INTERNATIONAL ASSOCIATION OF
INSURANCE SUPERVISORS

Public

Development of Liquidity Metrics: Phase 1 – Exposure Approach

Public Consultation Document

9 November 2020

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.

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Contents

List of Abbreviations

ASF	Available Stable Funding
BCBS	Basel Committee on Banking Supervision
CP	Company Projection
EA	Exposure Approach
FSB	Financial Stability Board
GME	Global Monitoring Exercise
G-SIIs	Global Systemically Important Insurers
HQLA	High Quality Liquid Assets
IIM	Individual Insurer Monitoring
ILR	Insurance Liquidity Ratio
LCR	Liquidity Coverage Ratio
NSFR	Net Stable Funding Ratio
RSF	Required Stable Funding
SWM	Sector-Wide Monitoring

1 Introduction

To support its Mission of effective and globally consistent supervision to protect policyholders and to contribute to global financial stability, the IAIS adopted in November 2019 the holistic framework for the assessment and mitigation of systemic risk in the global insurance sector (holistic framework).[1]

The key elements of the holistic framework are: an enhanced set of supervisory measures for macroprudential purposes, a global monitoring exercise (GME)[2] and an assessment by the IAIS of the consistent implementation of enhanced ongoing supervisory policy measures and powers of intervention.

As a key element of the holistic framework, the GME serves to assess global insurance market trends and developments and to detect the possible build-up of systemic risk in the global insurance sector. This includes an annual assessment by the IAIS of potential systemic risk arising from sector-wide trends with regard to specific activities and exposures, but also the possible concentration of systemic risks at an individual insurer[3] level (using an updated assessment methodology) arising from these activities and exposures.

The GME includes the following elements:

- Sector-wide monitoring (SWM);
- Individual insurer monitoring (IIM);
- Data analysis by the IAIS to assess any potential systemic risk stemming from a sector-wide or individual insurer level, considering also broad financial market developments;
- Collective discussion of the results of the assessment within the IAIS; and
- Reporting to participating insurers, IAIS Members, the Financial Stability Board (FSB), and the public.

The IIM assessment is no longer focused on identifying prospective Globally Systemically Important Insurers (G-SIIs), but rather aims to support a comprehensive assessment by the

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

[2] https://www.iaisweb.org/page/supervisory-material/financial-stability/file/87206/global-monitoring-exercise

[3] Where this document refers to the term 'individual insurer' this is to distinguish clearly to risks stemming from individual insurers versus risks stemming from collective exposures and activities and does not refer to individual legal entities.

IAIS of the potential build-up of systemic risk in the insurance sector as a whole by looking at potential systemic risk from activities or exposures concentrated in individual insurers.

The assessment includes:

- Individual absolute assessment: scores of individual insurers are calculated based on an absolute indicator-based methodology;
- Individual relative assessment: scores of individual insurers are calculated based on a relative indicator-based methodology;
- Cross-sectoral analysis, comparing the systemic footprint of individual insurers and the Insurer Pool with that of banks;
- Trend developments within the Insurance Pool; and
- Ancillary indicators, such as liquidity risk metrics.

To further aid the assessment of systemic risk in the global insurance sector, the IAIS can make use of ancillary indicators in its analysis. Ancillary indicators are used in the context of the IIM exercise and do not affect the total individual quantitative score. However, they may provide additional context that can inform the overall assessment.

Paragraph 58 of the November 2019 GME document states: "The IAIS is currently developing liquidity metrics. These liquidity metrics will serve as a tool for the IAIS to assess insurers' liquidity exposures. They will not be a binding requirement, but rather a monitoring tool, and will help identify trends in insurer and insurance-sector liquidity. The IAIS plans to consult on metrics for liquidity monitoring in 2020 and 2021."

This current paper is developed to consult on one metric the IAIS has developed as an ancillary indicator for the monitoring of liquidity risk. The IAIS' liquidity metrics will highlight potential vulnerabilities, risk drivers, and trends of insurers and the insurance sector rather than being binding requirements. Insurers have been exposed to liquidity shortfalls in previous crises.[4]

The IAIS plans to work further on the liquidity metric introduced in this paper and to consult on other liquidity metric(s) in 2021. Input received on this paper will inform the development of the forthcoming one.

1.1 Objective and scope

The IAIS' liquidity metrics facilitate the monitoring of the global insurance industry's liquidity risk. Liquidity risk could be a potential source of systemic risk transmission from the insurance industry due to insurers' large investments in certain asset classes and the interconnections between insurers and the real economy. In addition, other interconnections between financial sectors could make it possible for a liquidity shortage in one sector (eg, insurance) to spread

[4] See, eg., Das U, Davies N, Podpiera R (2003) Insurance and issues in financial soundness. IMF working paper 03/138.

to another (eg, banking) through channels such as common asset holdings, direct interconnections, and public confidence.

