5.6 Limitations and benefits of the CPA 52
5.6.1 Benefits of the CPA 52
5.6.2 Limitations of the CPA 53
Annex 1: EA – Proposed factors for ILR 2022 Liquidity Sources and Needs 54
Annex 2: Company Projection Approach – Examples of cash inflows and outflows 58
Annex 3: IIM 2022 Technical specifications for ILR-related data rows 60

Acronyms

ALM	Asset and Liability Management
BCBS	Basel Committee on Banking Supervision
CDS	Credit Default Swaps
CET1	Common Equity Tier 1
CFLR	Cash Flow Liquidity Ratio
CIU	Collective Investment Undertaking
CPA	Company Projection Approach
DGS	Deposit Guarantee Scheme
EA	Exposure Approach
ETF	Exchange-Traded Fund
FSB	Financial Stability Board
GIC	Guaranteed Interest Contract
GIMAR	Global Insurance Market Report
GME	Global Monitoring Exercise
GSE	Government Sponsored Entity
G-SIB	Globally Systemically Important Banks
GWP	Gross Written Premium
HQLA	High Quality Liquid Assets
IIM	Individual Insurer Monitoring
ILR	Insurance Liquidity Ratio
IOSCO	International Organization of Securities Commissions
ISIN	International Security Identification Number
LAE	Loss Adjustment Expenses
LCR	Liquidity Coverage Ratio
LST	Liquidity Stress Test
M&A	Mergers and Acquisitions
MMF	Money Market Fund

NSFR	Net Stable Funding Ratio
NTNI	Non-Traditional Non-Insurance
ORSA	Own Risk and Solvency Assessment
OTC	Over-the-Counter
P&C	Property and Casualty
PC	Public Consultation
PML	Probable Maximum Loss
PSE	Public Sector Entity
RSF	Required Stable Funding
SWM	Sector-Wide Monitoring
YE	Year-End
ALM	Asset and Liability Management
BCBS	Basel Committee on Banking Supervision

1 Introduction

1.1 Purpose of this document

This Level 2 document is part of the Holistic Framework for the assessment and mitigation of systemic risk in the global insurance sector (Holistic Framework), that the IAIS adopted in November 2019 in order to support its mission of effective and globally consistent supervision of the insurance industry to protect policyholders and to contribute to global financial stability. Its content should be read in conjunction with the Holistic Framework Level 1 document[1] (Level 1) and with the Global Monitoring Exercise (GME) Level 2 document[2] which are published on the IAIS website. For a detailed description of the relevant material that constitutes the Holistic Framework, please refer to paragraph 12 of the Level 1 document.

The key elements of the Holistic Framework are: (1) an enhanced set of supervisory measures for macroprudential purposes; (2) the GME, the IAIS' systemic risk assessment framework; and (3) an assessment by the IAIS of the consistent implementation of enhanced ongoing supervisory policy measures and powers of intervention.

As part of the GME, the IAIS also monitors liquidity risk. Capturing liquidity risk in the insurance sector is a complex task due to the many dimensions to consider, such as the variability of insurance products and their liquidity profiles, different liquidity needs of various insurance business models (eg reinsurers, life and non-life insurers), fungibility of assets, comparability across regions, differences between groups' liquidity management frameworks, choice of a time horizon and consideration of capital instruments. According to paragraph 58 of the GME document, the IAIS was planning to develop liquidity metrics as an ancillary indicator in the context of the Individual Insurers Monitoring (IIM). These liquidity metrics are described in greater detail in this document.

The liquidity metrics serve as a tool to facilitate the IAIS' monitoring of the global insurance industry's liquidity risk and for the IAIS to assess insurers' liquidity exposure from a macroprudential perspective, which may be critical as insurers have been exposed to liquidity shortfalls in previous crises.[3] The liquidity metrics highlight potential vulnerabilities and risk drivers. They are not intended to be a binding regulatory requirement. Rather, they are used as a monitoring tool that is part of the GME to gather information that will help identify trends in insurer and insurance-sector liquidity.

The IAIS split the development of liquidity metrics into two phases:

- During Phase 1 (2020-2021), the IAIS developed an Insurance Liquidity Ratio (ILR), which uses an exposure approach (EA). As a part of Phase 1, in November 2020, the IAIS launched an interim public consultation (PC) on the "Development of Liquidity Metrics: Phase 1 – Exposure Approach". The purpose was to consult specifically on the ILR using the EA, which the IAIS has developed as an ancillary indicator for the monitoring of liquidity risk.
- During Phase 2 (2021-2022), the IAIS developed other liquidity metrics, including a company projection approach (CPA). The CPA utilizes insurers' projections of cash flows to assess liquidity risk. Moreover, Phase 2 contained refinements to the EA, in particular to the ILR, and work on insurers' own liquidity metrics. Phase 2 also included a final PC "Development of Liquidity Metrics:

[1] https://www.iaisweb.org/page/supervisory-material/financial-stability/file/87109/holistic-framework-for-systemic-risk

[2] https://www.iaisweb.org/uploads/2022/01/191114-Global-Monitoring-Exercise1.pdf

[3] See Das U, Davies N, Podpiera R (2003) *Insurance and issues in financial soundness*. International Monetary Fund working paper 03/138.

Phase 2" that was based on the Phase 1 outcomes, comments received in the interim PC and results of the data analysis conducted in 2021.

Based on feedback received in the interim and final PCs, and considering IIM 2020-2022 data analysis outcomes, the IAIS developed liquidity metrics that will be used as an ancillary indicator for liquidity risk monitoring as part of the GME in 2023-2025. The IAIS' use of the liquidity metrics in 2023-2025 will focus as much on understanding trends and drivers of liquidity risk for insurers and the industry as on the relative level of the liquidity metrics for an insurer in the IIM Insurer Pool. Because of the limitations of different assumptions and approaches, the IAIS developed multiple liquidity metrics for use in the monitoring: EA ILR 1 year (1Y) and 3 month (3M) time horizons, CPA 1Y, 3M and 1 month (1M) time horizons.

The IAIS acknowledges that there are further aspects to liquidity management that insurers can include in their own liquidity metrics (eg fungibility, currency baskets, discretionary cash flows, access to liquidity platforms etc.). Some of those aspects were further expanded on in Phase 2. While those aspects might be useful, or even necessary, for some insurers' liquidity management and their microprudential supervision, they are not included in the approaches used for the GME in 2023-2025. This approach can be re-evaluated in following reviews of the GME, for example in 2025. As supported by stakeholders in the final PC, the inclusion of such aspects as part of the standardised approach for a macroprudential purpose would require more granular data elements and thus would inappropriately increase the need for reporting and analysis of very sensitive data.

This document consists of five sections. Section 1 provides an introduction to liquidity metrics and liquidity risk in insurance sector and section 2 includes insights on the development of liquidity metrics and main aspects that were considered in their calibration. The planned usage of the metrics is described in section 3. Section 4 describes the EA-based metrics, including their background and setting. Section 5 is dedicated to the CPA-based metrics.

1.2 Liquidity risk in insurance

Liquidity risk is the risk that an insurer is unable to realise its investments and other assets in a timely manner in order to meet its financial obligations, including collateral needs, as they fall due.[4] The nature of the traditional life and non-life insurance business models relies primarily on premiums and income from investments, as well as other sources of liquidity. Monitoring liquidity through liquidity risk management is important to ensure insurers' sound operations, protection of policyholders and financial stability, especially for insurers that are exposed to callable liabilities or those that can face large claims with quick settlements. Liquidity risk would arise when there is:

- An imbalance between the insurer's liquidity sources and liquidity needs; and/or
- A long-term imbalance between the insurer's cash inflows and cash outflows.

Liquidity needs represent the insurers' payment obligations arising over shorter maturities of 1Y or less. The asset and liability management (ALM) strategy of an insurer consists of holding liquid assets (including cash and cash equivalents) and assets convertible to cash over a certain period to meet the expected payment obligations. Events and activities that may give rise to liquidity risk, potentially impacting the insurer's financial condition or credit rating, include for example collateral calls on derivatives used for hedging, securities lending transactions, backing liquid liabilities with illiquid assets, exposure to insurable events such as catastrophe if claims are expected to be paid quickly, policyholder behaviour resulting in lapses, and contingent or off-balance sheet exposures.

[4] IAIS Glossary, November 2019

Liquidity risk could also arise if legal, regulatory and operational constraints limit the liquidity sources to be transferred within an insurance group or if there are changes to the tax regimes where insurers have tax-advantaged products or if insurers keep low cash buffers and engage more in investment activities aimed at generating better returns for their policyholders. Non-traditional non-insurance (NTNI) activities, including off-balance sheet derivative transactions for non-hedging purposes, over-the-counter (OTC) transactions and/or leveraging assets to enhance investment returns, may also give rise to liquidity risk.

Notwithstanding, insurers do need to maintain adequate liquidity reserves (a difference between needs and sources) to fulfil expected and significant unexpected payment obligations and funding needs. It would also be expected that due to differences in types of insurance products, different business lines would have different liquidity profiles. There also could be differences within similar business lines between jurisdictions due to different features (eg products with market value surrenders versus book value surrenders or jurisdictions with litigious environments in claims settlements versus those with relatively quick pay-outs).

1.2.1 Transmission channel between insurers' liquidity and financial stability

In a stressed event, an insurer with insufficient liquid assets may take remedial actions to manage sudden liquidity needs. The remedial actions taken by insurers may amplify or accelerate stresses through the whole financial system and adversely impact financial stability. In taking remedial actions, the main transmission channels identified by the IAIS for systemic risk include asset liquidation, exposure channels and critical functions.[5] For the purpose of liquidity risk monitoring, we will only focus on asset liquidation and exposure channels.

The use of derivatives and margin trading may result in a stressed collateral requirement. If the insurer has insufficient liquidity to meet the collateral requirement, the insurer may take remedial actions to sell a substantial portion of its assets, which depending on the size of the insurer or if other insurers are having concurrently similar issues, could cause stress on the financial markets through the asset liquidation transmission channel. For the asset liquidation, the remedial actions taken by the insurer may be to accept the sudden sale of assets on a large scale that could affect financial stability as the reduction in the value of assets may disrupt trading or funding in some financial markets. This may result in a less liquid or even an illiquid market.

From an exposure channel perspective, liquidity risk may be an exacerbating factor for when insurers lend out high quality securities or liquid assets to allow other firms to meet liquidity requirements. A liquidity need at the insurer level could force the insurer to recall loaned securities and transmit stress to counterparties who may no longer meet their own liquidity requirements.

1.2.2 Differences between banks and insurers in terms of liquidity risk

As discussed in the Basel Committee on Banking Supervision's (BCBS) paper *Principles for Sound Liquidity Risk Management and Supervision*, "The fundamental role of banks in the maturity transformation of short-term deposits into long-term loans makes banks inherently vulnerable to liquidity risk, both of an institution-specific nature and that which affects markets as a whole. Virtually every financial transaction or commitment has implications for a bank's liquidity"[6].

Liquidity risk may arise when the reputation of banks is impacted, government announcements are made on shortage of available cash, and/or economic events occur such as negative interest rates on deposits, which may result in bank runs by customers. Such a sudden increase in demand would

[5] Holistic Framework for Systemic Risk in the Insurance Sector, November 2019

[6] BCBS 2008, *Principles for Sound Liquidity Risk Management and Supervision*, https://www.bis.org/publ/bcbs144.pdf

cause a strain on the bank's liquidity sources as banks are leveraged and only hold a percentage of deposits received by bank customers, widely known as a money multiplication. Unlike banks, insurance products are commonly designed for protection, including but not limited to savings, investments, life, property and liability protection. As highlighted above, for life insurance, significant changes in policyholder behaviour impacting lapses and/or the embedded guarantees[7] and options, if included in insurance contracts, affect both cash inflows and outflows, which may give rise to liquidity risk for insurers. For non-life insurance, the potential for claims payments in response to severe weather events (or other NatCat-related events) occurring in a short period of time or large catastrophe events where claims are settled quickly, could create liquidity needs for insurers.

Other sources of liquidity risks may arise for insurers from the deterioration of a credit rating, poor asset and liability management strategies, aggressive investment and merger and acquisition (M&A) strategies, significant lapse events due to loss of public confidence, political and legal issues, and changes in tax laws. It is also possible that several of the potential drivers discussed above could occur around the same time and put significant stress on an insurers' liquidity profile.

2 Liquidity metrics – Types and main considerations

2.1 Types of metrics including own metrics

As previously described, as a part of the liquidity metrics project, the IAIS developed two approaches to measuring liquidity risk for the purpose of the GME. This includes

- EA (section 4); and
- CPA (section 5).

The EA develops a liquidity ratio calculated by dividing liquidity sources by liquidity needs. The numerator and denominator are determined by applying factors to balance sheet and off-balance sheet items. Please see section 4 for a full description of the EA. The CPA is a stressed cash flow approach whereby the liquidity profile of a firm is determined by applying stresses to baseline cash flows. Please see section 5 for a full description of the CPA. The strengths and weaknesses of these approaches are summarised in the table below.

[7] Embedded guarantees offered by insurers may also reduce liquidity risk as they can disincentivise policyholders to make early surrenders.

Table 1 - Approaches to Measuring Liquidity Risk

Exposure approach		Company projection approach	
Strengths	**Weaknesses**	**Strengths**	**Weaknesses**
• **Better comparability** • **Simplicity** • **Less burden (many inputs already available)** • **Transparent**	• Less risk sensitive • Loss of information on mismatches between liquidity needs and sources • Assumption on factors	• More risk sensitive • Additional information about timing mismatches between liquidity need and sources	• More complicated, especially with regards to stressed cash flows • Decreased comparability due to differences in assumptions across companies • Less transparent • More burdensome

2.2 General and separate accounts

As developed by the IAIS and supported by stakeholders in the PC 2020, the main liquidity metrics developed by the IAIS should focus on an insurer's general accounts. Liquidity risk within separate accounts is mainly borne by the policyholder, rather than the insurer. For the purposes of the IIM and the liquidity metrics (eg the ILR or the CPA based metrics), separate accounts are defined as on-balance sheet assets whose investment performance is borne by policyholders or contract holders. Such assets are often reported as "segregated accounts", "unit-linked assets" or "separate accounts" but may not necessarily be captured within those classifications. Assets that back guarantees (eg minimum guarantees of asset performance), when the risk is not borne by the policyholder, are not considered separate account assets themselves in the liquidity metrics or IIM. These assets are considered as general accounts.

Seen from a microprudential perspective, lapses of separate account products may carry a liquidity risk for the insurer, depending on the legal and contractual requirements. In addition, large scale lapses of separate account products might increase liquidity risk in general through the asset liquidation channel as described above. In order to lower the reporting burden for insurers participating in the IIM, the separate accounts will be not included in the ancillary indicator in 2023-2025. Developments of separate accounts will be monitored through the sector-wide monitoring (SWM).

2.3 Time horizons – Various analysed types and their meaning for liquidity

Based on comments received for the PC 2020, the IAIS considers several time horizons (two in the EA and three in the CPA) to prudently monitor short-term and longer-term liquidity risks:

- 1Y time horizon (main time horizon)
- 3M time horizon (supplementary time horizon for the EA and CPA)
- 1M time horizon (supplementary time horizon for the CPA, section 4).

The IAIS chose a 1Y stress horizon as the main time horizon. While this is longer than the horizon used by some analysts and certain regulatory requirements in other sectors (eg the BCBS' Liquidity

Coverage Ratio (LCR) that is 30 days), it is more in line with the insurer's liquidity risk profile. Insurers are relatively less vulnerable to liquidity stresses as many of the products require an event to occur prior to any payment, whereas banks tend to have callable deposits, which can be withdrawn over very short time horizons. Some of the largest drivers of insurers' liquidity needs, such as policyholder surrenders and catastrophe payments, would result in cash flows that are spread over months or years, instead of hours or days.

In addition to the main time horizon, and acknowledging stakeholders' comments in the PC 2020, the IAIS decided to include into the ancillary indicator also the supplementary 3M time horizon focusing on short-term liquidity risk. The 3M time horizon may provide better information regarding immediate liquidity needs and sources with limited impact of capital-related operations. As mentioned by some stakeholders in previous PCs, in the case of liquidity distress, the 1Y time horizon is sufficiently long for many insurance companies to take more complex actions (eg to demerge, to sell a part of their business to peers in exchange for required liquidity or to emit new shares to investors). In comparison, the 3M time horizon limits the number of available tools. Moreover, as mentioned by stakeholders, the 3M time horizon may better suit the circumstances of non-life insurers (whereas the 1Y time horizon fits the situation of life insurers). Both time horizons in combination provide a more precise picture of companies' liquidity situations.

The EA methodology is based on balance sheet items. The differentiation between EA time horizons is thus reflected in their different factors. The supplementary 3M time horizon may benefit from this as only a few additional data elements need to be collected (eg quarterly or annual net earned premiums and net incurred losses in non-life). As the IAIS has analysed the 3M time horizon only since summer 2021, in comparison to the 1Y time horizon that has been calibrated since 2018, the EA factors proposed for the 3M time horizon in this document may be further refined in 2023-2025. The CPA methodology is based on insurers' own predictions of cash flows and thus each collected time horizon requires new data elements without the possibility to leverage on data elements collected for other time horizons. However, in order to lower the data reporting burden on participating insurers, the IAIS decided to collect the lowest level of granularity needed for the CPA, collecting just aggregate operational cash flows (eg insurance activities), cash flows from investing activities (general account) and financing cash flows.

2.4 Fungibility

The IAIS currently uses the enterprise as a basis for the liquidity metrics calculation. The insurance company is considered one enterprise with unlimited fungibility of liquidity sources and needs. This approach is based on an assumption that liquidity sources in one jurisdiction may be utilised in another jurisdiction in case of liquidity needs (ie no ring-fencing applies). The main advantages of the EA are its simplicity and lower reporting burden.

As mentioned by stakeholders in the PC 2020, the assumption of unlimited group fungibility might often not be realistic. Many insurers manage liquidity considering the different liquidity needs of operational entities within a group with the recognition that liquidity is not entirely fungible across the group, especially in time of crisis, since there may be extreme scenarios where intra-group support is not fully available. The IAIS is aware of this limitation. The fungibility issue may be resolved by more granular reporting done at the level of fungible liquidity pools.

The fungible liquidity pools are parts of an enterprise for which it assumes to possess unlimited fungibility of liquidity sources and needs. They could be set up to include legal entities that are all located within the same jurisdiction or include companies in more than one jurisdiction. Liquidity

sources can move with no restrictions[8] within a pool. In a perfectly fungible company, there will be just one fungible pool, the enterprise. For other companies with more decentralised liquidity management, there may be multiple fungible liquidity pools depending on their own assessment of jurisdictional, legal, regulatory or geographical restrictions. Unless the fungible pools are composed of legal entities within one jurisdiction, this assessment could be complex and burdensome as there would have to be assumptions and a legal analysis made about what the various jurisdictions, with legal entities within the fungible pools, might do in times of severe stress. Additionally, to adequately assess the liquidity of an insurer with multiple fungible pools, it could require a significant amount of new data elements in the IIM.

The IAIS, recognising that there can be issues with either approach, decided to continue with enterprise approach in order to maintain a reasonable understanding of a firm's overall liquidity profile with less complexity, while not overburdening firms with a significant additional annual data request.

2.5 Consideration of capital

The traditional insurance business model exposes insurers to various direct and indirect risks from both the asset and liability side. For the insurance business, some of the risks are direct and comparatively easy to quantify, such as market risk whereby losses can be quantified by a fall of interest rate sensitive assets due to changed yield curves or from insurance risk such as claims from insured events. For most of the direct risks, insurers manage their capital to safeguard against significant unforeseen adverse events. The IAIS recognises, however, that other (indirect) risks, such as strategic risk, reputational risk, operational risk or liquidity risk are less readily quantifiable.[9]

Regarding liquidity risk, holding additional capital may not be the most appropriate risk mitigation technique and it may be more appropriate for the supervisor to require the insurer to control these risks via exposure limits and/or qualitative requirements such as policies, systems and controls to monitor and manage their liquidity risk. Although it may be difficult for an insurer to quantify all risks, it is important that insurers address their material risks as a part of their own risk and solvency assessment (ORSA) or equivalent internal assessments.[10] Where appropriate, a liquidity risk management report should be provided[11].

Insurers are exposed to liquidity risk indirectly from both the asset and liability side. Life insurers' liabilities tend to be long duration and estimates of the liabilities tend to be sensitive to economic assumptions, which, however, insurers can often match with assets of the same maturity. Insurers are less vulnerable to customer runs than other financial institutions, although not immune. The most common event that would give rise to liquidity risk for life insurers is the risk of simultaneous withdrawals or policy surrenders by policyholders in the event of negative publicity for an insurer or growing concern on an insurer's financial condition. For non-life insurers, liquidity risk may arise in response to a series of weather events or from an extraordinary natural catastrophe in a jurisdiction with quick claim settlement periods. This could lead to large claims payments that may need to be

[8] Or non-material restrictions.

[9] ICP 17 (Capital Adequacy)

[10] ICP 16 (Enterprise Risk Management for Solvency Purposes)

[11] CF 16.9.d

settled over a short period of time. On the asset side of liquidity risks, insurers face the risk of impaired liquidity in stressed capital markets when they need to pay a large amount of unexpected claims. When previously liquid asset classes become illiquid, raising liquid funds such as cash can be difficult and may require insurers to sell their most liquid assets to meet insurance liabilities.

Insurance groups can also face liquidity risks from leveraged positions (derivatives trading) from holding large amounts of credit default swaps (CDS) on positions that are at risk from rating downgrades of the insurer. This would require the insurer to post higher collateral in the event of a rating downgrade. An example of liquidity problems experienced by an insurance group from their CDS positions is that of the American International Group (AIG), a US-based insurance group, that experienced significant losses on credit default swaps issued by a non-US non-insurance legal entity that was owned by the holding company. These losses and the deteriorating outlook for AIG led to a rating downgrade in September 2008 that forced the group to post collateral payments on derivatives trades. AIG was unable to raise enough capital to satisfy the demands for collateral, resulting in the group requiring government support.

The assessment of liquidity risk and analysing the interplay of liquidity with the solvency position remains important for an insurer. The solvency ratio indicates the ability of an insurer to meet their liabilities in the long run. The solvency ratio of an insurer would be sensitive to the movement in their assets and liabilities and movements in assets and liabilities may have an indirect impact on the insurers' liquidity position. Examples of key drivers that would reduce an insurer's solvency ratio, which may impact the insurers' liquidity on the asset side, can include persistent low interest rates on assets supporting products with long-term guarantees, sudden increases in interest rates, rating downgrades on bonds reflective of increases in probability of default, widening of credit spreads and equity market volatility. From the liabilities side, the solvency ratios may be impacted by declining interest rates (liability discount rates), underwritten policies with minimum guarantees in declining markets, or insurance risks in terms of catastrophe modelling and under reserving.

One limitation of the solvency ratio is that it does not capture the liquidity profile of the insurer, which in an adverse scenario could make it hard for an insurer to meet short-term payment obligations. When considering a scenario where there is a significant change in the understanding of contract terms for non-life insurer claims that results in a quick pay-out of claims, coinciding with capital market distress, insurance companies could be constrained both on the asset and liability side. In such a scenario, insurers may be forced to make a distressed sale of their most liquid assets in order to meet the short-term liability obligations. The scenario assumes that the most liquid assets sold by the insurer will positively contribute towards their solvency ratio. By selling their most liquid assets, the insurer's solvency ratio would be indirectly impacted. Furthermore, the vulnerability of the insurer would be compounded if the asset portfolio is comprised of more illiquid assets, which contribute towards the insurer at least meeting its regulatory requirements prior to a stress event. The impact could be further increased if the insurer has issued minimum guarantee products. When considering the quality of its assets, it is important for insurers to meet short-term obligations in both normal and stressed scenarios and to consider the correlating effects between managing their solvency ratio and their liquidity.

Insurance companies have traditionally held a large portion of their assets in sovereign bond investments. However, a low interest rate environment in most developed markets has led insurers to diversify investment portfolios into alternative investments or other higher yield instruments such as corporate bonds.

The changing preference to corporate bonds primarily impacts life insurance companies as the low yields have brought much focus on the differences between assets and liabilities. Notwithstanding, in a low interest rate environment, insurers continue to hold solvency ratios of more than the regulatory requirements. In the 2007-2008 financial crisis,[12] even banks with strong capital positions faced liquidity problems. As such, the focus on the quality of capital assets remains important even for insurers to manage their liquidity. For this reason, it is prudent for insurers to consider capital in their liquidity monitoring strategy.

The CPA considers the cash inflows and outflows associated with capital activities and transactions related to their business for liquidity monitoring. The capital flows are included under the "Financing activities" category of cash in/outflows. The CPA captures the potential vulnerabilities of the insurer's activities that could give rise to liquidity risk by assessing the net cash flows (ie a difference between insurer's cash inflows and outflows). The key cash in/outflow transactions related to capital comprise are the following: capital contributions, commitments, dividends from subsidiaries, shareholder dividends, policyholder profit participations, capital contributions to subsidiaries and other activities (eg M&A activities).

The EA (as explained further in section 3), as designed in Phase 1 which was based on balance sheet exposures, calculated the ILR without considering capital-related transactions and instruments. Under this Phase 1 approach, the ILR was determined only by considering the insurer's assets and liabilities, without including capital activities. The ILR 2020 represented a ratio of the sources of liquidity (assets) against the liquidity needs (liabilities) weighted by factors (haircuts) assigned to the different items on the balance sheet. The factors assigned to the different items on the balance sheet are based on the characteristics of the financial instruments. Based on the feedback received in the PC 2020, in Phase 2, the IAIS has proposed and analysed various methods to capture capital instruments in the ILR. Finally, the IAIS decided to use the simplified method for capital consideration in the ILR. The simplified method adjusts the ILR for capital instruments received and capital instruments paid in the reporting period. Shareholder dividends paid, as suggested by stakeholders in the PC 2021, are considered in the ILR calculation. The IAIS chose the simplified method for ancillary indicator monitoring purposes in order to not increase the reporting burden on participating insurers. The detailed method for inclusion of capital instruments into the ILR calculation would require more data elements to be collected in the annual IIM data collections (eg Common Equity Tier 1 (CET1), Tier 1, Tier 2 or holdings of retained earnings etc.).

3 New IIM ancillary indicator "Liquidity metrics"

As described in the section 1, the IAIS monitors liquidity risk as a part of its IAIS' systemic risk assessment framework, the GME[13], and its two components IIM and SWM. The current IAIS liquidity monitoring is conducted primarily via two IIM absolute assessment methodology indicators: liability liquidity and level 3 assets. In order to refine the current monitoring approach, the IAIS developed liquidity metrics as an ancillary indicator in the context of the IIM.

The liquidity metrics serve as a tool to facilitate the IAIS' monitoring of the global insurance industry's liquidity risk and for the IAIS to assess insurers' liquidity exposure from a macroprudential

[12] BCBS, Basel III: The Liquidity Coverage Ratio and liquidity risk monitoring tools (2013), available at https://www.bis.org/publ/bcbs238.pdf

[13] https://www.iaisweb.org/uploads/2022/01/191114-Global-Monitoring-Exercise1.pdf

perspective. The liquidity metrics highlight potential vulnerabilities, risk drivers and trends of insurers and the insurance sector. In 2023-2025, the liquidity metrics are not intended to be a new indicator of the IIM absolute methodology or to replace the liability liquidity or level 3 assets indicators. Rather they are planned to be used as a monitoring tool, as part of the GME, complementing the IIM absolute assessment methodology.

Based on feedback received in the interim and final PCs and considering IIM 2020-2022 data analysis outcomes, the new IIM ancillary indicator called "liquidity metrics" will consist of the following metrics, each bringing a different perspective on insurers' liquidity profiles:

- EA ILR 1Y time horizon (section 4)
- EA ILR 3M time horizon (section 4)
- CPA 1Y time horizon (section 5)
- CPA 3M time horizon (section 5)
- CPA 1M time horizon (section 5)

The IAIS' use of the liquidity metrics in 2023-2025 will focus as much on understanding trends and drivers of liquidity risk for insurers and the industry as a whole as it will on the relative level of liquidity metrics for an insurer in the IIM Insurer Pool. Because of the limitations of different assumptions and approaches, the IAIS developed multiple liquidity metrics for use in the monitoring. The new ancillary indicator will be integrated into the GME process in the following way:

- Ancillary indicator will be included in the annual assessment of systemic risk (according to paragraphs 43-44 of the GME document)
- Monitoring outcomes may be included in the annual feedback loop (according to paragraphs 75-77 of the GME document)
- Monitoring outcomes will be provided during annual collective discussions (according to paragraphs 80-81 of the GME document)
- Liquidity metrics results will be provided in annual Participating Insurers Reports (according to paragraph 98 of the GME document)
- Liquidity metrics results will be provided in annual Global Insurance Market Report (GIMAR) according to paragraph 107 of the GME document.
- The ancillary indicator will be reported and monitored in 2023-2025 and may be further reconsidered or refined as part of the future regular GME reviews (eg in 2025).

4 Exposure approach

The IAIS decided to use the EA, in particular two liquidity metrics – the 1Y ILR and the 3M ILR – as part of the new IIM ancillary indicator "liquidity metrics". This section describes the approach and metrics, taking into consideration stakeholders' feedback received in the interim (PC 2020) and final (PC 2021) public consultations.

4.1 The Insurance Liquidity Ratio

The EA applies factors to balance sheet items and to off-balance sheet exposures to measure liquidity risk. In the EA, the IAIS leverages current and prior work on systemic risk assessment to develop the ILR. The IAIS' previously published assessment work included measurements of certain insurers' biggest potential liquidity needs, including the use of short-term funding and potential

withdrawals from insurance contracts. The ILR is the ratio of an insurer's liquidity sources and needs over a selected time horizon of an assumed liquidity stress.

$$\text{Insurance Liquidity Ratio (ILR)} = \frac{\text{Liquidity Sources}}{\text{Liquidity Needs}}$$

When determining the parameters (ie factors and balance sheet instruments) of the ILR, especially with respect to liquidity sources, the IAIS looked at a number of sources including the approaches of insurance supervisors, rating agencies and bank supervisors. For the treatment of assets, the IAIS relied most heavily on bank regulations. While insurers are less exposed to liquidity shortfalls than banks, both sectors invest in certain similar asset classes. Considering the experience of the banking sector regarding liquidity regulation and its interlinkages with the insurance sector, its liquidity risk practice is worth following on these common issues. The ILR factors for liquidity sources are thus similar to factors used by the BCBS in its metrics, but they also slightly differ considering the different design of IAIS and BCBS metrics, their time horizons, granularity and the specificities of the insurance sector.

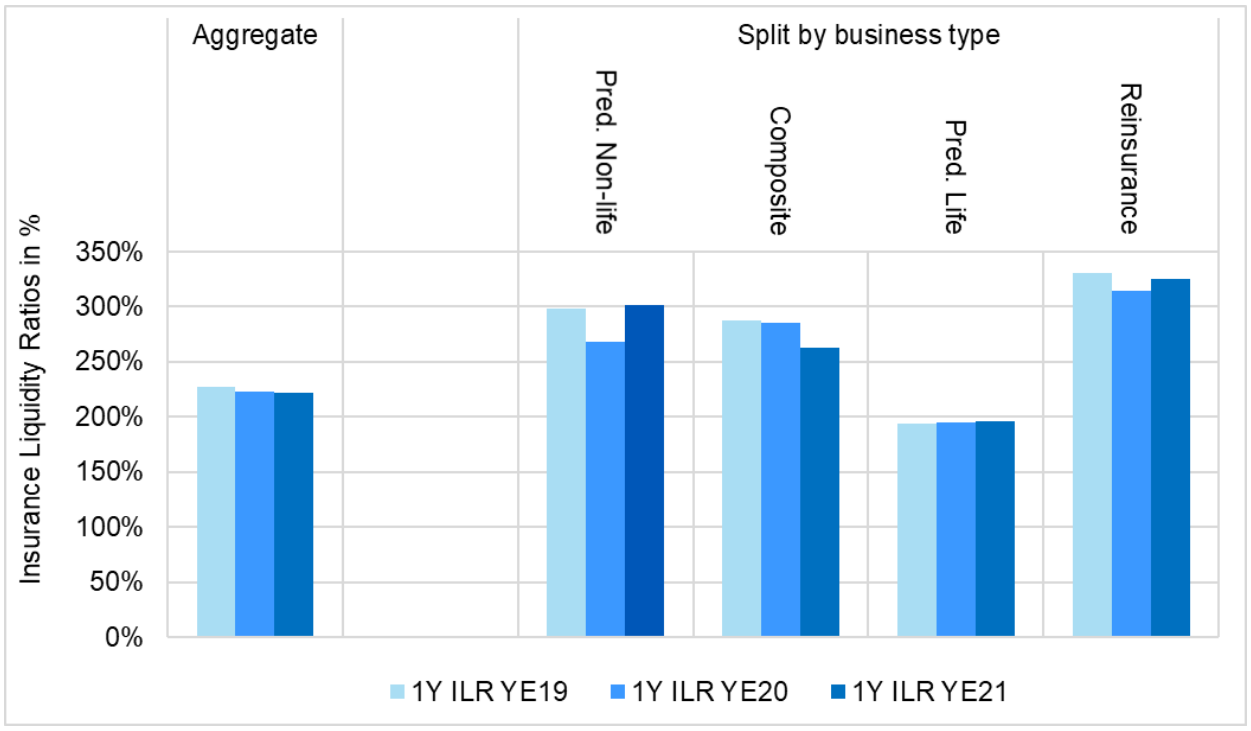
For liquidity needs, the ILR primarily leverages prior IAIS work on systemic risk identification, especially with respect to the surrenders. Due to the enhanced liquidity needs of banks relative to insurers, bank supervisors have developed a range of tools over the last decade to assess and regulate liquidity risk. The IAIS utilizes lessons learnt from these tools, especially for non-insurance liquidity needs.

4.1.1 Consideration of various business models in liquidity metrics

Acknowledging the comments received in previous PCs, with regards to the EA and ILR, the IAIS decided to consider differences in liquidity profiles of life insurers, non-life insurers and reinsurers, mainly in terms of ILR liquidity needs. ILR liquidity needs are a consequence of a specific business model. Each business model is exposed to various liquidity shortfalls and demands, for example:

- Non-life insurers (Property and Casualty (P&C) companies) are mostly exposed to:
  - Natural and other types of catastrophes and, therefore, often rely on reinsurance. This source of liquidity risk is the failure of their reinsurer to pay on time (or at all) according to non-life insurers' needs, because of a delay on the side of the reinsurer or a wrong expectation on the side of the cedent; and
  - Weather events or large natural catastrophes where settlement of claims is quick or where no or insufficient reinsurance was bought.
- Life insurers are mostly exposed to:
  - Mass lapse events, when liabilities assumed to be due in the far future have to be suddenly settled; and
  - Negative developments of their asset investments when needed to support liability cash flows and derivative operations that could require significant margin calls.
- Reinsurance companies are mostly exposed to natural and other types of catastrophes, but usually with a small time lag.

Figure 1 - ILRs per business model using 1Y ILR factors for YE19-YE21



Source: IIM 2021-2022 data collections

ILR data analysis in 2020-2022 proved that the ILR differences are driven primarily by liquidity needs. Liquidity sources composition was comparable across all four types of business models. In contrast, the CPA focuses on raw cash flows, regardless of their linkage to various business or liquidity profiles. The various business models are inherently considered in the CPA metrics.

4.1.2 Time horizons

Based on the comments received in previous PCs, the IAIS considers two time horizons in the EA to prudently monitor short-term and longer-term liquidity risks:

- 1Y time horizon (the main time horizon)
- 3M time horizon (the supplementary time horizon)

This is in line with the banking sector regulation – the BCBS[14] introduced in 2014 two liquidity ratios to achieve two separate but complementary objectives : (i) the LCR with a 1M time horizon (to promote short-term resilience of a bank's liquidity risk profile by ensuring that it has sufficient high quality liquid assets (HQLA) to survive a significant stress scenario lasting for one month); and (ii) the net stable funding ratio (NSFR) with a 1Y time-horizon (to provide a sustainable maturity structure of assets and liabilities).

Due to the nature of their investments and business model, insurers can help mitigate liquidity issues[15]. Unlike banks, insurers hold illiquid liabilities on their balance sheets and are less subject to short-term deposit liabilities. Insurance companies, especially life insurance companies, are financial

[14] BCBS, Basel III: The Liquidity Coverage Ratio and liquidity risk monitoring tools (2013), available at https://www.bis.org/publ/bcbs238.pdf

[15] The Role of Insurance Investments in the US Economy, 2019, Center for capital markets competitiveness

institutions with longer-term liabilities than banks. Therefore, they have the capacity to adopt investment strategies with longer-duration time horizons. By focusing on a longer-term time horizon, insurers are able to find additional yield by providing needed liquidity to types of assets that trade less frequently. Providing additional liquidity is particularly important in the current macroeconomic environment and especially for some asset classes.

The IAIS, therefore, chose a 1Y stress horizon as the main time horizon. While this is longer than the horizon used by some analysts and certain regulatory requirements in other sectors (eg the BCBS' LCR with 30 days), insurers are relatively less vulnerable to liquidity stresses, which resolve over shorter horizons. Some of the largest drivers of insurers' liquidity needs, such as policyholder surrenders and catastrophe payments, would result in cash flows that are spread over months or years, instead of hours or days.

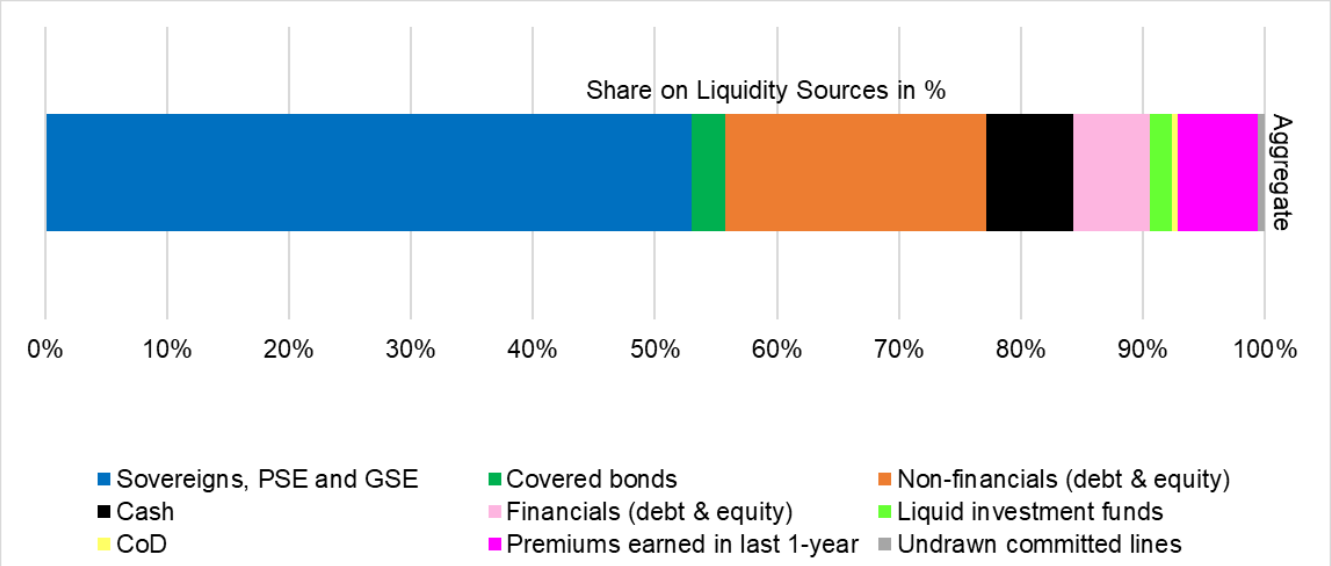
In addition to the main 1Y time horizon, acknowledging stakeholders' comments in 2020, the IAIS decided to monitor also the supplementary 3M time horizon, focusing on short-term liquidity risk. The 3M time horizon may provide better information regarding immediate liquidity needs and sources with limited impact of capital-related operations. Both time horizons in combination provide a more precise picture of companies' liquidity situations. The EA methodology is based on balance sheet items. The supplementary 3M time horizon may benefit from this as only a few additional data elements need to be collected. The differentiation between time horizons is thus reflected in their different factors. The proposed factors (in this Level 2 document) for the 3M time horizon may be further refined and adjusted in 2023-2025.

4.2 Liquidity sources

4.2.1 Categories of liquidity sources and their description

The insurers' liquidity sources are a key input in the calculation of the ILR. This section identifies significant categories of liquidity sources considered in the ILR design. The chart below shows materiality (after applying the factors/weights) of various categories of liquidity sources using the ILR methodology and weights as described in this Level 2 document.

Figure 2 - 1Y ILR Liquidity sources (YE21 data)



Source: IIM 2022 data collection

All descriptions of liquidity sources in this Level 2 document are based on the technical specifications of the 2022 IIM.

Cash and cash equivalents (approximately 7% of the 1Y ILR liquidity sources)

The cash category includes cash and cash equivalents. It is considered the most liquid category of ILR liquidity sources and covers all holdings of cash, including cash and currency on hand, demand deposits with banks or other financial institutions, or other kinds of accounts that have the general characteristics of demand deposits. Central bank reserves can be included only if they can be withdrawn in a time of stress. The cash category does not include any instruments with restricted withdrawal or usage.

Sovereign debt including PSE and GSE (approximately 53% of the 1Y ILR liquidity sources)

This category includes all sovereign counterparty exposure with rating AAA, AA, A and BBB or equivalent, from at least one external rating agency, on an immediate risk basis, held either outright or through participation in publicly traded collective investment vehicles. Sovereign debt includes bonds issued by public authorities (central governments, supra-national government institutions, regional governments, municipalities or local authorities) and bonds that are fully, unconditionally and irrevocably guaranteed by a Member State's central government and central bank (denominated and funded in the domestic currency of that central government and central bank, multilateral development or supranational organisations like the Bank for International Settlements, International Monetary Fund, European Central Bank, European Union). BBB-like sovereign debt instruments are included in the ILR liquidity sources to cover the whole investment grade (comparable to corporate bonds or PSE investments).

Government sponsored entity (GSE) securities senior to preferred shares refer to mortgage-backed securities issued by or unconditionally guaranteed by a GSE. Such securities must have an explicit guarantee such as to the timely payment of principal and interest from the GSE. Included securities must be "liquid", which is defined as those whose market price or the market haircut demanded on secured transactions collateralised by the security or equivalent securities has not changed by more than 10% during a 30 calendar-day period of significant stress. Only GSE's with rating AAA, AA, A and BBB or equivalent, from at least one external rating agency, are considered liquidity sources.

Public sector entity (PSE) debt instruments refer to all holdings of liquid investment-grade debt securities of PSEs with a rating AAA, AA, A or BBB. PSEs include national and multilateral development banks, but do not include state-owned commercial banks. In some cases, the difference between state-owned/state-sponsored PSEs and commercial banks may not be clear. A bank that serves a narrow purpose to benefit the public good (increase home ownership, promote development of rural infrastructure) should be classified as a PSE, whereas a bank that may focus on some of these same activities but has a wider ability to conduct banking activities should be considered a commercial bank. Government agencies and governments below the sovereign level that issue or guarantee securities or that provide loans, should not be considered a financial institution. The IAIS conducted a recalibration of the ILR factors in 2022 and agreed to make no changes to sovereign/PSE/GSE debt instruments factors.

Corporate debt and equity instruments (including covered bonds and non-financials accounts for approximately 24% of the 1Y ILR liquidity sources).

Corporate debt securities of non-financial counterparties include only liquid plain-vanilla assets whose value is readily available, based on standard methods, and does not depend on private

knowledge (ie excluding structured products or subordinated debt). These assets are actively traded in markets with no significant trading restrictions (eg no lock-up periods[16]). "Liquid" is defined as those securities whose market price, or the market haircut demanded on secured transactions collateralised by the security or equivalent securities, that has not changed by more than 20% during a 30 calendar-day period of significant stress. Only corporate debt securities with rating AAA, AA, A and BBB or equivalent, from at least one external rating agency, are considered liquidity sources.