The liquidity metrics will rely on data from IIM and be computed for each participating insurer on an enterprise-wide basis. The IAIS plans to use IIM data for two reasons. First, IIM data allows monitoring of liquidity risk at a more granular level than the SWM data collection, for which supervisors submit aggregated data related to their jurisdiction. Liquidity is not fungible across enterprises and analysing liquidity risk using aggregated jurisdictional data could conceal potential risks. Second, using IIM data allows for the development of more relevant and reliable metrics. The SWM data collection relies on existing regulatory reporting, which varies greatly across jurisdictions, particularly with regards to insurance liabilities. Creating meaningful global analyses from these disparate data sources and definitions would be challenging.

The IAIS' use of the metrics will focus as much on understanding trends and drivers of liquidity risk for companies and the industry as on the relative level of the liquidity metrics for a company and in the sample. Because of the limitations of different assumptions and approaches, the IAIS will develop multiple different liquidity metrics for use in monitoring. Additionally, the emphasis of the liquidity metrics is on monitoring of risk.

1.2 Structure

The remainder of this Public Consultation Paper is structured as follows:

- Section 2: Exposure approach and alternatives;
- Section 3: Insurance Liquidity Ratio; and
- Section 4: Next Steps.

2 Exposure Approach and Alternatives

The IAIS has split the development of liquidity metrics into two phases. During Phase 1, the IAIS will develop an Insurance Liquidity Ratio (ILR), which will use an exposure approach (EA) and is further defined in the following section. An EA applies factors to balance sheet items and off-balance sheet exposures to measure liquidity risk. During Phase 2, the IAIS will develop other liquidity metrics, including a company projection (CP) approach. The CP approach utilizes insurers' projections of cash flows to assess liquidity risk.

During Phase 1, the IAIS will leverage 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 through the use of short-term funding and potential withdrawals from insurance contracts. Phase 1 will refine these

measurements and combine them with measurements of other liquidity needs and the liquidity of assets.

The strengths and weaknesses of the two approaches are summarised in the table below:

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	• More risk sensitive • Additional information about timing mismatches between liquidity need and sources	• More complicated • Decreased comparability due to differences in assumptions across companies • Less transparent • More burdensome

Subject to implementing the feedback received to this public consultation, the IAIS will enter into Phase 2 of developing the liquidity metrics, with a second consultation paper envisaged for 2021. Following the feedback on that, the IAIS will be able to finalise the metrics that will be used to monitor liquidity risk as part of the GME.

Question 1: Do you agree with the IAIS' plan for the development of liquidity metrics for monitoring? If not, please explain what changes you recommend and why.

Question 2: Should the IAIS consider any other approaches or alternatives when developing liquidity metrics? If so, please explain.

3 Insurance Liquidity Ratio

3.1 Overview

The ILR is the ratio of an insurer's liquidity sources and needs over a one-year assumed liquidity stress.

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

The IAIS chose initially to focus on a one-year stress horizon. While this is longer than the horizon used by some analysts and certain regulatory requirements in other sectors (eg, the Basel Committee on Banking Supervision's Liquidity Coverage Ratio (BCBS's LCR)), insurers are relatively less vulnerable to liquidity stresses that resolve over shorter horizons. Some of the largest drivers of insurer 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.

The ILR focuses on an insurer's general accounts. Liquidity risk within separate accounts is borne by the policyholder, rather than the insurer.[5] The IAIS may develop separate metrics for monitoring in a future period to capture any potential risk from these products.

When determining the parameters of the ILR, the IAIS looked at a number of sources, including the approaches of insurance supervisors, rating agencies, and bank supervisors. A non-comprehensive summary of these is provided in Annex 1. For liquidity needs, the ILR would primarily leverage prior IAIS work on systemic risk identification. For the treatment of assets, the IAIS relied most heavily on bank regulations. 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. While insurers are less exposed to liquidity shortfalls than banks, both sectors invest in certain 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 studying on these common issues.

Question 3: Should the IAIS develop additional liquidity metrics that examine other time horizons? If so, how should these metrics differ from the proposed metric?

Question 4: Do you agree with the exclusion of separate accounts from the ILR? If not, how should separate accounts be incorporated?

3.2 Liquidity Sources

A key input in the calculation of an ILR is the insurers' sources of liquidity. This section identifies significant sources of liquidity for inclusion in the ILR.

The following table represents typical sources of liquidity of an insurance company. 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 for liquidity sources reflect both the ability to sell assets within a particular timeframe 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. Therefore only 85% of the current value of high quality bonds is considered available for purposes of calculating the ILR. The

[5] For the purposes of the IIM and the ILR, 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 ILR or IIM.

table below also shows the corresponding factor after taking the appropriate haircut for each liquidity source.