Covered bonds are bonds issued by a bank or mortgage institution and are subject by law to special public supervision that is designed to protect bondholders. Proceeds deriving from the issue of these bonds must be invested in conformity with the law on assets which, during the whole period of the validity of the bonds, are capable of covering claims attached to the bonds and which, in the event of the failure of the issuer, would be used on a priority basis for the reimbursement of the principal and payment of the accrued interest. Such securities may not be issued by any affiliate or subsidiary of the insurer. Only covered bonds with rating AAA, AA, A and BBB or equivalent, from at least one external rating agency are considered liquidity sources.

Common equities include all holdings of publicly traded common equity, issued by a non-financial sector entity. Such securities must be included in a major index and must be a reliable source of liquidity (ie the market price or the market haircut demanded on secured transactions collateralised by the security or equivalent securities has not changed by more than 40% during a 30 calendar-day period of significant stress[17]). The IAIS conducted a recalibration of the ILR factors in 2022 and agreed to make no changes to factors of non-financial corporate debt and equity instruments.

Corporate debt and equity instruments of financial counterparties (account for approximately 6% of the 1Y ILR liquidity sources).

This group of liquidity sources includes liquid corporate debt securities and equity instruments emitted by financial institutions. These assets are actively traded in markets with no significant trading restrictions (eg no lock-up periods). A financial institution is a company engaged in the business of dealing with financial and monetary transactions such as deposits, loans, investments and currency exchange. Financial institutions encompass a broad range of business operations within the financial services sector including banks, trust companies, insurance companies, brokerage firms and investment dealers. Typically, financial institutions include banks (and other deposit-taking institutions, excluding central banks and other public sector bodies), securities dealers, other capital markets business, insurance companies, reinsurance companies, mutual funds, other asset management business, hedge funds and pension funds. In the PC 2020, most stakeholders suggested to consider debt and equity instruments issued by financial institutions (financials) as ILR liquidity sources. This inclusion would be in line with the BCBS' LCR approach that considers exposures to both financial and non-financial counterparties. Their full exclusion would be, therefore, extremely conservative for the ILR calculation. On the other hand, the IAIS acknowledged a higher risk of these assets (in comparison to debt and equity instruments emitted by non-financial counterparties) stemming from their higher level of interconnectedness within the financial system.

[16] A lock-up period is a window of time when investors are not allowed to redeem or sell shares of a particular investment.

[17] Period of significant stress will be further explained in the IIM 2022 Technical Specifications.

Exposures to investment funds (account for approximately 2% of the 1Y ILR liquidity sources).

The IAIS agreed to include exposures to liquid investment funds into ILR liquidity sources. An investment fund is a supply of capital belonging to numerous investors used to collectively purchase securities while each investor retains ownership and control of their own shares. An investment fund provides a broader selection of investment opportunities, greater management expertise and lower investment fees than investors might be able to obtain on their own. The purpose of investment funds is gathering investors' capital and investing that capital collectively through a portfolio of financial instruments such as stocks, bonds and other securities. With investment funds, individual investors do not make decisions about how a fund's assets should be invested. They simply choose a fund based on its goals, risks, fees and other factors. A fund manager oversees the fund and decides which securities it should hold, in what quantities and when the securities should be bought and sold within a fund-specific mandate.

Types of investment funds typically include[18]:

- Mutual funds: they are a financial vehicle that pools assets from shareholders to invest in securities like stocks, bonds, money market instruments, and other assets. Mutual funds give small or individual investors access to professionally managed portfolios of equities, bonds, and other securities. Each shareholder, therefore, participates proportionally in the gains or losses of the fund. Mutual funds are divided into several categories, representing the types of securities they invest in, their investment objectives (money market funds, bond or fixed income funds, stock or equity funds, hybrid funds), and the type of returns they seek. The advantages of mutual funds include economies of scale, diversification, liquidity, as well as professional management. However, these come with mutual fund fees and expenses. Mutual funds are regulated by governmental bodies and are required to publish information including performance, comparison of performance to benchmarks, fees charged, and securities held. Hedge funds and exchange-traded funds (see below) are not subcategories of mutual funds.
- Money market funds (MMFs): they are a type of mutual fund, where the latter is classified by their principal investments. MMFs invest in money market instruments, which are fixed income securities with a very short time to maturity and high credit quality. Investors often use MMFs as a substitute for bank savings accounts, though MMFs are not insured by the government, unlike bank savings accounts. MMFs sold to institutional investors that invest in non-government securities must compute a net asset value based on the value of the securities held in the funds.
- Exchange-traded funds (ETF): they are a type of pooled investment security that operates in a similar way as a mutual fund. Like stocks, they are traded on an exchange. The price of an ETF's shares changes throughout the trading day as the shares are bought and sold on the market. This is unlike mutual funds, which are not traded on an exchange and which trade only once per day after the markets close. Additionally, ETFs tend to be more cost-effective and more liquid compared to mutual funds. They hold multiple underlying assets, rather than only one as is the case for stocks. Because there are multiple assets within an ETF, they can be a popular choice for diversification. Typically, ETFs will track a particular index, sector, commodity, bond, other asset or a mixture of investment types, which is unlike mutual funds, ETFs can be purchased or sold on a stock exchange, similarly to a regular stock. An ETF can be structured to track anything from the price of an individual commodity to a large and diverse collection of securities. ETFs can also be structured to track specific investment strategies.

[18] Source: www.investopedia.com

- Hedge funds: they are offshore investment funds, typically formed as a private limited partnership, that engage in speculation using credit or borrowed capital. A hedge fund is a pooled investment fund that trades in relatively liquid assets and is able to make extensive use of more complex trading, portfolio-construction and risk management techniques in an attempt to improve performance – such as short selling, leverage and derivatives. Hedge funds are considered alternative investments. Their ability to use leverage and more complex investment techniques distinguishes them from regulated investment funds available in the retail market, commonly known as mutual funds and ETFs. Hedge funds generally invest in relatively liquid assets and allow investors to invest and withdraw capital periodically, based on the fund's net asset value.

Other liquidity sources

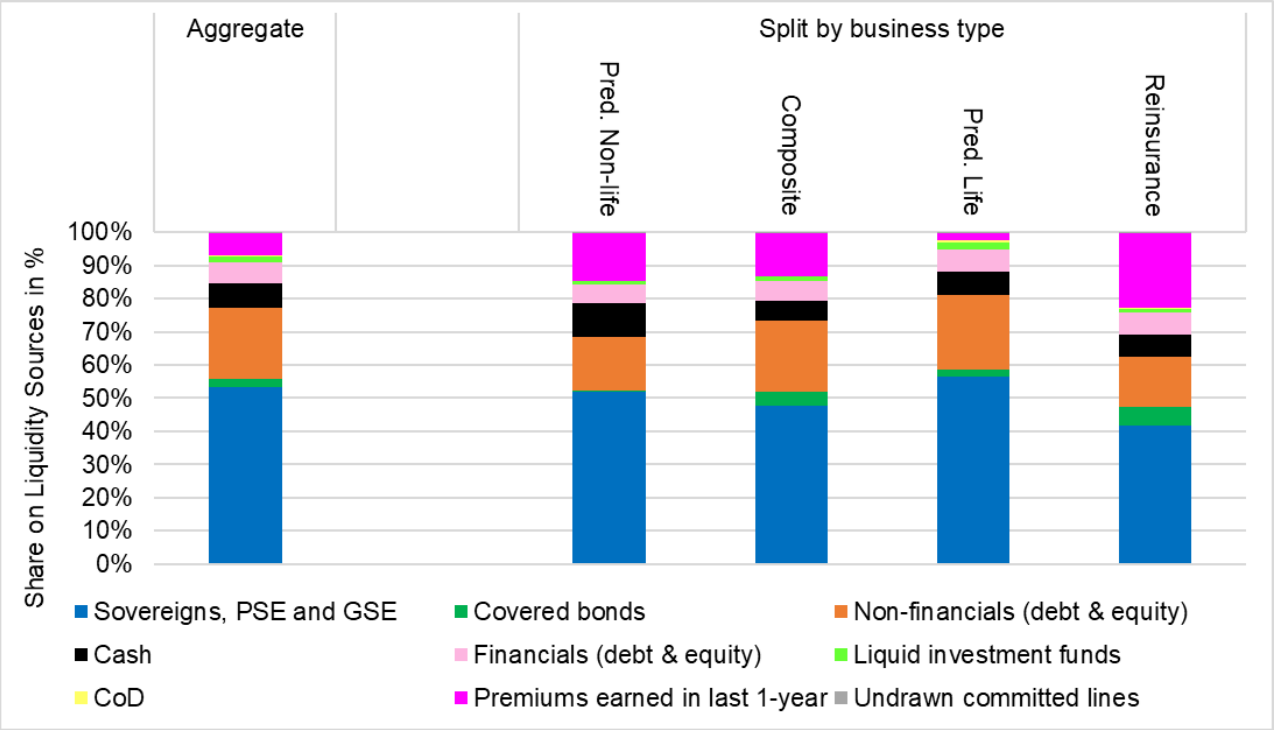
Other liquidity sources, that are considered as ILR liquidity sources, include certificates of deposit, undrawn committed lines (total committed amount less the drawn portion of all committed credit facilities obtained from third parties) and non-life premiums. Certificates of deposit cover all certificates of deposit with a maturity of less than 1Y or withdrawal penalty of less than 10%, even if they are not issued as a receipt (ie certificates of deposit with an International Security Identification Number (ISIN)).

Non-life premiums are equal to total value of future net premium that were earned in the last 3-12 months. Net earned premiums include direct and assumed business received from policyholders, less any premium payments paid to reinsurers on ceded business. Based on the comments received during PCs, the IAIS decided to include non-life premiums in the calculation of the ILR liquidity sources. As mentioned by stakeholders, non-life premiums are a source of liquidity for insurers and the assumed combined ratio, equal to 100%, was too conservative. Premiums are often used to satisfy certain business-as-usual liquidity needs, including expected claims and general and administrative expenses. Including premiums as a liquidity source requires including these and other items as liquidity needs. The IAIS agreed that life premiums, claims and expenses will not be included in the ILR design for the following reasons: (a) combined ratio, net earned premiums and net incurred losses are measures predominantly used in non-life and these data elements reported by life insurers proved to be very volatile; and (b) to avoid double-counting as the main sources of liquidity risk related to life policies are already covered by different liquidity needs.

Encumbered assets arising from repurchase agreements, securities lending or derivatives transactions are eligible for inclusion as ILR liquidity sources. This is consistent with the measurement of these liquidity needs on a gross basis.[19] For example, the amount borrowed in securities lending transactions would be included as a liquidity need for the insurer, but the assets used to collateralise this borrowing would be counted as liquidity sources. Conversely, off-balance sheet collateral received in securities borrowing or reverse repurchase (resale) agreements should not be included as a liquidity source. The ILR would include 90% of assets in securities financing transactions as a liquidity source. Insurers are assumed not to roll over these transactions during a time of liquidity stress. The following figure shows the structure of liquidity sources for various business models and regions.

[19] For example, see the treatment of derivatives in section 4.3.3.2 and treatment of securities lending transactions in section 0.

Figure 3 - 1Y ILR Liquidity sources per business model (YE21 data)



Source: IIM 2022 data collection

4.2.2 Factors for all types of liquidity sources

The following table represents liquidity sources considered in the ILR calibration. Some sources of liquidity have valuations that may fluctuate and/or may be depressed in times of need. Therefore, the current market value, or fair value, may not be realised in times of stress. To account for this situation, a haircut is applied to the current value of certain liquidity sources. Haircuts/factors for liquidity sources reflect both the ability to sell assets within a particular time frame and any fall in asset price that may occur before the asset can be liquidated. For example, the 85% factor for high quality sovereigns implies a 15% haircut in the 1Y time horizon. Therefore only 85% of the current value of high quality bonds is considered available for the purposes of calculating the ILR (1Y time horizon). The table below also shows the corresponding factors after taking the appropriate haircut for each liquidity source.

Table 2 - ILR Liquidity Sources – Factors 2022 for 1Y and 3M time horizons

Factors 3M time horizon	Factors 1Y time horizon	Liquidity Sources	Rows
100%	100%	Cash	9.4.a
95%	100%	Sovereigns rated AA- and above	9.5.1
95%	100%	Sovereigns in local currency	9.5.2
75%	85%	Sovereigns rated A- and above	9.5.3
60%	70%	Sovereigns rated BBB- and above	9.5.3.BBB
75%	85%	GSE securities senior to preferred shares rated above A-	9.5.7a & 9.5.7b
50%	70%	Investment-grade covered bonds	9.5.4
60%	70%	Investment-grade PSE debt	9.5.8
50%	70%	Non-financials: Investment-grade corporate debt securities	9.5.5
40%	50%	Non-financials: Common equity	9.5.6
40%	50%	Financials: Investment-grade corporate debt securities	9.5.5.F
30%	40%	Financials: Common equity	9.5.6.F
40%	50%	Certificates of Deposit	9.5.9
10%	10%	Undrawn committed lines	11.1
15%	25%	Investment funds: Liquid mutual and MMFs	9.10.1.L & 9.10.2.L
10%	25%	Investment funds: Liquid ETFs	9.10.3.L
20%	85%	Non-life net earned premiums in the last year	61.2.N

The “Rows” column refers to the 2022 IIM data collection data rows. Please refer to the IIM Technical Specifications in Annex 3 for a description of each of the above listed liquidity sources.

Factors for both tested time horizons are provided. The shorter 3M time horizon includes slightly lower factors (and thus higher haircuts) for some liquidity sources, reflecting the shorter time available for liquidation of these liquidity sources (without incurring material losses) and also the higher sensitivity of asset prices to sudden market movements (that would normally recover in the longer run) in comparison to the longer 1Y time horizon.

No adjustment is made for the quality of diversification of funding sources. Supervisors may note poor diversification of funding sources in the firms' internal liquidity risk management. Private equity and credit fund vehicles that are subject to lock-up periods (that exceeded either a 3M or 1Y time horizon) or to other significant trading restrictions will not receive liquidity credit in the corresponding tested time horizon. Hence, bonds and equities belonging to them should be excluded from the liquidity sources.

4.2.3 Comparison of factors with other organisations and agencies

Because of the lack of academic work on measuring the liquidity of different asset classes, the IAIS largely calibrated the factors applied to different liquidity sources, using supervisory judgment and an examination of the approaches of others. Supervisors and standard-setting bodies use similar approaches for bucketing of the asset classes and calibration of the haircuts. Differences can be found in the granularity of the aggregation of the assets and in the severity of the haircuts[20]. Haircuts are aligned with the widely recognised practices applied in other industries as well as with AM Best's approach. Below is a summary table of liquidity sources and their factors from different regimes/institutions. In the case of the NSFR, the displayed factor is one minus the appropriate Required Stable Funding (RSF) factor. Instances where these approaches use significantly differing definitions of asset classes are captured in the footnote. The table does not summarise the treatment of assets that are not included within the ILR.

Table 3 - Factors for liquidity sources used by other organisations

	BCBS		**S&P (US and Can. Life)[21]**		**S&P (Global)[22]**	**AM Best[23]**	
	LCR[24]	NSFR[25]	1 month	1 year		Short-Term[26]	Long-Term[27]
Cash	100%	100%	100%	100%	99%[28]	100%	100%

[20] EIOPA, January 2021, Methodological Principles of Insurance Stress testing: Liquidity component

[21] Standard and Poor's (S&P) Ratings Services, Life: Liquidity Model for US and Canadian Life Insurers (2004). S&P recently superseded this criteria with more general criteria for rating insurers. Their newer criteria lack details on the treatment of different asset classes.

[22] S&P's Ratings Services, Insurers: Rating Methodology (2013). S&P recently superseded this criteria with more general criteria for rating insurers. Their newer criteria lack details on the treatment of different asset classes.

[23] A.M Best's, AM Best's Stress Liquidity Ratio for US Life Insurers (2017), available at http://www3.ambest.com/ambv/ratingmethodology/OpenPDF.aspx?rc=197655. The rationale for developing and applying a liquidity haircut is to estimate potential cash available to fund cash demands during short- and longer-term scenarios. AM Best specifies that adjustments may be made based on additional information that becomes available to the analyst.

[24] BCBS, Basel III: The Liquidity Coverage Ratio and liquidity risk monitoring tools (2013), available at https://www.bis.org/publ/bcbs238.pdf

[25] BCBS, Basel III: the net stable funding ratio (2014), available at https://www.bis.org/bcbs/publ/d295.pdf.

[26] The short-term scenario is indicative of a stressed situation in which a company encounters a severe and unexpected liquidity event resulting in withdrawal and surrenders within a 30 days (1M) time frame.

[27]The longer-term scenario measures stressed liquidity over a period as long as (6 to) 12 months. Higher asset credits are given for the longer-term scenario.

[28] S&P assessed a 1% haircut on deposits with banks rated BBB- and higher. A 5% haircut was applied to banks rated BB or B.

Highest Quality Sovereign Debt	100%	95%	100%[29]	100%	90%	100%	100%
Sovereign Debt in Local Currency	100%	95%	96/98%	100%	90%	N/A[30]	N/A
High Quality Sovereign Debt	85%	85%	96/98%	100%	90%	N/A	N/A
Highest Quality Covered Bonds	85%	85%	96/98%	100%	90%	60/75%[31]	70/90%
Highest and High Quality GSE Securities	0/85/100%[32]	0/85/100%	90%[33]	90%	90%	90%	95%
Investment-Grade Corporate Bonds	50/85%[34]	50/85%	96/98%[35]	100%	90%	75%	90%
Investment-Grade PSE Debt	85/100%	85/100%	90%	90%	90%	0%[36]	0%
Liquid Common Equity	50%	50%	70%	85%	50%	70%	70%
Investment funds or CIUs	0-70%	0-70%	N/A	N/A	N/A	0-70%	0-70%

4.3 Liquidity needs

4.3.1 Categories of liquidity needs

The insurers' liquidity needs are the second key input in the calculation of the ILR. This section identifies significant categories of liquidity needs considered in the ILR design. The chart below shows materiality (after applying the 2022 factors[37]) of various categories of liquidity needs.

[29] S&P's US includes a 100% factor for US government securities.

[30] Because the AM Best methodology is for the US, only factors applicable to US Government Securities are specified. A.M. Best only prescribes factors for US obligations.

[31] A.M Best does not include a covered bond asset class. Investment-grade corporate bonds not issued in private offerings or by affiliates receive a 75% factor in the short-term scenario and 90% in the long-term scenario. Other Loan-Backed and Structured Securities receive a factor of 60% in the short-term scenario and 70% in the long-term scenario.

[32] The BCBS LCR and NSFR treat PSEs as equivalent to the sovereign. PSE is not precisely defined. Many, but not all entities considered as Government-Sponsored Entities, could be classified as PSEs under the BCBS rules.

[33] S&P applies a 90% factor to agency pass-through mortgage-backed securities. No general treatment of GSEs is specified.

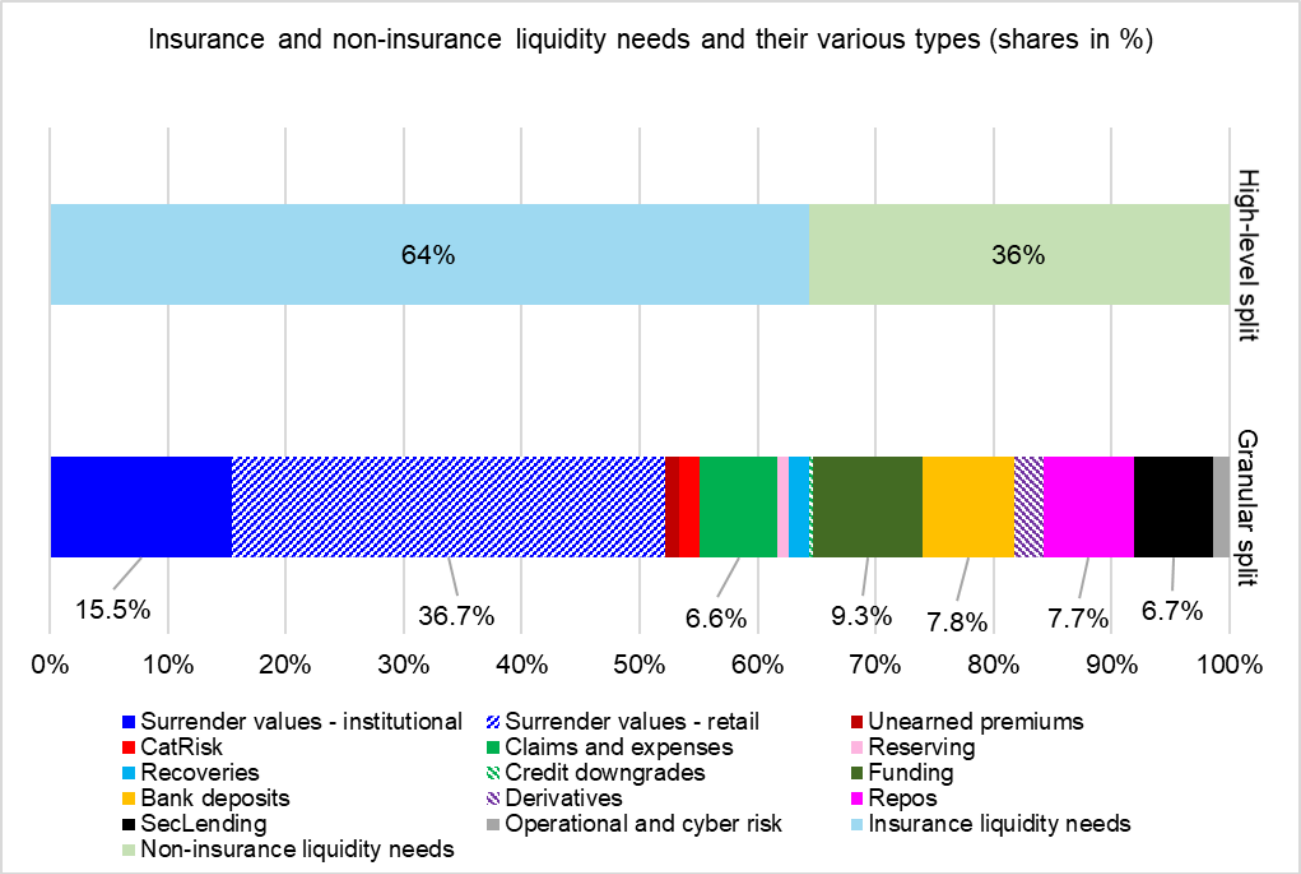
[34] The BCBS differentiates between highest quality corporate bonds, which have ratings of AA- or higher and receive a factor of 85%, and high-quality bonds, which have ratings of BBB- or higher and receive a factor of 50%. The BCBS also excludes corporate bonds issued by financial institutions.

[35] S&P uses a 98% factor for public bonds rated A- and above. Other investment-grade public bonds receive a 96% factor.

[36] Public-sector debt is not included in AM Best's classification of liquid assets.

[37] 2022 factors refer to factors listed in this Level 2 document.

Figure 4 - ILR Liquidity needs using ILR 1Y factors (YE21)

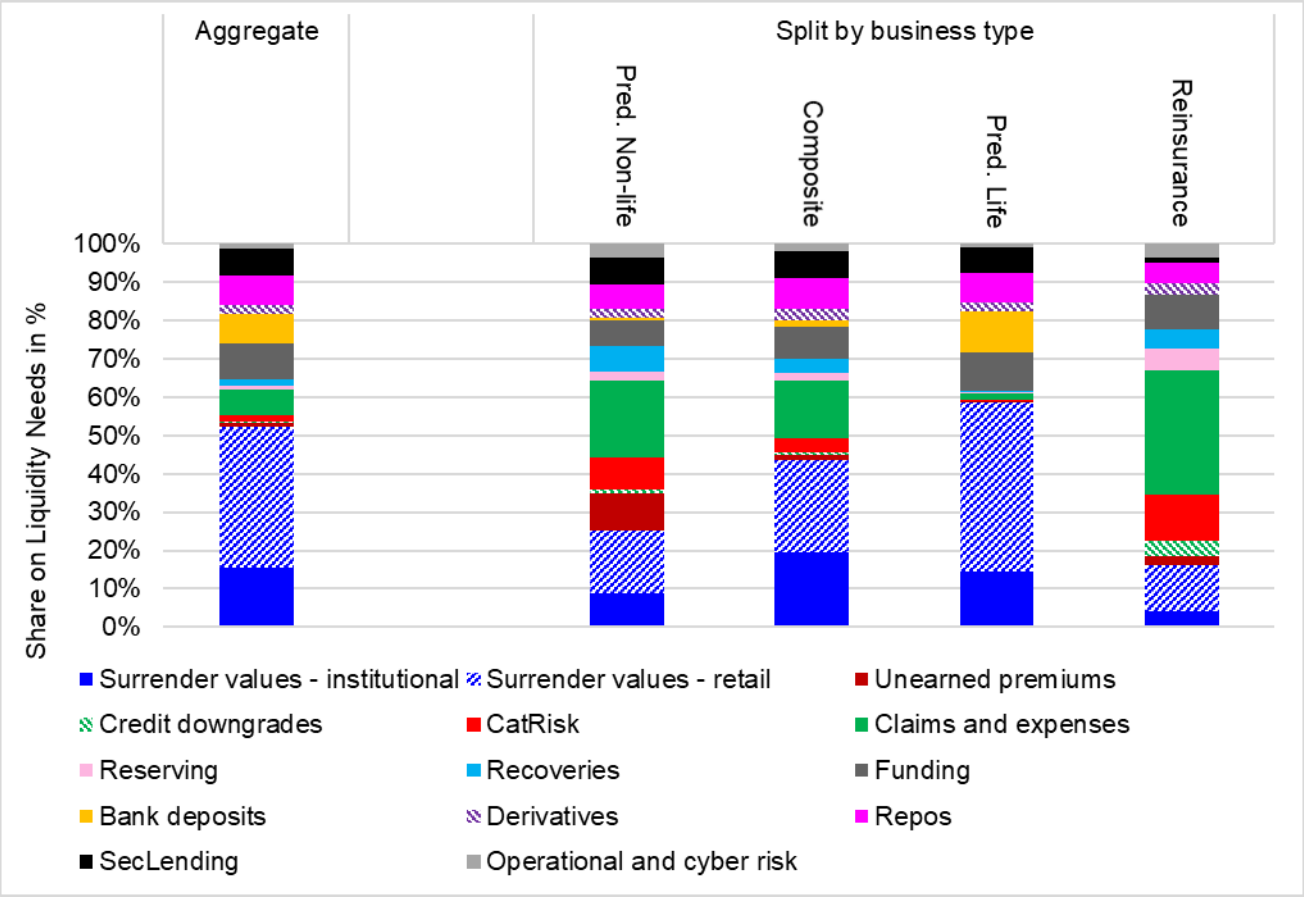


Source: IIM 2022 data collection

In previous PCs, many stakeholders (especially reinsurers and non-life insurers) mentioned that there are substantial differences in the liquidity profiles of various business models. These differences are reflected in the ILR calculation. Using the year-end (YE) 2020 and YE 2021 data, the IAIS found that the differences relate primarily to ILR liquidity needs (Figure 5). ILR liquidity sources are quite comparable for all analysed business models (Figure 3).

Non-life insurance companies (especially those offering property insurance and casualty insurance) can be exposed to an unexpected increase in claims, caused by the adverse consequence of natural and other types of catastrophes when settlements are quick, and these insurers often rely on reinsurance contracts to reduce their exposure. However, the reinsurer may fail to pay according to their needs, be it because of a delay on the side of the reinsurer or an insufficient reinsurance programme. This could trigger sudden funding needs which could cause a liquidity shock for the primary insurer. On the contrary, life insurance companies, due to the intrinsic characteristic of their long-term business, are mostly exposed to mass lapse events generating unforeseen cash outflows and to negative developments of their asset investments and derivative operations. Finally, reinsurance companies are exposed to extreme and tail disasters such as man-made or natural disasters that may generate sudden and large funding needs. Contractual terms or the inability to liquidate sufficient assets at a reasonable price within a limited time frame, may increase the reputation risk and potentially cause a liquidity shock.

Figure 5 - ILR Liquidity needs per business model using ILR 1Y factors (YE21)



Source: IIM 2022 data collection

Therefore, the ILR methodology attempts to capture specificities of different business models and to reflect the different liquidity profiles (Figure 5). In 2022, all liquidity needs factors have been revisited in more detail. These factors are further described in the sections below. The ILR is calculated based on the updated methodology, which has been recalibrated during two project phases in 2020-2022. The updates reduced the heterogeneity in the ILRs and made them more comparable across various business models and also less volatile, thereby more suitable for monitoring purposes. The IAIS acknowledges that more work needs to be done in the following years to consider correlations between stresses to various types of liquidity needs. This issue is mainly related to composite insurers whose ILR liquidity needs are driven by both life and non-life related liquidity stresses. The probability of such a combined liquidity stress is, however, rather low. The IAIS will monitor this topic and may refine its approach during 2023-2025.

The ILR liquidity needs can be divided into three categories:

- Insurance liquidity needs;
- Non-insurance liquidity needs; and
- Consideration of capital in the calculation of liquidity needs.

Insurance liquidity needs are the biggest category of ILR liquidity needs and account for approximately 64% of the overall liquidity needs component. Most liquidity needs arise from insurance-related liabilities, which for the purposes of the ILR comprise surrender values, unearned

premiums, reserving risk, reinsurance recoveries, non-life claims and expenses, and catastrophe payments.

Non-insurance liquidity needs include obligations related to derivatives, bank deposits, funding and repo or securities lending transactions, or needs related to credit downgrades, operational and cyber risk. They account for approximately 36% of the ILR liquidity needs.

4.3.2 Insurance liquidity needs

All descriptions of liquidity needs in this Level 2 document are based on the technical specifications of the 2022 IIM.

4.3.2.1 Liability Surrenders

Surrender values refer to the value of life insurance and annuity liabilities (or similar savings products), written as liabilities for insurance licensed entities, that can be surrendered or transferred as cash to an unaffiliated insurer upon the request of policyholders. The value of the surrender is the amount that the insurer is required to pay (total "cash out") at the policyholder's request, regardless of whether or not the full payment is remitted directly to the policyholder.[38]

Although mass surrenders[39], withdrawals or terminations are rare in insurance and, therefore, could be considered tail events, they can significantly deteriorate the stability and predictability of future cash flows and have a negative impact on the liquidity of insurance undertakings. The risk of simultaneous withdrawals or policy surrenders by policyholders in the event of negative publicity of an insurer or growing concern on an insurer's financial condition, is one of the main factors that could threaten the liquidity position of life insurers. The materiality of surrender values in the total liquidity needs of insurance groups in the scope of the 2022 IIM illustrates the significance of this risk (Figures 4 and 5).

An example of a major liquidity stress, intensified by a policyholder run that is driven by eroded consumers' confidence in the insurer's ability to pay back the surrender values is that of the Ethias group (accounting for almost 13% of the Belgian insurance market in 2007). During the global financial crisis, the group was particularly hit by the fall in the value of its shareholding in Dexia, caused by the bankruptcy and liquidation of the Lehman Brothers group. These losses reduced Ethias group's capital and solvency positions below the regulatory requirements and led rating agencies to downgrade the group's rating. Consequently, surrender rates for a specific savings products ("First") jumped from 0.3% to between 2.44% and 4.88% in one month[40] causing severe liquidity problems and forcing the recapitalisation of the group.

Policyholders' behaviours are based on the complex interaction of factors including the insurer's reputation, the market and economic environment, external rating valuation, the policyholders'

[38] For the purposes of the calculation of the ILR, surrender values collected via the IIM data collection include: i) Direct life insurance and similar savings products either with a contractual surrender option or where the policyholder has a legal right to surrender at any time (considering the actual situation at the reporting date and not the situation at the underwriting date); ii) Life reinsurance, if it implies a payment to the cedant in case of surrenders by direct policyholders; iii) Group pension contracts; iv) Deposit-type contracts; v) Potential surrender payment on insurance contracts containing bifurcated embedded derivatives. Surrender values exclude the following: i) Policy loans; ii) Any debt-like liabilities whose payments can be accelerated; iii) Deposits at banking subsidiaries.

[39] Berdin et al. (2019) estimated that the surrender rates for life insurance savings policies, based on historical data, typically range between 2% to 10% per year. Therefore mass surrenders are those for which the surrender rate exceeds 10%.

[40] ESRB report, "Enhancing the macroprudential dimension of Solvency II", February 2020.

personal circumstances and the product characteristics.[41] These factors may change over time and could mitigate or exacerbate the policyholders' intention to withdraw their policies. A non-exhaustive list of mitigating and/or exacerbating factors includes, for example, a surrender value higher than the market value of the underlying assets, the possibility to replace the coverage for comparable costs, the value of insurance policies compared to other investment opportunities, the presence or lack of a credible policyholder protection scheme or mechanism in case of insurer failure, contract features such as premium structure, remaining time in force or fee structure, the share of insurer portfolio invested in liquid or illiquid assets, the tax regime or supervisory measures, and the policyholders' income. The purpose of the policy may also play a role in the likelihood of policyholder runs occurring as policyholders are less likely to withdraw from products principally providing protection against specific risks than policies used as a vehicle for savings. Finally, the existence and the level of surrender penalties associated with a contract is a key factor that can disincentive the policyholder's decision to surrender in stressed conditions and reduce the surrender risk.

In order to strike a balance between simplicity and risk sensitivity, standardised factors mirroring the main drivers influencing policyholders' behaviour are applied to the surrender value of insurance liabilities to assess potentially stressed policyholder surrenders. With regards to the surrender values, both time restraints and economic penalty applicable to policyholders wishing to withdraw are key contractual aspects that can heavily influence the propensity of policyholders to surrender; the lower the penalty and the shorter the time restraint, the more likely it is that policyholders may surrender, thus implying a higher liquidity risk for the insurer. For these reasons, the time restraints and the economic penalty have been identified[42] as key quantifiable factors determining the weights that liabilities receive under the liability liquidity indicator. This approach captures the most relevant and quantifiable policyholder behaviour drivers ensuring, at the same time, simplicity (ie limiting the number of dimensions), risk sensitivity and comparability among companies[43].

The potential inclusion of different factors for savings and protection products has been considered, but the historical data collected did not allow to obtain robust results and clearly identify distinct lapse characteristics between policies purchased primarily for protection[44] and those serving primarily for savings purposes[45]. The time restraints, economic penalty and policyholder's characteristics are categorised into discrete quantitative buckets capturing the sensitivity to policyholder withdrawal. This approach allows to compare in a standardised way insurers' exposures and to assess their liquidity needs deriving from surrenders, withdrawals or terminations.

[41] For further details see IAIS - "Systemic Risk from Insurance Product Features (previously referred to as Non-traditional Non-insurance activities and products)", 2016.

[42] For further details please refer to the IAIS 2016 Methodology: "Global Systemically Important Insurers: Updated Assessment Methodology", 2016.

[43] The calculation of the ILR does not include or take into account any potential tax penalties or other tax implications occurring in some jurisdictions when life insurance contracts are surrendered by policyholders within a certain time period.

[44] Eg life contracts or products where the protection component is larger than the saving component.

[45] Eg annuities or products where the savings component is larger than the protection component in terms of present value of death benefit.

Table 4 - ILR factors (1Y time horizon) - Liability liquidity: Retail and Institutional

		Time restraints					
		Low (less than < 1 week)		***Medium*** (between 1 week and < 3 months)		***High*** (more than > 3 months)	
		Retail	Institutional	Retail	Institutional	Retail	Institutional
Economic penalty	***Low*** (no economic penalty)	50%	100%	25%	50%	1.25%	2.5%
	Medium (less than < 20% economic penalty)	25%	50%	12.5%	25%	0%	0%
	High (more than 20% economic penalty)	1.25%	2.5%	0%	0%	0%	0%

- ILR factors (3M time horizon) - Liability liquidity: Retail and Institutional

		Time restraints					
		Low (less than < 1 week)		***Medium*** (between 1 week and < 3 months)		***High*** (more than > 3 months)	
		Retail	Institutional	Retail	Institutional	Retail	Institutional
Economic penalty	***Low*** (no economic penalty)	25%	50%	12.5%	25%	0%	0%
	Medium (less than < 20% economic penalty)	12.5%	25%	6.25%	12.5%	0%	0%
	High (more than 20% economic penalty)	0%	1.25%	0%	0%	0%	0%

Surrender values account for more than 52% of liquidity needs of insurance groups in the scope of the 2022 IIM data collection, the majority of which corresponds to insurance policies with retail policyholders (more than 36% of ILR liquidity needs).

Time restraints: Time restraints are based on the average time between the request by a policyholder and the settlement under the normal course of business. The more quickly policyholders are able to access their funds, the more likely it is that insurers may have to engage in disruptive fire sales of assets to make the payments promised. The longer the delay, the more opportunities insurers will have to spread the sale of assets over time and/or to access liquidity through other means. In addition, a substantial delay in access may create a disincentive for counterparties to surrender their contracts.

Economic penalty: Economic penalty only includes contractual penalties (ie surrender charges) imposed by the insurer on policyholders that surrender early. It does not include penalties that are imposed by third parties, or are not explicitly quantified in the contract, such as the economic value of foregone benefits (eg tax penalties or other tax implications). The larger the economic penalty that counterparties must bear on surrenders, the smaller the incentive to withdraw funds. Conversely, the smaller the costs that counterparties must bear on surrenders, the larger the incentives to withdraw funds. A substantial penalty, by itself, will not remove all surrender risk as some counterparties may be immune to any monetary disincentive (eg in the case of panic).

The factors are lower for insurance contracts with high contractual penalties and long delays in accessing the surrender value because both these conditions disincentivise the counterparties from surrendering their contracts. To reflect the difference in severity, a gradated approach is applied. The combination of time restraints and economic penalty determines the factors in the 1Y time horizon, similar to liability liquidity indicator of the IIM absolute methodology (Table 4). For the 3M time horizon, currently half of those factors are used for time restraints up to 3M. While a more tailored approach is applied in the CPA, the factors included in the ILR allow to capture the main characteristics of the different insurance policies, reflecting the variation in surrender attributes across insurance products and ensuring simplicity of the approach and comparability across companies. Moreover, the CPA surrender projections do not provide granular information on the surrenders as just one value is collected in the data collection – the sum of all cash inflows from insurance activities.

Different factors apply to policies held by retail policyholders (ie policies written to natural persons) and institutional investors. This additional granularity distinguishes between these policyholders because of different levels of awareness of market distress and the relative sophistication of the policyholder's decision-making process with regards to surrenders and withdrawals. In particular, this approach reflects the fact that institutional investors have better decision-making ability and deeper knowledge of the market, therefore they are more sensitive to variation in the market conditions and have greater motive and ability to surrender their contracts for economic incentives than retails clients do. Moreover, as not all liquid liabilities will indeed be surrendered in a stress event, the baseline factors for retail insurance products are half the value of the factors used in IIM absolute assessment. The data collected in the IIM 2021 (YE19-YE20) and 2022 (YE21) data collections seems to confirm this assumption. Although the maximum surrender rates observed by insurance undertakings in 2019 and 2020 do not vary significantly depending on the policyholder characteristics (see Table 5), when looking at the tails:

- In the IIM 2021 data collection more than 12% of the sample experienced a surrender rate higher than 10% for policies held by institutional investors, while only 4% of the sample experienced severe lapse rates for retail insurance products; and

- In the IIM 2022 data collection more than 16% of the sample experienced a surrender rate higher than 10% for policies held by institutional investors, while only over 9% of the sample experienced severe lapse rates for retail insurance products.

Due to its complexity and the lack of reliable historical data, the different factors have been derived using the IIM surrenders value data, literature review and expert judgment. Please note that surrender rates show the overall insurers' results without reflecting the split (by time restraints and economic penalty) applied by the IAIS. As preferred by stakeholders in the PC 2021, the detailed recalibration of surrender rates and factors was not conducted as it would have required adding a substantial number of new data elements to the IIM 2022 data collection. Hence, the IAIS decided to keep the factor for surrender rates unchanged.

Table 5 - Surrender rates: Retail and Institutional (YE19 – YE21)

	Max surrender rates			Average surrender rates		
	YE19	**YE20**	**YE21**	**YE19**	**YE20**	**YE21**
Retail insurance products	47%	50%	54%	6%	5%	6%
Institutional products	53%	50%	61%	6%	7%	6%

Source: IIM 2022 data collection

Different approaches and criteria are used by rating agencies to define the factors related to liquidity needs metrics. For example, S&P Life for the US and Canada uses a 70% base factor for most annuity contracts and a 35% factor for most life contracts. These factors are cut in half for policies with a surrender charge equal to or greater than 5% or those with market-value adjustments.[46] Outside of the US in its global methodology, S&P Global does not take into account the economic penalty embedded in the contract or time restraints. Instead, it applies a 35% weight to all lapsable or transferrable life liabilities. This factor is based on global experience. S&P considers 35% of lapsable and transferable life liabilities (eg all continental Europe participating business, annuity liabilities and with-profit liabilities) to have an abnormally high lapse rate.[47]

4.3.2.2 Unearned Premiums

Unearned premiums can be defined as premiums paid-in but not earned that the insurer is legally or contractually obligated to repay upon request of the policyholder. Unearned premiums are seen as a liquidity need in the ILR as they can potentially generate liquidity stress in cases where policyholders have the ability to cancel policies and to receive premium refunds. Despite seemingly limited historical evidence, such cancellations can potentially generate unplanned cash outflows that stress the liquidity position of an insurer.[48]

[46] Market-value adjustments alter the surrender value of the contract based on current market values. As interest rates increase, the surrender value of these contracts would decrease to avoid creating an incentive to surrender.

[47] When comparing this number with the threshold proposed by Berdin et al. (2019), it is important to notice that Berdin et al. base their definition on life insurance savings policies, while S&P refers to lapsable and transferable life liabilities.

[48] An example of a major liquidity stress intensified by a policyholders' run on unearned premiums is that of the National Surety Company, a US company that had to be resolved during the Great Depression. For more details, see "The Resolution of a Systemically Important Insurance Company During the Great Depression, Jonathan Rose, FEDS Working Paper No. 2016-5, 8 February 2016.

Factors applied to unearned premiums depend on whether these refer to retail or institutional policies, aiming to reflect different levels of awareness of market stress and sophistication in decision-making to terminate a policy. The factors reflect the relative likelihood that there will be a stressed liquidity need during the ILR's 1Y time horizon and are applied only to the portion of unearned premiums that the insurer would be legally or contractually obligated to repay upon request of the policyholder. Given mixed responses received in both PCs and the relatively low materiality of unearned premiums in terms of insurers' total liquidity needs (1.3%, with greater relevance for non-life insurers), the IAIS agreed to keep the approach unchanged. Moreover, the IAIS will apply the same factors for both the 3M and 1Y time horizons as the considered liquidity stress is comparable for both.

Table 6 - ILR Unearned premiums – Factors

Factors		Liquidity needs	Rows
3M time horizon	**1Y time horizon**		
10%	10%	Unearned premiums – retail policyholders	33.E - 33.E.1
25%	25%	Unearned premiums – business policyholders	33.E.1

4.3.2.3 Non-life claims and expenses

For non-life insurers, net incurred claims is the sum of current year incurred claims (paid + reserves), prior years incurred paid claims and a change in prior year reserves. The cash-flow requirements associated with catastrophe claims are separately accounted for in the ILR. The prior year claims and potential adjustment to reserves are not related to the cash flow of this year claims. As a result, the IAIS focuses on two types of liquidity needs:

- Net incurred claims for the current year, excluding catastrophe claims (including loss adjustment expenses (LAE)); and
- Prior-year incurred paid claims (including LAE).

The associated liquidity risk charges would be 40% and 100%, respectively. The rationale for the 100% of prior-year paid claims is that any additional paid claims are already accounted for using the under-reserving liquidity need within the ILR so further factors for deterioration do not need to be accounted for. The 40% risk charge for "current year net-incurred claims excluding catastrophe claims" is based on the assumption that for a diversified non-life insurer, 25%-30% of the incurred claims would be paid within the first year incurred and potential adjustments would be allowed in the case of sudden increases in paid claims.