Table 2: ILR Asset Factors

Factors	Liquidity Sources	Rows
100%	Cash	9.4.a
100%	Sovereigns rated AA- and above	9.5.1
100%	Sovereigns in local currency	9.5.2
85%	Sovereigns rated A- and above	9.5.3
85%	GSE securities senior to preferred shares rated above A-	9.5.7a and 9.5.7b
70%	Investment-grade covered bonds	9.5.4
70%	Investment-grade public sector entity debt	9.5.8
70%	Investment-grade corporate debt securities	9.5.5
50%	Common equity	9.5.6

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

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. Below is a summary table of liquidity sources and their factors from different regimes/institutions. More details regarding existing liquidity frameworks may be found in Annex 1. In the case of the Net Stable Funding Ratio (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: Asset Factors from Other Approaches

	BCBS		S&P (US and Can. Life)[6]		S&P (Global)[7]	AM Best[8]	
	LCR[9]	NSFR[10]	1 month	1 year		Short-Term	Long-Term
Cash	100%	100%	100%	100%	99%[11]	100%	100%
Highest Quality Sovereign Debt	100%	95%	100%[12]	100%[12]	90%	100%[14]	100%[14]
Sovereign Debt in Local Currency	100%	95%	96/98%[13]	100%[13]	90%	N/A[14]	N/A[14]
High Quality Sovereign Debt	85%	85%	96/98%[13]	100%[13]	90%	N/A[14]	N/A[14]
Highest Quality Covered Bonds	85%	85%	96/98%[15]	100%	90%	60/75%[16]	70/90%[16]
Highest and High Quality GSE Securities	0/85/100%[17]	0/85/100%[17]	90%[18]	90%[18]	90%	90%[18]	95%[18]
Investment-Grade Corporate Bonds	50/85%[19]	50/85%[19]	96/98%[15]	100%	90%	75%	90%
Investment-Grade Public Sector Entity Debt	85/100%[17]	85/100%[17]	90%	90%	90%	0%[20]	0%[20]
Liquid Common Equity	50%	50%	70%	85%	50%	70%	70%

[6] Standard and Poor's Ratings Services, Life: Liquidity Model for U.S. and Canadian Life Insurers (2004). S&P recently superseded this criteria with more general criteria for rating insurers. Their newer criteria lacks details on the treatment of different asset classes.
[7] Standard and Poor'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.
[8] AM Best, AM Best's Stress Liquidity Ratio for US Life Insurers (2017).
[9] BCBS, Basel III: The Liquidity Coverage Ratio and liquidity risk monitoring tools (2013), *available at* https://www.bis.org/publ/bcbs238.pdf.
[10] BCBS, Basel III: the net stable funding ratio (2014), *available at* https://www.bis.org/bcbs/publ/d295.pdf.
[11] 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.
[12] S&P's U.S. criteria includes a 100% factor for U.S. government securities. No general treatment of sovereign debt is specified.
[13] S&P's criteria includes a list of developed countries and international financial centers. Bonds issued by corporations or governments not on this list would receive more punitive treatment.
[14] Because the AM Best methodology is for the U.S., only factors applicable to U.S. Government Securities are specified. AM Best only prescribes factors for U.S. obligations.
[15] S&P uses a 98% factor for public bonds rated A- and above. Other investment-grade public bonds receive a 96% factor.
[16] AM 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.

The IAIS anticipates converging definitions for these asset classes further towards the BCBS's definitions. Most investments in investment funds will not qualify under these definitions for inclusion in the ILR. The liquidity of investment funds can differ significantly from the underlying investments, particularly during times of market stress or distress at a fund's sponsor. Recently, even certain funds regarded as among the most liquid experienced outflows that required intervention by central banks.

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.

Expected future premiums over the next year are not currently included within liquidity sources. While premiums are a source of liquidity for insurers, 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 would require including these and other items as liquidity needs; hwever, the IAIS has not historically collected data on claims and expenses. Consequently, premiums and expected business-as-usual expenses are conservatively assumed to offset and neither are currently included in the metric. In 2021, the IAIS will consider whether this assumption should be modified and whether the additional accuracy of risk measurement from including these additional liquidity needs and sources would offset the potential added complexity.

In 2021, the IAIS will assess the treatment of instruments issued by financial institution. Previously, the IAIS has not differentiated between instruments issued by financial institutions and other issuers. The 2020 IIM Data Collection Exercise includes additional rows related to these obligations. The IAIS will analyse this data and discuss it in 2021. Additionally, the IAIS will consider whether to include time deposits as a source of liquidity.