Life premiums, claims and expenses are not included in the ILR. Many life insurers mentioned in the previous IAIS data collections that loss and combined ratios are not metrics usually used in life insurance. Moreover, the liquidity risk stemming from life business is already captured, mainly by surrender values.

Table 7 - ILR Non-life claims and expenses – Factors

Factors	Liquidity needs	Rows

3M time horizon	1Y time horizon		
10%	40%	Non-life net incurred claims (including LAE, excluding Cat risk) – Current year	61.1.N.1
10%	40%	Non-life expenses (including LAE, excluding Cat risk) – Current year	61.4.N.1
25%	100%	Non-life net paid claims (including LAE, excluding Cat risk) – Previous years	61.1.N.2
25%	100%	Non-life paid expenses (including LAE, excluding Cat risk) – Previous years	61.4.N.2

4.3.2.4 Reserving risk

As pointed out by stakeholders, under-reserving can lead to sudden liquidity needs for insurance companies. Given that no detailed data on reserves or underlying triangle/development factors are collected in the IIM data collection, and in order not to increase the reporting burden, the IAIS includes reserving risk as a liquidity need based on a simplified flat charge of 2.5% to be applied to the non-life net technical provisions already reported in the IIM data collection.

No factor is applied for the life business as the 2.5% factor tested in 2022 overstated the potential cash outflows for life insurers. Any changes to the life insurers' reserves are more than likely not to impact next year's cash outflows, but rather will affect future cash flows given the long-term nature of the business.

Table 8 - ILR Reserving risk – Factors

Factors		Liquidity needs	Rows
3M time horizon	1Y time horizon		
1.25%	2.5%	Non-life: Flat charge (on net provisions) for potential sudden liquidity needs related to under-reserving	69.2
0%	0%	Life: Flat charge (on net provisions) for potential sudden liquidity needs related to under-reserving	69.1

4.3.2.5 Reinsurance recoveries

The feedback from stakeholders suggested that potential liquidity needs, stemming from reinsurance recoveries, should be taken into account in order to capture potential liquidity needs generated by the failure of their reinsurer to pay on time (or at all). In such situations, the payment due by the reinsurer may need to be suddenly covered by the insurer, thereby adding to the insurer's own liquidity needs. Reinsurance receivables already captured in the data collection in row 27.1.C are used as a proxy for future reinsurance recoveries. The inclusion of reinsurance recoveries mostly impacts the liquidity needs composition of non-life and reinsurance groups, followed by predominantly composite undertakings.

Table 9 - ILR Reinsurance recoveries – Factors

Factors		Liquidity needs	Rows
3M time horizon	**1Y time horizon**		
15%	25%	Reinsurance recoveries/receivables	27.1.C

4.3.2.6 Catastrophe Claim Payments

In the IIM 2022 data collection, participating groups were asked to report general insurance catastrophe claim payments as the estimated outflow (including claims and related expenses) across all general insurance perils and the catastrophic event(s) used by the insurer's internal liquidity monitoring and/or stress testing, and the fraction of that amount that would be expected to be paid within 1Y of the start of the catastrophe scenario, both gross and net of reinsurance recoveries and considering a global event with the probable maximum loss (PML) of 1 in 200 years. These amounts should include all sources of payments from general (re)insurance contracts (for example, payments made for death or injury under workplace liability contract) but exclude payments on stand-alone life (re)insurance contracts for death related to a catastrophic event. The PML 1 in 200 was chosen as there was a general concern related to the PML of 1 in 250, which was perceived as being too conservative in the interim PC. Moreover, there was also a request by stakeholders to consider potential liquidity needs stemming from the failure of the reinsurer to make the due payments on time (or at all) and to consider also payments done beyond 1Y after the start of the catastrophe scenario.

Considering comments collected in both PCs and results of the data analysis, the IAIS agreed to consider catastrophe payments stemming from the PML 1/200 stress scenario and three types of catastrophe risk sub-exposures originating from liquidity needs:

1. Catastrophe payments: Net (1Y);
2. Catastrophe payments: Net (beyond 1Y); and
3. Catastrophe payments: Gross (1Y) - Net (1Y) = Ceded (1Y).

Sub-exposure 1 captures net payments (real own risk) held by the (re)insurer in the following year and, therefore, should be applied as the main risk charge. The IAIS uses a conservative approach, taking into account also sub-exposures 2 and 3. Sub-exposure 2 captures the payments related to catastrophe scenarios that would be paid/settled more than 1Y after the start of the scenario, but that could be due in the following 12 months (if the scenario happened for example two years ago). The IAIS utilizes a lower factor for these payments (and a 0% factor for the 3M time horizon) reflecting:

- Uncertainty on the speed of the claims settlement process. Overly optimistic estimates, also visible in the data reported by some (re)insurers, predicting that a majority of payments come more than 1Y after the start of this severe scenario, could significantly overestimate the ILR of some (re)insurers; and
- Climate change and its increasing physical risk component may lead to more frequent tail events than the historical experience so two 1/200s may occur close to each other.

Sub-exposure 3 refers to ceded premiums and is intended to capture any potential issues with catastrophe recoveries, communication or credit quality of reinsurers under the tested PML. The risk charges for each sub-exposure are presented in Table 10.

Table 10 - ILR Catastrophe payments – Factors

Factors		Liquidity needs	Rows
3M time horizon	**1Y time horizon**		
25%	100%	Catastrophe payments: Net (1Y)	33.G.2.a
0%	50%	Catastrophe payments: Net (beyond 1Y)	33.G.2 - 33.G.2.a
15%	25%	Catastrophe payments: Gross (1Y) - Net (1Y) = Ceded (1Y)	33.G.1.a - 33.G.2.a

4.3.3 Non-Insurance liquidity needs

4.3.3.1 Bank deposits and non-financial liabilities

Bank deposits are traditionally very liquid and withdrawable on demand. This liquidity – along with the illiquidity of bank loans – could incentivise bank runs under certain circumstances.[49] To mitigate this risk, many governments guarantee certain bank deposits.[50] Additionally, bank supervisors measure and regulate banks' residual liquidity risks using granular deposit classifications. For example, in the LCR, the factor applied to bank deposits depends on whether:

- The depositor is a natural person;
- The deposit is partially or fully protected by an effective deposit insurance scheme;
- The effective deposit insurance scheme is pre-funded;
- The depositor has other relationships with the bank or factors that make them unlikely to move the deposit;
- The deposit is for operational purposes;
- The currency of the deposit; and
- Any notice periods or penalties applicable to the deposit and past waivers of these periods or penalties.

In order to reduce the reporting burden, the ILR includes a less granular treatment of bank deposits. Most insurers do not control a depository institution and do not rely on bank deposits for funding. A majority of stakeholders supported factors proposed for bank deposits in both PCs. Stakeholders also supported the usage of these banking-specific factors for bank deposits. In alignment with the scope of the Holistic Framework's IIM, of which this ancillary indicator is a part of, the ILR will include banking business. The IIM and the ILR provide a group-wide perspective on the systemic risk or liquidity position of participating insurers (in contrary to the BCBS' approach in the Globally Systemically Important Banks (G-SIB) data exercise). This issue was studied and supported by a joint task force of the BCBS and IAIS in 2018-2019. Exclusion of banking business may distort the overall group-wide picture.

In addition, stakeholders expressed mixed views on the granularity of bank deposits in the ILR. Many of them asked to consider deposit guarantee schemes (DGS) in ILR factors and in their calibration. Such a consideration is linked to an increased number of data points that need to be collected in the IIM data collection. As the topic of bank deposits is material for a smaller subset of the Insurer Pool,

[49] Bank Runs, Deposit Insurance, and Liquidity, Douglas W. Diamond and Philip H. Dybvig, Journal of Political Economy 1983 91:3, 401-419.

[50] *Id*.

the IAIS decided to include four new optional data elements for insurers that are willing to report an amount of deposits covered by DGS with regards to:

- Retail and small business time deposits;
- Retail and small business demand deposits;
- Commercial time deposits; and
- Commercial demand deposits.

Based on the recalibration conducted in 2022, the IAIS decided to consider DGS in ILR factors by providing them with a discount (for insurers who report optional DGS data rows) in comparison to deposits without any deposit guarantee protection. The table below displays the ILR factors for deposit liabilities.

Table 11 - ILR Bank Deposit Factors

Factors		Liquidity needs	Rows
3M time horizon	**1Y time horizon**		
20%	25%	Retail and small business time deposits	24.3.a - 24.3.a.DGS
15%	20%	of which are covered by deposit guarantee schemes (DGS)	24.3.a.DGS
20%	25%	Retail and small business demand deposits	24.D.a - 24.D.a.DGS
15%	20%	of which are covered by deposit guarantee schemes (DGS)	24.D.a.DGS
40%	50%	Commercial time deposits	24.3-24.3.a-24.3.b-24.3.d - 24.3.CTD.DGS
35%	40%	of which are covered by deposit guarantee schemes (DGS)	24.3.CTD.DGS
75%	100%	Commercial demand deposits	24.D-24.D.a-24.D.b-24.D.d - 24.D.CDD.DGS
70%	80%	of which are covered by deposit guarantee schemes (DGS)	24.D.CDD.DGS

The factors were influenced by the BCBS's LCR and NSFR factors. As the ILR uses fewer categories of bank deposits than the approaches used by bank supervisors, bank supervisors could apply a range of different factors to bank deposits within the same ILR category. The factors are generally at the upper end of the range of factors that may be applied by a bank supervisor. This approach is actually more conservative than the one used in banking supervision. This was done because of the ILR's longer time horizons relative to the LCR (30 days). Additionally, the ILR's purpose differs from bank liquidity regulations. While the LCR and NSFR set binding requirements, the ILR is a monitoring tool with different costs to false positive and negative results. The factors proposed for the supplementary 3M time horizon are slightly lower than for the 1Y time horizon, reflecting lower uncertainty linked to the shorter time horizon.

The factors were also influenced by the relative magnitude of the factors applied to the cash value of insurance products. Surrenderable insurance liabilities are generally less liquid than banking

products. They typically have higher penalties for withdrawal, longer delays in accessing funds and withdrawal results in a loss of insurance coverage. Partially mitigating these features is that while some policyholder protection schemes exist, most insurance contracts do not benefit from the same level of government protection as bank deposits. The ILR would only apply these factors to liabilities from a licensed banking subsidiary. Deposit-type products issued by an insurance company (ie products that do not transfer significant insurance risk) would be assessed using the factors for insurance products.

4.3.3.2 Derivatives

The ILR includes estimated potential cash flow needs from derivatives. Insurers should maintain sufficient liquid assets to be able to settle derivative liabilities within the time horizon. Many stakeholders supported in both PCs the proposal for derivatives treatment. The derivatives treatment in the ILR thus remained stable with few minor refinements. The refined approach contributes to total ILR liquidity sources by approximately 2.5%.

The ILR's treatment of derivatives leverages off the approach developed by the BCBS. Banks are large users of derivatives and the potential liquidity needs from a derivative contract should not depend on whether the derivative is owned by an insurer or bank. In particular, the ILR would be similar to the BCBS's NSFR. The NSFR approach was adjusted for consistency with other elements of the ILR (eg the treatment of certain encumbered assets) and to reflect the ILR's different numerator and denominator definition (ie liquidity sources and needs rather than available and required stable funding).

The ILR includes as a liquidity need 100% of ILR gross derivative liabilities. ILR gross derivative liabilities is calculated by contractual netting sets. A contractual netting set is the set of all contracts subject to a master netting agreement. Derivative transactions not subject to a master netting agreement are their own contractual netting set. ILR gross derivative liabilities is the sum of the netting sets that have a negative replacement cost from the perspective of the insurer (ie the insurer's current position has a negative market value).

$$\sum_{netting\ sets} \max(-gross\ replacement\ cost\ of\ derivatives\ in\ netting\ set, 0)$$

The ILR gross derivative liabilities do not include the value of any bifurcated embedded derivatives related to insurance contracts. The liquidity risk on these products is assessed using the liquidity needs of surrenders. On the other hand, the ILR gross derivative liabilities does include any bifurcated embedded derivatives that do not have a host insurance contract. Moreover, the ILR gross derivative liabilities do not include the value of any cash or securities collateral pledged or received in the calculation of ILR gross derivatives liabilities.

Few stakeholders suggested that the IAIS should consider also derivative assets in the ILR calculation, as a part of the ILR liquidity sources. Derivative assets are included in the LCR design as a part of its denominators, in a calculation of cash in/outflows. Derivative assets are partially covered also in the NSFR calculation of required stable funding. The IAIS included the derivative assets in the recalibration 2022, but decided not to include them in the ILR design for 2023-2025. The derivative assets will be further monitored and may be used in other supplementary metrics.

The ILR also adjusts for the Eligible Cash Variation Margin. An insurer's liquidity needs are decreased by any cash payments already made to counterparties on affected derivative contracts. These cash payments would be offset from derivative liabilities to the extent that this value was not otherwise included in the ILR's numerator. Similarly, any cash collateral received from counterparties in derivative transactions could be a source of liquidity for the insurer and should be offset from

derivative liabilities, if not otherwise included in the numerator. Some stakeholders in the PC 2020 proposed to include also other types of collateral under the Eligible Cash Variation Margin (as done by the BCBS), for example very liquid securities. Based on responses received in both PCs, the IAIS decided to use the whole cash variation margin, including its non-cash but very liquid elements. By doing so, the IAIS aligns its approach with that of the BCBS.

Similar to the NSFR, the ILR includes 20% of derivative liabilities within the ILR's denominator to account for potential valuation changes on derivative contracts. Additionally, 85% of the current fair value of securities posted as initial margin by an insurer for derivative contracts would be included as a liquidity need. This reflects that insurers will have a continued need for some liquid assets that can be posted as an initial margin.

Table 12 - ILR Derivative Factors

Factors		Liquidity needs	Rows
3M time horizon	**1Y time horizon**		
50%	100%	ILR Gross Derivative Liabilities - Eligible Variation Margin Offset	39.5 - 39.6.ALL
85%	85%	Initial Margin	39.9
10%	20%	ILR Gross Derivative Liabilities	39.5

Some participating insurers were unable to report ILR data rows as described in the table above. Not reported data for the new data rows would lead to skewed results and underestimated ILR liquidity needs (ie overestimated some ILRs) for some insurers. In order to fix this data gap and keep the level playing field, the IAIS agreed to use a floor for the derivative ILR liquidity need. The floor applies only to participating insurers who do not submit three derivative-related ILR rows.

Floor = 1% of the "All Derivatives Gross Notional Amount" {data row: 40.A.1}

The floor for the derivative ILR liquidity needs was calibrated using IIM 2021 data:

- Median ratio of "ILR derivative charge" to "All Derivatives Gross Notional Amount" = 0.8%
- Average ratio of "ILR derivative charge" to "All Derivatives Gross Notional Amount" = 2.7%

The factors proposed for the supplementary 3M time horizon are lower than those proposed for the 1Y time horizon, reflecting lower uncertainty linked to shorter time horizons, especially with regards to the gross derivative liabilities. The factor for initial margin remains unchanged considering the going concern principle and continued need for some liquid assets that can be posted as initial margin in maintaining active derivative operations.

4.3.3.3 Other Funding Liabilities and potential liquidity needs

The ILR also captures other sources of short-term funding and long-term debt that may come due in the next year. The ILR assumes that during a time of stress, an insurer would not be able to roll over unsecured short-term debt or issue more long-term debt. Additionally, investors are assumed to exercise any options that would shorten the maturity of outstanding debt or draw upon any contingent funding that the insurer provides.

Securities lending transactions and repurchase agreements are measured on a gross basis. This treatment is consistent with the inclusion of the relevant encumbered assets in the numerator of the ILR. While securities lending transactions represent a liquidity need in the denominator, the assets securing this funding would also represent a liquidity source. Repurchase agreements include the total gross fair value of recognised and non-recognised repurchase transaction liabilities (also called "securities sold under agreements to repurchase"). This gross fair value is equal to the amount of cash and securities borrowed against securities collateral. Repurchase agreements include all transactions regardless of whether or not the contract contains the right to resell, re-use or re-hypothecate the collateral (assets borrowed). Securities lending transactions cover the gross fair value of all recognised and non-recognised securities lending liabilities (ie the amount of cash or fair value of non-cash collateral received from the counterparty in exchange for lending securities), including all transactions regardless of whether or not the contract contains the right to resell, re-use or re-hypothecate the collateral.

The ILR also includes as a liquidity need any potential payments as a result of a credit downgrade. The materiality of this liquidity need is rather small ≈ 0.4% in terms of ILR liquidity needs. This represents the maximum value of any additional payments, capturing collateral or margin, that could be required in the event that the insurer, its holding company or any subsidiary is downgraded or breaches any other covenant triggers based on financial health, other than credit ratings (covenants driven by regulatory capital levels, leverage ratios, etc.) and excluding long-term debt that can be accelerated, and including payments from all reinsurance contracts. The worst case results out of three scenarios is applied:

- Two notches;
- To BB+; or
- To C.

Stakeholders proposed other options to consider the potential liquidity needs from a downgrade (eg cash flow stress scenarios or individual assessment of circumstances). Taking into consideration the low materiality of this type of liquidity need and trying not to increase the size of the IIM data call and its complexity, the IAIS decided to keep its approach unchanged.

Table 13 - ILR Funding Liability Factors

Factors		**Liquidity needs**	**Rows**
3M time horizon	**1Y time horizon**		
75%	100%	Short-term debt and the current portion of long-term debt	25
50%	100%	Long-term debt that can be accelerated	25.A + 25.B
75%	100%	Gross repurchase agreements and security lending transactions	(42.4 - 42.4.S) + (43.4 – 43.4.S)
12.5%	25%	Pledged contingent funding including credit facilities	12.1
50%	100%	Potential liquidity needs from a downgrade	33.F

4.3.4 Operational and cyber risk

The IAIS decided to consider liquidity needs related to daily operations, natural or human caused catastrophes, or cyber events as a part of the ILR design. Examples include big ransomware attacks, earthquakes, floods and other such events. All these events can lead to sudden liquidity needs.

Gross written premium (GWP) is considered a comparable measure of the scale of business activities of insurance companies. The bigger the insurance activities are, the higher the GWPs are and the bigger the potential stressed liquidity needs related to operational and cyber risk may be. In 2022, the IAIS conducted a recalibration of factors for operational and cyber risk liquidity needs. The IIM data showed that a percentage of operational and cyber losses to the total GWP in the last 5 years was below 5% of total GWP. Moreover, only part of the Insurer Pool provided data required for this calibration. The IAIS acknowledges that detailed company data on losses may lead to more precise estimates of this liquidity need but, as this data is not widely available, the IAIS used a flat percentage on the GWP as a simplified measure of potential liquidity needs related to sudden operational or cyber-related events.

Table 14 - ILR Operational and Cyber Risk Factors

Factors		Liquidity needs	Rows
3M time horizon	**1Y time horizon**		
1%	2.5%	GWP (last 12 months)	18

5 Company projection approach

5.1 Objective and description

Capturing liquidity risk in the insurance sector is a complex task due to the many dimensions to consider, including but not limited to a) insurance specific risks such as claims, withdrawals, surrenders and lapses; b) investing activities related to the general account; and c) financing activities such as debt issuance, debt maturities, credit facilities, dividends, capital raising and capital distributions.

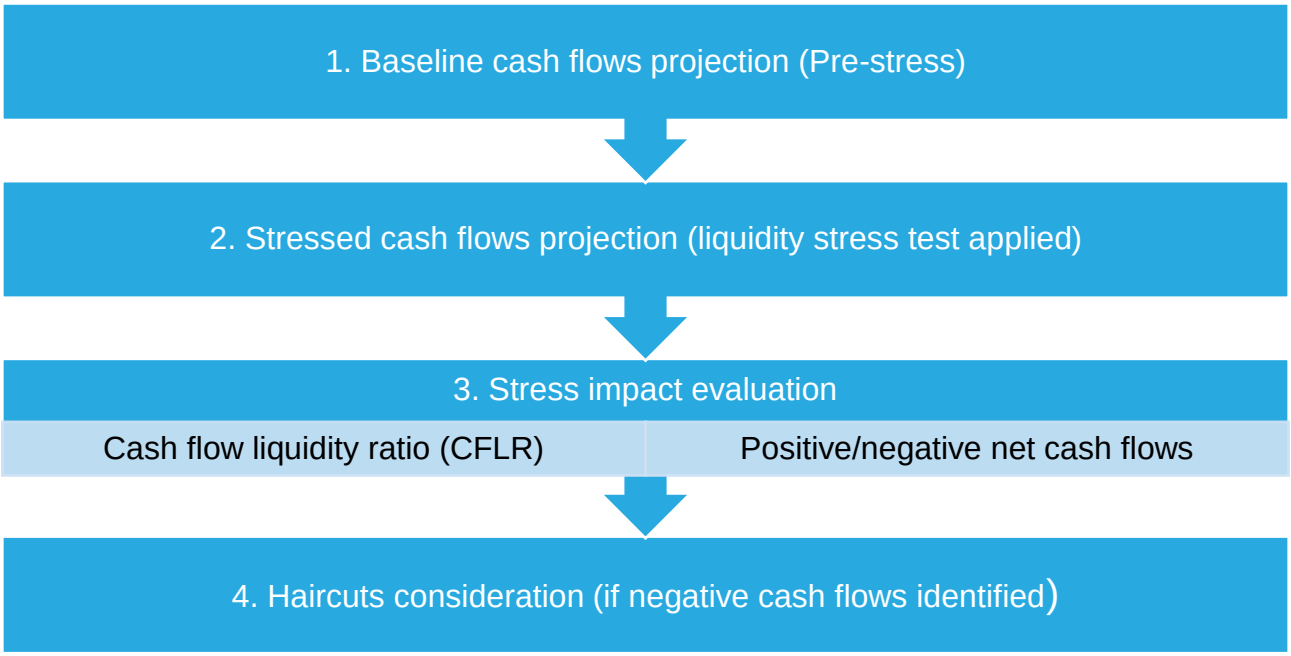
Although the EA is a transparent measure, which takes most of these factors into account, it takes a simplistic approach to measuring the liquidity of existing assets and liabilities and disregards both firm-specific characteristics and the timings of cash flows. This results in a less sensitive ratio that does not capture timing mismatches between liquidity sources and liquidity needs.

The IAIS is therefore implementing a second approach, the CPA to complement the EA and ILR. The CPA captures the potential vulnerabilities of the insurer's activities that could give rise to liquidity risk by assessing the net cash flows (ie insurers' cash in/outflows). By evaluating firm-specific projected cash flows, the timings of cash in/outflows can be assessed and any cash flow mismatches can be highlighted. The CPA is intended to capture additional liquidity risks compared to the ILR and to provide a more risk sensitive metric. The IAIS believes that the combination of the EA and CPA

may prove useful as a monitoring tool and help identify potential trends in insurer and insurance sector liquidity.

More specifically, the CPA analyses insurers' liquidity over various time horizons where cash outflows are subtracted from cash inflows. This is done under a baseline assumption and under a stressed scenario where the cash flows are subject to a liquidity stress. If the (overall) stressed cash flow is still positive, then the insurer would not be required to complete an estimate of assets available for sale. However, if the stressed cash flow is negative, then the CPA applies a haircut on the available liquid assets that could be sold to cover the cash flow deficit. Haircuts are applied to liquidity sources to reflect their potential illiquidity. The IAIS uses for the CPA the same haircuts for liquidity sources as for the ILR.

Figure 6 - Company Projection Approach in steps



5.2 Categories of cash flows considered in the CPA

Audited consolidated cash flow statements are divided into three sections: operating, investing and financing, based on the nature of the transaction. Each section measures the gross amount (equalling essentially total cash inflows and outflows) and the net amount (equalling total cash inflows less cash outflows). However, for some firms, audited operating cash flow statements contain a mixture of cash flows from insurance activities and cash flows from investing activities (general account). Given the fundamental difference between these activities, a combined cash flow is less useful for assessing the liquidity profiles of insurance companies. In order to obtain an understanding of the liquidity needs in the insurance industry, a division into insurance-related cash flows, investing cash flows (general account) and financing cash flows would be desirable (see further below). The CPA intends to only capture cash flows related to the general account.

5.2.1 Operating Cash Flows (insurance related)

Insurance gross cash flow includes premiums written (direct and assumed) and re-insurance recoveries. To calculate net cash flow from insurance activities, various operational cash outflows, such as total expenses, re-insurance payables and premiums ceded are subtracted from the gross cash flows. The net cash flows for life, non-life insurers and re-insurers, are nearly always positive[51] because insurers collect premiums but do not immediately have to pay claims (since this is dependent on the insured event actually happening). Even if the insured event happens, this would most likely not disrupt the insurer's liquidity position because of the low correlation among insured events in a large and well diversified insurance portfolio. In other words, it is unlikely that all the insured events occur at the same time, triggering simultaneous claim requests. Thus, the insurer pays the claim but still collects premiums from other policyholders where the insured event has not happened. It is important to note that for both life and non-life insurance business, there are several circumstances under which the operating cash flows will not be positive:

- Non-life business characterised by poor(er) underwriting results (combined ratio > 100%) or in the case of one or more natural catastrophes. Notably, payments are typically delayed after a catastrophe and the underwriting tends to tighten to reflect evolving risks; and
- Life business in runoff, or more general, characterised by decreasing business volumes (low premium income combined with higher outflows, which can be caused by both surrenders and/or contract maturities). However, where the decreasing volumes is due to surrenders, claims outflows will also be reduced.

A detailed list of considered cash inflows and outflows is provided in Annex 2.

5.2.2 Investing Cash Flows

For investing activities related to the general account, the cash flows include not only sale and purchase of investments, principal and interest that is either received or paid, dividends received and maturities of bonds, but also collateral positions for securities lending, repurchase agreements and derivatives. During the 2008 financial crisis, the collateral cash call on securities lending, repurchase agreements, and derivatives was a key driver of liquidity stress for firms such as AIG. In a stressed environment, a trading position that triggers collateral calls, due to either a ratings downgrade or fluctuations of the value of investments, can create a cash flow deficit in the investing section. In addition, liquidity risk could arise from fixed and indexed annuities as well as funding agreements and guaranteed interest contracts (GICs). Synthetic GICs expose the insurer to collateral risk from derivatives. Finally, policy loans can expose insurers to liquidity risk because they may be more attractive to policyholders than surrenders. Surrendering a life policy may be unattractive because the replacement of coverage may be less certain due to pricing and required health checks, tax payments due and penalties imposed by the insurer. In sum, when applying a stress scenario to the investing section, there could be a negative cash flow position. A detailed list of considered cash in/outflows is provided in Annex 2.

5.2.3 Financing Cash Flows

The financing section of the cash flow statement includes issuance or retirement of debt and other funding liabilities as well as capital received and paid (including dividends paid to shareholders). During the 2008 financial crisis, the commercial paper market froze, which created liquidity risk for some large companies but insurers relied more on long-term debt given the nature of their business model of matching long-term assets with liabilities. Moreover, insurers often are a stabilising force

[51] Valid for 1Y and not considering the run-off of the prior year(s).

because of their ability to generate cash from premiums without having to raise funding from capital markets.

Section 4.3 and 4.4 provide further details on the main cash flows that the IAIS aims to capture in terms of operational insurance activities, investing activities (general account) and financing activities. This division may, in some cases, differ from the cash flow statements in the audited accounts. Cash flows related to general expenses and tax should ideally be allocated to related insurance activities or investing activities. However, at this stage, the IAIS accepts any allocation that facilitates the provision of information.

A detailed list of considered cash inflows and outflows is provided in Annex 2.

5.3 Main types of cash inflows

5.3.1 Operating Cash Inflows (insurance related)

Premiums (Renewal/New Business)

An insurance premium is the amount of money an individual or business pays for an insurance policy. Typically, the premium is paid once a month or once a year. Payments can be elective where an individual chooses to pay for a specific insurance product or non-elective where an employer makes contributions to a retirement plan or healthcare cover, regardless of whether the employee wants to contribute to the plan or not. Insurance premiums are paid for policies that cover healthcare, auto, home and life insurance. Once paid in, the premium is income for the insurance company and provides a cash inflow.

Cash charges/Fees

A policy fee is an additional fee that an insured individual is required to pay in addition to the policy premiums. Not all insurance companies charge policy fees but those that do generally use the fee to cover the administrative costs associated with establishing a new policy or payment method or costs associated with maintaining the policy (administration fees). Fees can also be charged to compensate the insurer if the individual does not live to the estimated age (mortality and expense risk charge). Once paid in, these charges/fees provide a cash inflow for the insurance company.

Reinsurance recoverables

Reinsurance recoverables are the portion of claims related losses that an insurer can recover from reinsurance companies. They include the reinsurer's obligations toward the insurer in terms of claims and claims-related expenses, estimated losses (occurred and reported), losses incurred but not reported and unearned premiums paid to the reinsurer. The payment of these recoverables results in a cash inflow for the insurance company.

5.3.2 Investing Cash Inflows

Asset sales/Asset maturities

The insurance company receives a positive cash flow from the sale of assets such as bonds, equities, loans, property etc. The asset maturity and subsequent payment of principal on a bond/loan similarly results in a cash inflow.

Interest income

Investors in bonds receive a pre-established number of interest payments, paid at a regular schedule. Payments are usually made semi-annually but can also be made quarterly or annually. Interest payments can be either fixed (paid according to a pre-agreed rate) or floating (paid with a pre-agreed size of basis points above a floating reference rate).

Dividends on equity

Investors in equities receive annually some non-regular payments – dividends are a participation on business profit. These payments depend on business (investment) profitability and liquidity needs. Dividends are usually paid in cash but payments can also be made in the form of additional shares in the company.

5.3.3 Financing Cash Inflows

Capital contributions

A capital contribution is an agreement by an individual or a corporation (usually made by the controlling shareholder) to provide new capital to a company, also providing a cash inflow. In some countries, capital contributions can be made without issuance of additional shares or creating debt.

Debt issuance/Refinancing

Debt issuance is when an insurer raises funds by borrowing money, thereby creating a financial obligation to repay the lender at a specific time in the future and in accordance with the terms of the lending/bond agreement. This generates a cash inflow for the insurance company. Refinancing is when an insurer reorganises its outstanding debt by replacing or restructuring existing financial obligations. This is made either to roll over existing, maturing debt or to replace part of the outstanding debt by new, usually lower interest rate loans/debt obligations, resulting in lower monthly payments. During a period of stress, it may be more difficult to roll over unsecured short-term debt or to issue more long-term debt. Investors may also be more likely to exercise any options that would shorten the maturity of existing debt. Market conditions may also trigger other debt covenants. The IAIS would therefore expect insurance companies to make cautious assumptions in terms of any potential cash inflow from debt refinancing in a stress scenario and to clearly state any assumptions.

Credit facilities (including contingency facilities)

A credit facility is a type of funding that allows for greater flexibility compared to traditional loans. Types of credit facilities include letters of credit, receivables, financing and revolving credit facilities, where the borrower can withdraw some or all of a pre-agreed committed amount up until a pre-determined end of term. A contingency facility is similar to a credit facility but is designed to allow the borrower to meet its financial obligations after a shortfall in resources due to some adverse economic event. Although the existence of credit facilities provides liquidity in the form of cash inflows for insurance companies, the IAIS would expect insurance companies to be cautious when expecting to draw upon these in a period of stress and clearly state any assumptions.

5.4 Main types of cash outflows

5.4.1 Operating Cash Outflows (insurance related)

Surrender values and contract maturities for life insurance

Surrender values refer to the value of life insurance and annuity liabilities or similar savings products, written as liabilities for insurance licensed entities that can be surrendered or transferred as cash to an unaffiliated insurer upon the request of policyholders. The value of the surrender is the amount that the insurer is required to pay (total “cash out”) as a result of the policyholder’s request, regardless of whether or not the full payment is remitted directly to the policyholder. Also regular life insurance contracts generate cash outflows when they mature as payments are made to policyholders.

Natural/man-made catastrophes

Catastrophes can be divided into two categories: natural and man-made. A catastrophe is an event when a large number of policyholders file claims at the same time. Common examples of catastrophe events include earthquakes, tornadoes, floods or acts of terrorism. Catastrophes may trigger material cash outflows especially for non-life and composite insurers and reinsurance companies. Insurance companies typically have a delay when making those payments, especially as compared to reinsurers.

Benefits, fixed and indexed annuities

Benefits can be paid to policyholders/beneficiaries in the form of a lump sum, instalments or various types of annuities. A lump sum is usually paid to beneficiaries after the death of the policyholder. Payments can also be made in instalments, providing a pre-determined, guaranteed income stream over a specified number of years (usually between five and 40 years) or in the form of an annuity which usually provides the policy holders with a lifetime of guaranteed income streams. These payments can expose the insurer to liquidity risk when the fair value of the assets at surrender is lower than the value of the product guarantee, which would require additional cash to make up the difference.

Claims

Non-life insurance claims referrers to the amount an insurance company is obliged to pay out under insurance contracts after specific events. Payments are made in settlement of injuries or damage to persons or goods. All claims represent cash outflows for the insurer.

Expenses

An insurance company has a number of expenses associated with acquiring, underwriting and servicing the insurance products/contracts. More specifically, these relate to acquisition costs such as advertising, commissions paid to the salesforce, administrative costs and costs for re-insurance, and are recurring cash outflows for insurers.

5.4.2 Investing Cash Outflows

Asset Purchases

Insurers hold assets on the general account, which not are attributed to any specific policyholder but rather to the aggregate of all policies. These assets typically include investment grade bonds, mortgages and, to a lesser extent, equities and other assets. Funds can be managed in-house or can be outsourced to an external asset manager. Cash outflows are incurred when the insurer purchases assets or transfer funds to the external asset manager.

Derivatives

Derivatives vary widely by type and are used for different purposes. A key liquidity risk pertaining to derivatives is the requirement of posting daily cash collateral if the fair value of derivatives change or are impacted by other circumstances, such as credit rating downgrades. In a derivative transaction, one counterparty is typically hedging, while the other is providing hedging in exchange for some yield on risks, such as a change in interest rates or foreign exchange rates, fluctuation in equity prices or bond default in the form of swaps, futures, forwards or options. Liquidity risk is present in hedging and non-hedging derivatives. For example, hedging with derivatives for the

macroeconomic exposure of variable annuities exposes insurers to liquidity risk in a scenario where fair value changes require the posting of additional collateral.

5.4.3 Financing Cash Outflows

Debt maturities

Although the bulk of an insurer's liabilities are related to insurance contracts, some insurers also borrow money from capital markets. This can be in the form of long-term, senior debt (usually issued by the holding company and down-streamed to the subsidiaries) or subordinated debt that may qualify as capital if certain regulatory requirements are met. Under the loan or bond agreements, investors agree to provide the insurer with a certain amount of money for a specific period. After this time, the debt will need to be repaid or refinanced, creating a potential cash outflow for the insurer.

Commercial paper

Commercial paper is short-term borrowing with maturities of less than 1Y. Besides unexpected cash demands, liquidity risk can arise if the firm is unable to roll over its commercial paper in order to meet its cash needs, especially during times of stress. The IAIS would therefore expect insurance companies to make cautious assumptions in terms of how these instruments are rolled over in a stress scenario and to clearly state any assumptions.

Funding agreements and GICs

Funding agreements typically involve a life insurer's annuity payment in exchange for cash, which has the potential to cause a liquidity crunch depending on the nature of the transaction. For example, General American sold funding agreements with put options that allowed the purchasers to demand repayment of principal and interest in a seven-day period with no penalty (a book value withdrawal), which led to that insurer's insolvency.

Guaranteed Investment Contracts (GICs) can expose insurers to liquidity risk when the fair value of the assets at surrender is lower than the guarantee provided, which would require additional cash to make up the difference. In the case of synthetic GICs, a specific type of derivative, there is additional liquidity risk related to the posting of collateral.

Policy Loans

Policyholders may choose to take out a loan against their policy rather than surrender it. The liquidity impact would depend on how much the insurer may be required to lend.

5.5 Setting of the CPA metrics

5.5.1 Cash flow projections

The IAIS recognises the potential burden from providing cash flow projections and, in order to mitigate this, allows for some additional flexibility during the initial phase of the CPA monitoring. The rest of the sections should be considered as recommendations for the benefit of the insurer. The IAIS is still refining the CPA liquidity metric 2023-2025.

The cash flow projections should be ideally done at the holding company level, consistent with the consolidated reporting of the IIM. Thus, the CPA would not only monitor liquidity from insurance operations but also from banking and asset management businesses, if those entities would have a material impact on the holding company's liquidity. If insurers own a bank that is regulated by the

BCBS with a material impact on the liquidity of the holding company, the BCBS LCR may be appropriate for those mixed banking entities.[52] If insurers, own an asset management firms that is not associated with the general account (ie unit-linked or separate account assets and thus regulated by the International Organization of Securities Commissions (IOSCO) with a material impact on the liquidity of the holding company), the liquidity guidance issued by the Financial Stability Board (FSB)/IOSCO may be appropriate.

However, although consolidated projections would be preferable, the IAIS recognises that some firms may do these projections on an entity level basis and, therefore, not have access to consolidated projections. In such circumstances, firms may submit the cash flows for the largest insurance entity (or group of entities), that comprise preferably at least 70% of the insurer's consolidated total assets.

In terms of the granularity of reported cash flows, in the long-term CPA projections should ideally be split according to main product line (annuities, motor insurance, etc.). However, in short- to medium-term in 2023-2025, the IAIS requires only a high level split into cash flows from operational insurance activities, cash flows from investing activities (general account) and financing cash flows. Cash flows related to general expenses and tax should ideally be allocated to related insurance activities or asset management activities but the IAIS accepts any allocation that facilitates the provision of information in the initial phase of the CPA liquidity monitoring. If an insurer cannot provide the high level split into three categories of cash flows, the insurer can provide aggregate cash inflows and outflows. The IAIS will also facilitate a technical reporting solution for insurers that includes investment cash flows in operating cash flows.

5.5.2 Liquidity stress

By adding the cash flows from operating (insurance) activities, investing activities (general account) and financing cash flows, a net cash position can be established that is likely to be positive. Subsequently, a stress scenario is applied to the net cash flows for three chosen time horizons:

- 1 month
- 3 months
- 12 months

Following PC 2021 consultation feedback, the liquidity stress will be applied to all three categories of cash flows. Insurers will in the short- to medium-term have a choice between:

a) Applying any existing and currently available internal liquidity stress (with parameters, calibrations and any assumptions clearly outlined in the annual IIM Explanatory Statement); or
b) Applying the IAIS prescribed liquidity stress with the relevant variables as defined by the IAIS. Should any insurer be unable to apply the liquidity stress test (LST), the IAIS will apply a general blanket (factor based) stress to the relevant baseline cash flows.

[52] To improve internationally active banks' short-term resilience to liquidity shocks, the BCBS introduced the LCR as part of the Basel III post-crisis reforms. Historically, banks have failed quickly resulting in liquidation, which the BCBS LCR appropriate for banking. In the case of a bank, a bank deposit is a liability that can be withdrawn simultaneously by customers with no prior notice, which historically has happened when concerns of a bank's solvency arise. The LCR is designed to ensure that banks hold a sufficient reserve of high-quality liquid assets to allow them to survive a period of significant liquidity stress, lasting 30 days. If insurers engage in asset management activities with a material impact on the liquidity of the holding company, IOSCO's liquidity enhancement recommendations, which were endorsed by the FSB, would be followed.

As the CPA is further refined, the IAIS' prescribed stress is likely to change as a more thorough understanding of systemic liquidity stresses is developed. Details regarding the prescribed LSTs will be provided to participating insurers annually via relevant Level 3 documents. The IAIS is also aiming to harmonise the parameters and the severity of the stress (calibration) across the insurers in the Insurer Pool. Once the CPA calibration is completed, in the final metric, insurers will not be allowed to set their own liquidity stresses but rather a single liquidity stress scenario will be applied for all participating insurers.

5.5.3 Haircut application

If the stressed overall net cash flow remains positive, then the insurer would not be required to complete an estimate of assets available for sale. If the stressed cash flow is negative, then the IAIS focuses on the assets that would be immediately available for sale to meet the cash flow deficit. The assets to remedy the cash flow deficit will be subject to a haircut to reflect both the ability to sell assets within a particular time frame and any fall in asset prices that may occur before the assets can be liquidated.

The CPA will use haircuts established by the ILR as described in the section 3. By using the existing ILR liquidity sources and their factors, there will be a substantial reduction in the reporting burden and, at the same time, it will allow for a flexible approach that takes into consideration various insurers' business models. These benefits are considered to outweigh potential disadvantages, such as the haircuts applied to liquidity sources not being calibrated in accordance with the relevant stress scenario.

5.5.4 Historical cash flows and validation

In order to develop an understanding of insurer's cash flows and how these impact insurers' liquidity, firms are also asked to submit historical cash flows. With regards to historical data, the IAIS aims to balance the need for a more thorough understanding of systemic liquidity against the objective of avoiding too much of a burden in terms of reporting.

The IAIS, therefore, asks firms to provide historical cash flows from the audited cash flow statements, supplemented where possible with further details in order to enable (to the extent possible) a split into cash flows from operating insurance activities, cash flows from investment activities (general account) and financing activities. The IIM template will reflect the information considered to be available under most major accounting standards and may change over time, based on feedback from participating insurers. At minimum, operating cash flow, investing cash flow and financing cash flow aligning to the audited accounts should be provided. In the case of a future change in the accounting standards for reporting cash flows for financial institutions, the data required for historical cash flows will remain aligned with the audited financials.

The IAIS recognises that potential differences in the scope of cash flows and accounting treatment is likely to make these historical cash flows difficult to reconcile to the cash flow projections. However, the requested historical data will provide a better understanding of the cash flows and liquidity consideration of insurers whilst minimising the burden of providing the information.

5.5.5 Refinements of the CPA liquidity metrics

The CPA will remain an ancillary indicator for the monitoring of liquidity risk, at least until the CPA is further refined and potential issues are identified and rectified. It is intended only as a tool for macroprudential monitoring and analysis. The requested data will be kept to a minimum and is meant to be: a) largely available from the audited accounts in terms of historical cash flows and b) aligned to internal liquidity management for projected cash flows.

The CPA is likely to evolve as the IAIS is developing a more thorough understanding of the interplay between historical cash flows and insurer-specific projections for liquidity purposes. Moreover, the LST will be annually refined. Importantly, the IAIS needs to collect cash flow related data and qualitative feedback from insurers in order to be able to further refine the CPA. Any future changes to the audited cash flow statements for financial institutions or relevant associated legislation is likely to be reflected in the CPA.

5.5.6 Guidance for applying the liquidity stress

This Level 2 document includes principles related to the application of the LST. The LST will be applied to three categories of cash flows (investing, financing and operating), regardless of the fact that both the operating and financing cash flows are assumed to be more stable during a financial crisis or a period of stress. The LST scenario simulates a decline in broad asset categories such as returns on government bonds, structured finance securities and corporate bonds as well as equities, as measured by a decline in main equity indices. Assumption of going concern principle applies to all cash flow projections so there is no required run-off (only if intentionally planned by an insurer) of the balance sheet instruments at the reporting date. If a stable company growth is planned, assets and liabilities (and their related cash flows) that retire during the following 30 days/90 days/1Y may be replaced by new ones, taking into account a going concern perspective. If a business increase or a run-off is planned, stressed projected cash flows should be adjusted accordingly. Cash flows should be preferably calculated in a similar way as the cash flow financial statements are prepared.

The LST is defined by the adverse liquidity stress scenario, characterised by weakening economic activity, deflation and increasing unemployment rates across all economies. This economic downturn is accompanied by a global aversion to long-term fixed-income assets that, despite lower short-term rates, brings about a near-term rise in long-term rates and steepening yield curves. In addition, the scenario assumes a decline in material equity prices and a material increase in market volatility. The adverse liquidity stress scenario covers also stress on insurance liabilities. The adverse liquidity stress scenario consists of adverse macroeconomic, market related and other parameters (eg mass lapse ratios for liabilities).

The IAIS will provide further guidance on how to calibrate a liquidity cash flow stress, based on the given parameters. A detailed setting of the LST, including its parametrisation, will be described in a Level 3 document that will be annually updated and shared with participating insurers (as a part of the annual IIM data collection package). The IAIS acknowledges that the CPA data was collected only once, during Phase 2 in 2022 (in comparison to the ILR data that was collected in five data collections). Therefore, in 2023-2025, the setting of the LST may be annually further refined and its parametrisation adjusted, if needed. Moreover, the IAIS will be able to quickly react and use other adverse stress scenarios that reflect actual macroeconomic developments.

5.6 Limitations and benefits of the CPA

5.6.1 Benefits of the CPA

The CPA is designed to reflect the different business model of insurers and is thus more reflective of actual liquidity risk. For example, the CPA takes into account the considerable cash flows generated by insurance premiums – even in the case of a significant insured loss – which is a reflection of the insurance business model that has allowed most insurance failures to be resolved in an orderly run-off compared to a liquidation that is common in the banking sector. A run-off is a failure scenario that allows claims to be paid, although not all at once, because premiums are collected and the business reduced. The inability to pay claims is rare. Insurance liabilities are also

fundamentally different to bank liabilities due to the disincentives for policyholders to run (ie surrender). As mentioned previously, this is a reflection of policyholder uncertainty that they will find an affordable replacement of coverage.

The CPA also considers the timings of cash flows where insurers tend to generate positive cash flows from premiums and investments without having to immediately pay claims. This is due to insurers typically designing their withdrawable products to include contract features that allow the right to delay the processing of withdrawals and surrenders, which further mitigates the short-term liquidity impact of surrenders.

5.6.2 Limitations of the CPA

Although the IAIS recognises the importance of the fungibility of liquidity pools, the increased administrative burden of providing data for fungibility is considered to outweigh the potential benefits of more granular data. The resulting implied assumption of unrestricted transfer of liquidity between legal entities, potentially in different jurisdictions, remains an acknowledged weakness of the CPA. However, some supervisors have the regulatory authority to unlock liquidity from operating insurance companies to flow to the holding company if that is deemed prudent for a distressed insurer, in which case fungibility is possible.

The comparability between historical cash flows and projected cash flows is likely to be limited. If the audited cash flows combine insurance cash flows with the cash flows from investment activities (general account), then there is less insight into how the insurers' historical cash flows impact liquidity. By asking for audited, high level cash flows in addition to some additional information on insurance products, the burden on firms is reduced and the provided data is easier to validate. However, it will be more difficult to compare these historical cash flows to the projected cash flows (as they are likely to use different systems and assumptions). In addition, projected cash flows may be made on an entity level instead of the consolidated numbers for the insurance group, which is the basis for the historical cash flows, further reducing comparability. More granular data collected for the CPA may mitigate this limitation slightly, but it may also lead to an increase of the IIM data call. The IAIS will carefully consider those costs versus benefits.

Comparability may also be difficult for stressed cash flows. Stresses may differ between insurers (if using own stress parameters) and even if the LST parameters are used, not all insurers will be able to apply all requested parameters exactly in the same fashion.

The CPA may not appropriately capture asset management and off-balance sheet activities. The CPA should address a similar liquidity crisis that AIG experienced from its securities lending inside its insurance operations along with substantial CDS exposure from banking operations during the 2008 financial crisis. The cause of AIG's liquidity crisis was a credit rating downgrade by Moody's that triggered cash collateral calls from CDS and securities lending counterparty agreements. However, asset management activities may not be fully captured in the cash flow statement. The CPA will capture banking and insurance cash flows well but any counterparty exposures related to asset management operations may be off-balance sheet and thus harder to capture on a consolidated basis. In addition, the trading may involve financial instruments that have clauses which exempt them from bankruptcy proceedings, which would make resolution more difficult. However, this weakness in the CPA would likely only be offset by a qualitative approach or more granular reporting.

Annex 1: EA – Proposed factors for ILR 2022 Liquidity Sources and Needs

ILR Liquidity sources – Factors 2022

Factors 3M time horizon	Factors 1Y time horizon	Liquidity Sources	Rows
100%	100%	Cash	9.4.a
95%	100%	Sovereigns rated AA- and above	9.5.1
95%	100%	Sovereigns in local currency	9.5.2
75%	85%	Sovereigns rated A- and above	9.5.3
60%	70%	Sovereigns rated BBB- and above	9.5.3.BBB
75%	85%	GSE securities senior to preferred shares rated above A-	9.5.7a & 9.5.7b
50%	70%	Investment-grade covered bonds	9.5.4
60%	70%	Investment-grade PSE debt	9.5.8
50%	70%	Non-financials: Investment-grade corporate debt securities	9.5.5
40%	50%	Non-financials: Common equity	9.5.6
40%	50%	Financials: Investment-grade corporate debt securities	9.5.5.F
30%	40%	Financials: Common equity	9.5.6.F
40%	50%	Certificates of Deposit	9.5.9
10%	10%	Undrawn committed lines	11.1
15%	25%	Investment funds: Liquid mutual and MMFs	9.10.1.L & 9.10.2.L
10%	25%	Investment funds: Liquid ETFs	9.10.3.L
20%	85%	Non-life net earned premiums in the last year	61.2.N

ILR Liquidity needs – Factors 2022

ILR factors (1Y time horizon) - Liability liquidity: Retail and Institutional

		Time restraints					
		Low (less than 1 week)		***Medium*** (between 1 week and 3 months)		***High*** (more than 3 months)	
		Retail	Institutional	Retail	Institutional	Retail	Institutional
Economic penalty	***Low*** (no economic penalty)	50%	100%	25%	50%	1.25%	2.5%
	Medium (less than 20% economic penalty)	25%	50%	12.5%	25%	0%	0%
	High (more than 20% economic penalty)	1.25%	2.5%	0%	0%	0%	0%

ILR factors (3M time horizon) - Liability liquidity: Retail and Institutional

		Time restraints					
		Low (less than 1 week)		***Medium*** (between 1 week and 3 months)		***High*** (more than 3 months)	
		Retail	Institutional	Retail	Institutional	Retail	Institutional
Economic penalty	***Low*** (no economic penalty)	25%	50%	12.5%	25%	0%	0%
	Medium (less than 20% economic penalty)	12.5%	25%	6.25%	12.5%	0%	0%
	High (more than 20% economic penalty)	0%	1.25%	0%	0%	0%	0%

Factors		Liquidity needs	Rows
3M time horizon	1Y time horizon		
10%	10%	Unearned premiums – retail policyholders	33.E - 33.E.1
25%	25%	Unearned premiums – business policyholders	33.E.1
10%	40%	Non-life net incurred claims (including LAE, excluding Cat risk) – Current year	61.1.N.1
10%	40%	Non-life expenses (including LAE, excluding Cat risk) – Current year	61.4.N.1
25%	100%	Non-life net paid claims (including LAE, excluding Cat risk) – Previous years	61.1.N.2
25%	100%	Non-life paid expenses (including LAE, excluding Cat risk) – Previous years	61.4.N.2
15%	25%	Reinsurance recoveries/receivables	27.1.C
25%	100%	Catastrophe payments: Net (1Y)	33.G.2.a
0%	50%	Catastrophe payments: Net (beyond 1Y)	33.G.2 - 33.G.2.a
15%	25%	Catastrophe payments: Gross (1Y) - Net (1Y) = Ceded (1Y)	33.G.1.a - 33.G.2.a
1.25%	2.5%	Non-life: Flat charge (on net provisions) for potential sudden liquidity needs related to under-reserving	69.2
20%	25%	Retail and small business time deposits	24.3.a
15%	20%	of which are covered by deposit guarantee schemes (DGS)	24.3.a.DGS
20%	25%	Retail and small business demand deposits	24.D.a
15%	20%	of which are covered by deposit guarantee schemes (DGS)	24.D.a.DGS
40%	50%	Commercial time deposits	24.3-24.3.a-24.3.b-24.3.d
35%	40%	of which are covered by deposit guarantee schemes (DGS)	24.3.CTD.DGS
75%	100%	Commercial demand deposits	24.D-24.D.a-24.D.b-24.D.d
70%	80%	of which are covered by deposit guarantee schemes (DGS)	24.D.CDD.DGS
50%	100%	ILR Gross Derivative Liabilities - Eligible Cash Variation Margin Offset	39.5 - 39.6
85%	85%	Initial Margin	39.9
10%	20%	ILR Gross Derivative Liabilities	39.5
75%	100%	Short-term debt and the current portion of long-term debt	25
50%	100%	Long-term debt that can be accelerated	25.A + 25.B

75%	100%	Gross repurchase agreements and security lending transactions	(42.4 - 42.4.S) + (43.4 – 43.4.S)
12.5%	25%	Pledged contingent funding including credit facilities	12.1
50%	100%	Potential liquidity needs from a downgrade	33.F
1%	2.5%	GWP (last 12 months)	18

Annex 2: Company Projection Approach – Examples of cash inflows and outflows

The following table shows the cash inflows and outflows that should be included in the CPA calculation.

Cash inflows

Operating inflows

- Premiums and Deposits (Renewal/New Business)
- Cash Charges/Fees
- Reinsurance Recoverables
- Expenses – Intercompany Settlements
- Tax Payments (Inflows)
- Other Flows

Investing inflows

- Principal and Interest
- Dividends/Distributions
- Initial and Variation Margin Received
- Other Collateral Received
- Asset Sales (Pending Settlement)
- Other Flows

Financing inflows

- Capital Contributions
- Commitments
- Dividends from subsidiaries
- Other Flows
- Debt Issuance/Refinancing
- GICs
- Federal Home Loans Banks (FHLB)
- Repo/Securities Lending
- Credit Facilities (Incl. Contingency Funding Facilities)
- Intercompany Loans
- Commercial Paper
- Other Flows

Cash outflows

Operating outflows

- Non-Elective Benefits/Claims
- Elective Benefits/Claims
- Commissions
- Reinsurance Payables
- Expenses - Other
- Expenses - Intercompany Settlements
- Insurance Product Commitments
- Tax Payments (Outflows)
- Other Flows

Investing outflows

- Investment Commitments
- Initial and Variation Margin Paid
- Other Collateral Pledged
- Asset Purchases (Pending Settlement)
- Other Flows

Financing outflows

- Shareholder/Policyholder Dividends
- Capital contributions to subsidiaries
- Dividends to Parent
- Other Flows
- Debt Maturities/Debt Servicing
- GICs Benefits/Maturities
- FHLB
- Repo/Securities Lending
- Credit Facilities (Incl. Contingency Funding Facilities)
- Intercompany Loans
- Other Flows

Annex 3: IIM 2022 Technical specifications for ILR-related data rows

Row 9.4.a: Cash

Report all holdings of cash, including cash and currency on hand, demand deposits with banks or other financial institutions or other kinds of accounts that have the general characteristics of demand deposits. Include central bank reserves only if they can be withdrawn in a time of stress. Do not include cash equivalents, defined as short-term, highly liquid investments that are both readily convertible to known amounts of cash and subject to an insignificant risk of change in value assessed against the amount at inception. Do not include cash which is restricted as to its withdrawal or usage.

Row 9.5: Liquidity of invested assets

Include only assets that are traded in consistently deep and active repo or cash markets characterised by a low level of concentration on both sides of the transaction. Only include assets that have transparent and accurate valuations.

Only certain encumbered assets may be included. Assets encumbered to collateralize securities financing or derivatives liabilities that are reported in rows 39.2, 42.4, or 43.4 should be included. Assets encumbered for other reason should be excluded. For the purposes of these rows, assets are unencumbered if they are (i) free of legal, regulatory, contractual, or other restrictions on the ability of the reporting entity promptly to liquidate, sell, transfer or assign the assets; and (ii) not pledged, explicitly or implicitly, to secure or to provide credit enhancement to any transaction. Do not exclude assets that are owned outright at a subsidiary of the reporting entity, but have been pledged to secure a transaction with another subsidiary of the reporting entity; to the extent these assets remain unencumbered (ie. assets used to secure an internal transaction that remain unencumbered).

Exclude any assets that are owned strictly for the benefit of the policyholder or contract holder (ie. “segregated accounts”, “unit-linked assets” or “separate accounts”). Exclude any investments in these asset classes through investments funds whose liquidity may differ from its investments. Exclude transactions involving the purchase of securities that have been executed, but not yet settled.

Row 9.5.EA: Encumbered assets reported in 9.5 subrows

Report all encumbered assets that were reported in any of 9.5 subrows (9.5.1-9.5.9). Certain encumbered assets may be included in 9.5 subrows. Only assets encumbered to collateralize securities financing or derivatives liabilities that are reported in rows 39.2, 42.4, or 43.4 should be included. Provide more clarification on included encumbered assets in the Explanatory Statement.

Row 9.5.1: Highest quality sovereign and supranational securities

Report all holdings of securities issued or unconditionally guaranteed by sovereign entities or supranational organisations. For this row, the entity or organisation must have at least a credit rating equivalent to or better than AA-, or equivalent, from at least one external rating agency. Such securities must have an explicit guarantee as to the timely payment of principal and interest from the sovereign entity, including the sovereign’s central government, agency, ministry, department or central bank, or supranational organisation, which includes the Bank for International Settlements, the International Monetary Fund, the European Central Bank, the European Union, or a multilateral development bank with at least a AA- credit rating from at least one external rating agency. Do not include mortgage backed-securities included in Row 9.5.7.

Row 9.5.2: Sovereign and supranational securities in local currency

Report all holdings of securities issued or unconditionally guaranteed by sovereign entities, not included in Row 9.5.1, issued in local currency used to back payments in that jurisdiction or in the insurer's home jurisdiction. Such securities must have an explicit guarantee as to the timely payment of principal and interest from the sovereign entity, including the sovereign's central government, agency, ministry, department or central bank.[53] Do not include mortgage backed-securities included in Row 9.5.7.

Row 9.5.3: High quality sovereign and supranational securities

Report all holdings of liquid securities issued by or unconditionally guaranteed by a sovereign entity or Multilateral Development Bank. For this row, the entity or organisation must have at least an A-, or equivalent credit rating from at least one external credit rating agency, not included in Rows 9.5.1 and 9.5.2. Such securities must have an explicit guarantee as to the timely payment of principal and interest from the sovereign entity, including the sovereign's central government, agency, ministry, department or central bank, or multilateral development. Included securities must be "liquid," which is defined as those whose market price or the market haircut demanded on secured transactions collateralised by the security or equivalent securities has not changed by more than 10% during a 30 calendar-day period of significant stress. Do not include mortgage backed-securities included in Row 9.5.7.

Row 9.5.3.BBB: Other investment grade sovereign and supranational securities

Other investment grade sovereign and supranational securities with rating at least BBB-, or equivalent credit rating from at least one external credit rating agency, not included in Rows 9.5.1 and 9.5.2 and 9.5.3.

Covered Bonds:

Covered bonds are bonds issued by a bank or mortgage institution and are subject by law to special public supervision designed to protect bond holders. Proceeds deriving from the issue of these bonds must be invested in conformity with the law in assets which, during the whole period of the validity of the bonds, are capable of covering claims attached to the bonds and which, in the event of the failure of the issuer, would be used on a priority basis for the reimbursement of the principal and payment of the accrued interest. Such securities may not be issued by any affiliate or subsidiary of the insurer.

Row 9.5.4.a: Highest quality covered bonds

Report all holdings of liquid covered bonds with a credit rating of at least AA-, or equivalent from at least one external credit rating agency, not issued by an affiliate**.** Do not include mortgage backed-securities included in Row 9.5.7.

Row 9.5.4.b: Investment grade covered bonds

Report all holdings of liquid covered bonds with a credit rating of at least BBB-/Baa3, or equivalent from at least one external credit rating agency, not issued by an affiliate. Do not include amounts included in 9.5.4.a or mortgage backed-securities included in Row 9.5.7.

[53] There is no credit floor on these securities. See para. 50 (d) at http://www.bis.org/publ/bcbs238.pdf.

Corporate debt securities: For 9.5.5 rows, corporate debt securities includes only plain-vanilla assets whose value is readily available based on standard methods and does not depend on private knowledge (ie. excluding structured products or subordinated debt). "Liquid" is defined as those securities whose market price or the market haircut demanded on secured transactions collateralised by the security or equivalent securities has not changed by more than 20% during a 30 calendar-day period of significant stress.

Row 9.5.5.a: Non-financial highest quality corporate debt securities ■□

Report all holdings of liquid corporate debt securities (including commercial paper) with a credit rating of at least AA-, or equivalent from at least one external credit rating agency, **not** issued by financial sector entities or their affiliates.

Row 9.5.5.a.F: Financial highest quality corporate debt securities ■□

Report all holdings of liquid corporate debt securities (including commercial paper) with a credit rating of at least AA-, or equivalent from at least one external credit rating agency, issued by financial sector entities or their affiliates.

Row 9.5.5.b: Investment grade corporate debt securities (non-financials) ■□

Report all holdings of liquid corporate debt securities (including commercial paper) with a credit rating of at least BBB-/Baa3, or equivalent from at least one external credit rating agency, **not** issued by financial sector entities or their affiliates. Do not include amounts included in 9.5.5.a.

Row 9.5.5.b.F: Investment grade corporate debt securities (financials) ■□

Report all holdings of liquid corporate debt securities (including commercial paper) with a credit rating of at least BBB-/Baa3, or equivalent from at least one external credit rating agency, issued by financial sector entities or their affiliates. Do not include amounts included in 9.5.5.a.F.

Row 9.5.6: Liquid common equity securities (non-financials) ■□

Report all holdings of publically traded common equity issued by a **non-financial sector entity**. Such securities must be included in a major index and must be a reliable source of liquidity, ie. the market price or the market haircut demanded on secured transactions collateralised by the security or equivalent securities has not changed by more than 40% during a 30 calendar-day period of significant stress.

Row 9.5.6.F: Liquid common equity securities (financials) ■□

Report all holdings of publically traded common equity issued by a **financial sector entity**. Such securities must be included in a major index and must be a reliable source of liquidity, ie. the market price or the market haircut demanded on secured transactions collateralised by the security or equivalent securities has not changed by more than 40% during a 30 calendar-day period of significant stress.

Government Sponsored Entity (GSE) Securities Senior to Preferred Shares:

The 9.5.7 rows refer to mortgage-backed securities issued by or unconditionally guaranteed by a government sponsored entity (GSE). Such securities must have an explicit guarantee as to the timely payment of principal and interest from the GSE. Included securities must be "liquid," which is defined as those whose market price or the market haircut demanded on secured transactions collateralised

by the security or equivalent securities has not changed by more than 10% during a 30 calendar-day period of significant stress. Do not include other PSE debt securities included in Row 9.5.8.

Row 9.5.7.a: Highest quality GSE securities senior to preferred shares

Report all holdings of mortgage-backed securities issued by or unconditionally guaranteed by a government sponsored entity (GSE) with at least an AA-, or equivalent credit rating from at least one external credit rating agency.

Row 9.5.7.b: High quality GSE securities senior to preferred shares

Report all holdings of mortgage-backed securities issued by or unconditionally guaranteed by a government sponsored entity (GSE) with at least an A-, or equivalent credit rating from at least one external credit rating agency. Do not include amounts included in 9.5.7.a.

Row 9.5.8 Investment-grade public sector entity debt

Report all holdings of liquid investment-grade debt securities of public sector entities, including government entities below the sovereign level not included in Rows 9.5.1, 9.5.2, 9.5.3, or 9.5.7. The debt security must be backed by the full faith and credit of the public sector entity. “Debt securities” includes only plain vanilla assets whose value is readily available based on standard methods and does not depend on private knowledge (ie. excluding structured products or subordinated debt). “Liquid” is defined as those securities whose market price or the market haircut demanded on secured transactions collateralised by the security or equivalent securities has not changed by more than 20% during a 30 calendar-day period of significant stress. Investment-grade refers to securities with a credit rating of BBB-/Baa3 or higher. Securities must meet the investment grade criteria without credit enhancement (ie. bond insurance.) by a financial institution.

Row 9.5.9 Certificates of Deposit

Include all certificates of deposit with a maturity of less than a year or withdrawal penalty of less than 10% Exclude any deposits reported in row 9.4. Include deposits even if they are not issued as a receipt (ie. certificates of deposit with an International Security Identification Number (ISIN). Do not include demand deposits.

Row 9.5.10.1.L Investment funds: Liquid mutual funds (excl. separate accounts)

Include exposure to all liquid mutual funds excluding MMFs. A mutual fund is an open-end professionally managed investment fund that pools money from many investors to purchase securities. Despite the existence of fees and expenses, the advantages of mutual funds compared to direct investing in individual securities include not only economies of scale, diversification and professional management but also daily liquidity. A liquid mutual fund is a fund that is traded at the liquid and active market every working day and has not changed by more than 40% during a 30 calendar-day period of significant stress.

Row 9.5.10.2.L Investment funds: Liquid MMFs (excl. separate accounts)

Include exposure to all money market funds (MMFs). A MMF is an open-ended mutual fund that invests in short-term debt securities such as US Treasury bills and commercial paper. MMFs are managed with the goal of maintaining a highly stable asset value through liquid investments, while

paying income to investors in the form of dividends. MMFs are important providers of liquidity for financial intermediaries. They seek to limit exposure to losses due to credit, market and liquidity risks. A liquid MMF is a fund that is traded at the liquid and active market every working day and has not changed by more than 40% during a 30 calendar-day period of significant stress.

Row 9.5.10.3.L Investment funds: Liquid ETFs (excl. separate accounts) ■□

Include exposure to all exchange-traded funds (ETFs). An exchange-traded fund is a type of security that tracks an index, sector, commodity, or other asset, but which can be purchased or sold on a stock exchange the same way a regular stock can. An ETF can be structured to track anything from the price of an individual commodity to a large and diverse collection of securities. A liquid ETF is a fund that is traded at the liquid and active market every working day and has not changed by more than 40% during a 30 calendar-day period of significant stress.

Row 11.1: Size of undrawn committed lines □□

Report the total maximum undrawn value (total committed amount less the drawn portion) of all committed credit facilities obtained **from third parties**.

Row 12.1: Off-balance sheet or contingent financial liabilities □□

Report off-balance sheet or contingent liabilities and commitments **to third parties** that are usually disclosed in the notes to the consolidated financial statements. Report the gross notional amount of such obligations (ie. gross of collateral). In addition, provide a breakdown of the data based on notes to the consolidated financial statements in the Explanatory Statement, where available. Exclude contingent liabilities from:

- policy loan provisions in insurance contracts;
- obligations from repurchase agreements and securities lending;
- potential collateral posting for derivatives.

Row 12.1.c: of which is undrawn committed lines of credit outstanding

Row 18: Gross premiums written (GA + SA) ■■

Report all premiums written by all entities in all countries, for both general and separate accounts. These premiums are the contractually determined premiums on all policies which a company has issued in the period specified for this report, regardless of how they are accounted for under the national GAAP. For non-life insurance and reinsurance, gross premiums are the sum of direct premiums written, both earned and unearned, before any outgoing reinsurance.[54] For life insurance and reinsurance, gross premiums that should be included are the stock of insurance written that is recognised that year as earned on the Income Statement and the new flow written that year. If the number is different from what is reported on the Income Statement, provide details in the Explanatory Statement. Premiums for contracts where insurers do not accept material insurance risk from policyholders should be excluded.

$$\textbf{Row 18 (GA + SA)} = \textbf{Row 66 (GA only)} + \textbf{Row 66.S (SA only)}$$

[54] In these instructions, third-party reinsurance is broadly defined, including always both reinsurance from direct insurers and retrocession activities.

Row 24.3: Certificates of deposit outstanding

Report all certificates of deposit outstanding. Certificates of deposit are time deposits where the bank issues a receipt for the funds specifying that they are payable on a specific date seven or more days in the future. Include all certificates of deposit issued as securities, even if they were not issued as a receipt (ie. certificates of deposit with an International Security Identification Number (ISIN). Do not include demand deposits.

Row 24.3.a: of which is from retail or small business customers[55].

Row 24.3.a.DGS: of which are covered by deposit guarantee schemes (DGS)

Row 24.3.b: of which is from central banks.

Row 24.3.d: of which is from public sector entities.

$$\mathbf{24.3.a + 24.3.b + 24.3.d \leq 24.3}$$

Row 24.3.CTD: of which are commercial time deposits – automatically calculated

Row 24.3.CTD.DGS: of which are commercial time deposits covered by deposit guarantee schemes (DGS)

Row 24.D: Deposits

Report all deposits placed with licensed banking subsidiaries excluding certificates of deposit. These may include, but are not limited, to current accounts, transactional accounts, savings accounts, or time deposits other than certificates of deposit and may include retail or corporate or institutional deposits. These should not be included in Row 24 (and, as a result, in rows 24.1 through 24.4).

Row 24.D.a: of which is from retail or small business customers.

Row 24.D.a.DGS: of which are covered by deposit guarantee schemes (DGS)

Row 24.D.b: of which is from central banks.

Row 24.D.c: of which is from financial institutions.

Row 24.D.d: of which is from public sector entities.

$$\mathbf{24.D.a + 24.D.b + 24.D.c + 24.D.d \leq 24.D}$$

Row 24.D.CDD: of which are commercial demand deposits – automatically calculated

Row 24.D.CDD.DGS: of which are commercial demand deposits covered by deposit guarantee schemes (DGS)

Row 25: Short-term borrowing

[55] Small business customers are those customers with less than €1 million in consolidated deposits that are managed as retail customers and are generally considered as having similar liquidity risk characteristics to retail accounts. For more information, see the Basel II framework – International Convergence of Capital Measurement and Capital Standards, paragraph 231, June 2006.

Report all short-term borrowing, namely any debt or debt-like instruments maturing in the next 12 months, in Row 25. This should not include deposits, repurchase agreements or securities lending. The amount reported in this line should be the sum of Rows 25.1 and Row 25.2:

$$25.1 + 25.2 = 25$$

Row 25.1: Current portion of long-term debt and debt-like instruments

Report the current portion of long-term debt and debt-like instruments. This amount should include all obligations which are due within 12 months that are attributed to long-term debt (original maturity of more than 12 months), including long-term debt obligations that will fully mature and be repaid within the next 12 months. Include amounts linked to deposit-type insurance liabilities.[56]

Row 25.2: Short-term debt and debt-like instruments outstanding

Report all short-term obligations with original/initial maturity of 12 months or less**.** Include amounts linked to deposit-type insurance liabilities. Where a special purpose vehicle (SPV) or other structure is used to transform the maturity of the issued instrument, measure the maturity based on the instrument that is sold to investors (eg., include amounts of long-term funding agreements or fixed annuities that are placed into a SPV to back commercial paper).

Row 25.A: Long-term debt and debt-like instruments with provisions that could accelerate payment

Report the total face value of outstanding debt and/or debt-like instruments that contain any covenants relating to the issuing entity's financial condition or provisions that would allow the liability to be sold or put back to the issuer. Examples of such covenants are broadly captured under "Limitations on indebtedness" and may include, but are not limited to, limitations on leverage or interest coverage. Other examples of included liabilities are those extension features (where the issue can or choose not to extend the maturity of the liability) or puttable liabilities. Do not include debt containing only other covenants such as those pertaining to restrictions on payments, liens or assets, changes in control, or failure to pay principal or interest as scheduled.

Exclude amounts already reported in Rows 25.1 and 25.2 (borrowing - short term). Exclude amounts linked to deposit-type insurance liabilities and fixed annuities included in 33.A. Provide details of any such financial covenants or ratings triggers in the Explanatory Statement including the amount of the instrument and the specific requirements in the instrument.

Row 25.B: Long-term debt and debt-like instruments where payments could be accelerated at the holder's discretion:

Report the total value of all debt and debt-like instruments that contain provisions which allow the holder to request the early payment on the note. Exclude amount already reported in Row 25 (borrowing - short term). Exclude amount linked to deposit-type insurance liabilities. Provide details on any positive amount in the Explanatory Statement. Do not include amounts included in 25.A.

Row 27.1.C: Reinsurance receivable

Report reinsurance receivable assets. Include balances recoverable from assuming companies for

[56] Deposit-type insurance liabilities are those products that do not incorporate significant insurance risk. Examples of products that should be reported include Guaranteed Investment Contracts (GICs), Funding Agreements, Annuities Certain, Capital Redemption Contracts, and Funding Agreement-backed or Fixed Annuity-backed securities.

paid and unpaid losses and loss expenses.

Row 33.A: Surrender value of insurance liabilities (normal course of business)
Report the value of **life insurance and annuity liabilities** or similar saving products written as liabilities of insurance licensed entities that can be surrendered or transferred as cash to an unaffiliated insurer upon a request by policyholders.

The value of the surrender is the amount that the insurer is required to pay (total "cash out") as a result of the policyholder's request, regardless whether the full payment is not remitted directly to the policyholder. For example, if the insurer would be required to remit payment to a taxing authority as a result of the surrender, this payment shall be included in the amount reported. Partial surrenders shall be treated in the same way as total surrenders. However, partial surrenders should only be included in the submission if the insurance policy can partially be surrendered in the reporting year.[57]

This amount shall include:
- Direct life insurance and similar saving products either with a contractual surrender option or where the policyholder has a legal right to surrender at any time (consider the actual situation at the reporting date and not the situation at the underwriting date);
- Life reinsurance, if it implies a payment to the cedant in case of surrenders by direct policyholders;
- Group pension contracts;
- Deposit-type contracts; and
- Potential surrender payment on insurance contracts containing bifurcated embedded derivatives.

This amount shall exclude:
- Policy loans;
- Any debt-like liabilities reported in Row 25.A relating to debt like instruments whose payments could be accelerated; and
- Deposits at banking subsidiaries.

For rows related to separate account/unit-linked (S) surrenders: If any funds paid upon surrender of a policy would come from another source besides the liquidation of assets solely attributable to that policyholder, those amounts should be classified as general account surrenders. This is the case even if liabilities receive separate account treatment in the accounting regime used in the other sections of the reporting Template. If the amount that can be surrendered for a SA policy is greater than the separate account/unit-linked assets for that policy, then the excess amount should be considered a general account surrender.

[57] Example: if the reporting year is 2017 and a policyholder can only surrender partially at specific predefined dates in the future, eg 2020, then do not include the number in the 2017 submission but in the 2020 submission.

		Time restraints		
		Low (less than 1 week)	Medium (between 1 week and 3 months)	High (more than 3 months)
Economic penalty[58]	Low (33.A.1) (no economic penalty)	**33.A.1.1**	**33.A.1.2**	**33.A.1.3**
	Medium (33.A.2) (less than 20% economic penalty)	**33.A.2.1**	**33.A.2.2**	**33.A.2.3**
	High (33.A.3) (more than 20% economic penalty)	**33.A.3.1**	**33.A.3.2**	**33.A.3.3**

Note: each of the cells in the above matrix are mutually exclusive.

Row 33.A: Aggregate total of full surrender value / cancellation refunds (Sum of 33.A.1, 33.A.2, and 33.A.3) (on pro rata basis if policy is cancelled) ■■

Row 33.A.1: of which is available without economic penalty (Sum of Rows 33.A.1.1, 33.A.1.2 and 33.A.1.3). ■■

Row 33.A.1.1: of which is available without time restraints or with time restraints of less than a week (Subset of Row 33.A.1). ■■

Row 33.A.1.1.S: of which are classified as separate account or unit-linked liabilities (Subset of 33.A.1.1). □■

$$\mathbf{33.A.1.1.S} \leq \mathbf{33.A.1.1}$$

[58] For the purposes of this exercise, the value of the Economic Penalty should only include contractual penalties (ie surrender charges) imposed by the insurer on policyholders that surrender early. It should not include penalties that are imposed by third parties, or are not explicitly quantified in the contract, such as the economic value of foregone benefits.

Row 33.A.1.2: of which is available within 3 months (Subset of 33.A.1; exclude amounts reported in Row 33.A.1.1).

Row 33.A.1.2.S: of which are classified as separate account or unit-linked liabilities (Subset of 33.A.1.2).

$$\mathbf{33.A.1.2.S} \leq \mathbf{33.A.1.2}$$

Row 33.A.1.3: of which is available after 3 months. (Subset of Row 33.A.1)

Row 33.A.1.3.S: of which are classified as separate account or unit-linked liabilities (Subset of 33.A.1.3).

$$\mathbf{33.A.1.3.S} \leq \mathbf{33.A.1.3}$$

Row 33.A.2: of which is available with an economic penalty less than 20% and more than 0% (Sum of Rows 33.A.2.1, 33.A.2.2 and 33.A.2.3).

Row 33.A.2.1: of which is available without time restraints or with time restraints of less than a week (Subset of Row 33.A.2).

Row 33.A.2.1.S: of which are classified as separate account or unit-linked liabilities (Subset of 33.A.2.1).

$$\mathbf{33.A.2.1.S} \leq \mathbf{33.A.2.1}$$

Row 33.A.2.2: of which is available within 3 months. (Subset of Row 33.A.2; exclude amounts reported in Row 33.A.2.1).

Row 33.A.2.2.S: of which are classified as separate account or unit-linked liabilities (Subset of 33.A.2.2).

$$\mathbf{33.A.2.2.S} \leq \mathbf{33.A.2.2}$$

Row 33.A.2.3: of which is available after 3 months. (Subset of Row 33.A.2).

Row 33.A.2.3.S: of which are classified as separate account or unit-linked liabilities (Subset of 33.A.2.3).

$$\mathbf{33.A.2.3.S} \leq \mathbf{33.A.2.3}$$

Row 33.A.3: of which is available with an econ. penalty equal to or greater than 20%.

Row 33.A.3.1: of which is available without time restraints or with time restraints of less than a week (Subset of Row 33.A.3).

$$\mathbf{33.A.3.1.S} \leq \mathbf{33.A.3.1}$$

Row 33.A.3.1.S: of which are classified as separate account or unit-linked liabilities (Subset of 33.A.3.1).

Row 33.A.3.2: of which is available within 3 months (Subset of Row 33.A.3; exclude amounts reported in Row 33.A.3.1).

Row 33.A.3.2.S: of which are classified as separate account or unit-linked liabilities (Subset of 33.A.3.2).

$$\mathbf{33.A.3.2.S} \leq \mathbf{33.A.3.2}$$

Row 33.A.3.3: of which is available after 3 months. (Subset of Row 33.A.3).

Row 33.A.3.3.S: of which are classified as separate account or unit-linked liabilities (Subset of 33.A.3.3).

$$\mathbf{33.A.3.3.S} \leq \mathbf{33.A.3.3}$$

For 33.A.7.a, 33.D and 33.E rows, retail policies refer to those directed by natural persons. This is in contrast to policies that are directed by businesses (non-retail or commercial). Terminology may vary by company, but for these rows amounts should be reported by whether a natural person or business makes the decision to surrender or cancel the policy or to take a policy loan. In the liquidity metrics the IAIS is currently developing, separate haircuts may be applied by policyholder type.

Row 33.D: Surrender value by policyholder type

Provide further detail of the surrender values reported in Rows 33.A.1.1 - 33.A.3.3 based on policyholder type, with additional information on surrender value stemming from retail policies[59].

Row 33.D.1.1: Amount reported in Row 33.A.1.1 attributable to retail policyholders.

Row 33.D.1.1.S: of which are classified as separate account or unit-linked liabilities (Subset of 33.D.1.1).

$$\mathbf{33.D.1.1.S} \leq \mathbf{33.D.1.1}$$

Row 33.D.1.2: Amount reported in Row 33.A.1.2 attributable to retail policyholders.

Row 33.D.1.2.S: of which are classified as separate account or unit-linked liabilities (Subset of 33.D.1.2).

$$\mathbf{33.D.1.2.S} \leq \mathbf{33.D.1.2}$$

Row 33.D.1.3: Amount reported in Row 33.A.1.3 attributable to retail policyholders.

Row 33.D.1.3.S: of which are classified as separate account or unit-linked liabilities (Subset of 33.D.1.3).

$$\mathbf{33.D.1.3.S} \leq \mathbf{33.D.1.3}$$

Row 33.D.2.1: Amount reported in Row 33.A.2.1 attributable to retail policyholders.

Row 33.D.2.1.S: of which are classified as separate account or unit-linked liabilities (Subset of 33.D.2.1).

$$\mathbf{33.D.2.1.S} \leq \mathbf{33.D.2.1}$$

Row 33.D.2.2: Amount reported in Row 33.A.2.2 attributable to retail policyholders.

Row 33.D.2.2.S: of which are classified as separate account or unit-linked liabilities (Subset of 33.D.2.2).

$$\mathbf{33.D.2.2.S} \leq \mathbf{33.D.2.2}$$

[59] Retail policies are defined as those written to a natural person, single individual or family unit rather than trade or business.

Row 33.D.2.3: Amount reported in Row 33.A.2.3 attributable to retail policyholders.

Row 33.D.2.3.S: of which are classified as separate account or unit-linked liabilities (Subset of 33.D.2.3).

$$33.D.2.3.S \leq 33.D.2.3$$

Row 33.D.3.1: Amount reported in Row 33.A.3.1 attributable to retail policyholders.

Row 33.D.3.1.S: of which are classified as separate account or unit-linked liabilities (Subset of 33.D.3.1).

$$33.D.3.1.S \leq 33.D.3.1$$

Row 33.D.3.2: Amount reported in Row 33.A.3.2 attributable to retail policyholders.

Row 33.D.3.2.S: of which are classified as separate account or unit-linked liabilities (Subset of 33.D.3.2).

$$33.D.3.2.S \leq 33.D.3.2$$

Row 33.D.3.3: Amount reported in Row 33.A.3.3 attributable to retail policyholders.

Row 33.D.3.3.S: of which are classified as separate account or unit-linked liabilities (Subset of 33.D.3.3).

$$33.D.3.3.S \leq 33.D.3.3$$

Row 33.E: Unearned premiums

Report the value of premiums paid-in but not earned that the insurer is legally or contractually obligated to repay on request by the policyholder. In the explanatory statement, provide an overview of the terms of such repayments, including any applicable delays or contractually assessed penalties. For life contracts, this would often only apply to policies without cash values. Prepaid premium or future premium deposit funds that increase policy surrender values or have a separate cash balance that can be withdrawn should be included in 33.A rows. **Do not include amounts that are included in 33.A rows.**

Row 33.E.1: Unearned premiums – business policyholders

Report the part of 33.E that is for business (non-retail) policyholders.

Row 33.F: Additional payments due as the result of credit downgrade

Report the maximum value of any additional payments, including collateral or margin that could be required in the event that the insurer or any subsidiary is downgraded or breaches any other covenant triggers based on financial health, other than credit ratings (covenants driven by regulatory capital levels, leverage ratios, etc.) Do not include amounts included in Rows 25.A or 25.B. This should reflect payments from all sources including reinsurance contracts. Provide a description of these payments in the Explanatory Statement.

Row 33.F.1: two notches

Row 33.F.2: to BB+

Row 33.F.3: to C

Row 33.G: General Insurance Catastrophe Claim Payments:

Report an estimated outflow (including claims and related expenses) in the greater of a 1 in 200 global event across (PML 1/200) all general insurance perils and the catastrophic event(s) used by the insurer's internal liquidity monitoring [and/or] stress testing. Include all sources of payments from general (re)insurance contracts (for example, include payments made for death or injury under workplace liability contract.). Payments on stand-alone life (re)insurance contracts for death related to a catastrophic event may be excluded.

Row 33.G.3: Gross of reinsurance (PML 1/200)

Row 33.G.3.a: The amount in 33.G.3 that would be expected to be paid within 1 year of the start of the catastrophe scenario (PML 1/200)

Row 33.G.4: Net of reinsurance (PML 1/200)

Row 33.G.4.a: The amount in 33.G.4 that would be expected to be paid within 1 year of the start of the catastrophe scenario less any expected reinsurance recoveries received within the same time frame (PML 1/200).

Row 38.7a: Capital Received

Report capital funds received (during the reporting period) including dividends from subsidiaries, capital contributions, and other capital commitments.

Row 38.7b: Capital Paid

Report capital funds paid including shareholder and/or policyholder dividends, and capital contributions to subsidiaries.

Row 38.7b.D: Shareholder dividends paid

Report the amount of all dividends paid to shareholders during the last 12 months.

Row 39.5: ILR Gross Derivative Liabilities

The calculation of ILR gross derivatives liabilities is performed by contractual netting set. A contractual netting set is the set of all contracts subject to master netting agreement. Derivative transactions not subject to a master netting agreement are their own contractual netting set.

ILR gross derivative liabilities is the sum of the netting sets that have negative replacement cost from the perspective of the insurer (ie the insurer's current position has a negative market value).

$$\sum_{netting\ sets} \max(-gross\ replacement\ cost\ of\ derivatives\ in\ netting\ set, 0)$$

Because of an insurer may have derivative assets and liabilities within a netting set and because this excludes derivatives held in separate accounts, this amount should be less than or equal to the value reported in 39.2.

$$\mathbf{39.5} \leq \mathbf{39.2}$$

Do not include the value of any bifurcated embedded derivatives related to insurance contracts. The liquidity risk on these products is assessed using Row 33. Include any bifurcated embedded derivatives that do not have a host insurance contract. Do not include the value of any collateral cash or securities collateral pledged or received in the calculation of ILR Gross Derivatives Liabilities.

Row 39.6: ILR Eligible Cash Variation Margin

Report the value of any cash collateral provided to counterparties on ILR Gross Derivative Liabilities in the derivative's settlement currency. Exclude any amounts reported in row 9.4.

Row 39.6.ALL: ILR Eligible Variation Margin

Report the value of any collateral provided to counterparties on ILR Gross Derivative Liabilities in the derivative's settlement currency. Include any amounts reported in row 39.6 and other non-cash forms of collateral.

$$\mathbf{39.6} \leq \mathbf{39.6.ALL}$$

Row 39.9: Initial Margin

Report the fair value of the securities posted as initial margin by an insurer for derivatives contracts. Include the value of securities pasted as initial margin that are included in rows 9.5.x. Do not include any cash initial margin that is not reported in row 9.4.

Row 42.4: Repurchase agreements (gross) ■■

Gross fair value of recognised and non-recognised repurchase transaction liabilities (also called "securities sold under agreements to repurchase"). This is equal to the amount of cash and securities borrowed against securities collateral. Include all transactions regardless of whether or not the contract contains the right to resell, re-use or re-hypothecate the collateral (assets borrowed).

Row 42.4.S: Of those repurchase agreement liabilities in 42.4 which are conducted entirely from the separate account. Include amounts here only if all financial risks including financing collateral/margin are obligations solely of the separate account and not of the insurer. □■

Row 43.4: Securities lending (gross) ■■

Report the gross fair value of all recognised and non-recognised securities lending liabilities (ie the amount of cash or fair value of non-cash collateral received from the counterparty in exchange for lending securities). Include all transactions regardless of whether or not the contract contains the right to resell, re-use or re-hypothecate the collateral.

Row 43.4.S: Of the securities lending liabilities in 43.4 which are conducted entirely from the separate account. Include amounts here only if all financial risks including financing collateral/margin are obligations solely of the separate account. □■

Row 61.1.N: Net incurred claims (non-life only) ■□

Report the total value of all net claims (including all claim/loss related expenses (LAE)) which incurred in the reporting year. Net incurred claims (including LAE) include direct and assumed business while deducting the ceded business. Incurred claims include all paid claims and following reserves: RBNS, IBNR or IBNER.

Row 61.2.N: Net earned premium (non-life only) ■□

Report the total value of net premium which was earned in the reporting year. Net earned premiums include direct and assumed business while deducting the ceded business.

Row 61.4.N: Expenses (non-life only) ■□

Report the value of all expenses (excluding all claim/loss related expenses) which incurred in the reporting year. Do not include expenses reported under row 61.1 as loss adjustment expenses (LAE) in order to avoid double-counting. Expenses include direct and assumed business while deducting the ceded business.

Row 69.2: Total non-life and health net technical provision, excl. sep. accounts ■□

Report total non-life and health net (net of reinsurance) technical provisions which are held for the purpose of fulfilling insurance contracts (including policyholder dividends, funds held pursuant to reinsurance treaties, future policy benefits, policyholder account balances, loss reserves, asset valuation reserves and interest maintenance reserves related to insurance products, and unearned premiums reserves and excluding advance premiums received). Report values after considering any reinsurance contract or cession.