Encumbered assets arising from repurchase agreements, securities lending, or derivatives transactions would be eligible for inclusion as ILR liquidity sources. This is consistent with the measurement of these liquidity needs on a gross basis.[21] 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,

[17] The BCBS LCR and NSFR treat Public Sector Entities (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.
[18] No general treatment of GSEs is specified. The factor for public pass-through mortgages is displayed.
[19] 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.
[20] Public-sector debt is not included in AM Best's classification of liquid assets.
[21] For example, see the treatment of derivatives in section 3.3.2.2 and treatment of securities lending transactions in section 0.

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 to not roll over these transactions during a time of liquidity stress.

Question 5: Do you agree with the proposed factors for liquidity sources? If not, please explain.

Question 6: Do you agree with the treatment of investment funds? If not, please explain and suggest an alternative treatment.

Question 7: Do you agree with the treatment of premiums? If not, please explain how premiums and excluded expenses should be treated in the ILR.

Question 8: How should instruments issued by financial institutions be treated within the ILR?

Question 9: Do you agree with the inclusion of certain encumbered assets as liquidity sources within the ILR or should the IAIS alternatively exclude these encumbered assets and measure the related liquidity needs on a net basis?

3.3 Liquidity Needs

3.3.1 Insurance Liquidity Needs

Liquidity needs stemming from the liability of insurers can originate from claims or policyholders' behaviours that diverge from the planned expected cash outflows. Policyholders' behaviour can trigger surrender payment[22] or return of unearned premiums, whereas liquidity distress from claims might be triggered by payment driven by catastrophic events. Consistent with the treatment of premiums, the ILR would currently not include as liquidity needs most claim payments and expenses.

3.3.1.1 Liability Surrenders

Although, mass surrenders[23], withdrawals or terminations are rare in insurance and therefore could be considered tail events, they can significantly deteriorate the stability and predictability of the future cash flows, having a negative impact on the liquidity of insurance undertakings. Consequently, the ILR includes a measurement of this risk.

An example of a major liquidity stress intensified by a policyholder run driven by the eroded consumers' confidence in the insurer's ability to pay back the surrenders values is that of the

[22] The value of the surrender can be defined as "the amount that the insurer is required to pay (total "cash out") as a result of the policyholder's request, regardless if the full payment is not remitted directly to the policyholder". For further details, please see: IAIS – "Technical Specifications for the 2020 Individual Insurer Monitoring (IIM) Data Collection Exercise", 2020.

[23] 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%.

Ethias group[24]. In 2007 the Ethias group had 1.1 million individual customers and accounted for almost 13% of the Belgian insurance market. During the global financial crisis, the Ethias group was particularly affected by the fall in the value of its shareholding in Dexia, by the consequences of the stock market collapse at the beginning of 2008 and by the incurred losses stemming from 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. Consequently, the deterioration of the policyholders' confidence in the group's ability to pay back the surrender values and the design of a specific saving products ("First"), that allowed customers to withdraw at any time without any penalty, caused a jump in the surrender rates (from 0.3% to between 2.44% and 4.88% in one month[25]). Severe liquidity problems began to develop for the group. In order to restore confidence and improve the solvency position, the Belgian authorities recapitalised the Ethias group with an injection of € 1,500 million.

As described in the Ethias case, the existence and the level of surrender penalties associated with a contract can determine the policyholder decision to surrender in stressed conditions. For example, surrender disincentives such as surrender penalties can reduce the surrender risk. Additionally, there are further factors that could mitigate or exacerbate the policyholders' intention to withdraw their policies. These incentives and disincentives may change over time.

Policyholders' behaviours are based on the complex interaction of factors including the insurer's reputation, the market environment, policyholders' personal circumstances, and the product characteristics.[26] A drop in policyholders' income or in the value of insurance policies compared to other investment opportunities are economic triggers that could incentivise policyholders to withdraw. In particular, policyholders with low income are more likely to stop paying for fees and regular premiums and to surrender their contracts in case of financial distress. Moreover, higher expected external returns, such as spikes in interest rates or expected stock returns, could lead to higher lapse rates, while higher internal returns, such as surplus participation, could lead to lower lapse rates. Additionally to these exogenous and more visible triggers, there are also endogenous factors that can influence the policyholders' behaviour such as the insurers' reputation or the policyholders' confidence in the insurers' financial position and their ability to pay back the surrender values.

The purpose of the policy may play a role in the likelihood of policyholder runs occurring. Because they would typically value the protection feature, policyholders are less likely to withdraw from products principally providing protection against specific risks than policies used as a vehicle for saving. Previously, the IAIS attempted to collect information on policies that are principally providing protection; however, this was difficult to quantify and obtain

[24] Decision of the European Commission on national measures adopted as a response to the financial/economic crisis in the case of Ethias, State aid NN 57/2008 – Belgium Emergency aid for Ethias - C(2009) 990 final.
[25] ESRB report, "Enhancing the macroprudential dimension of Solvency II", February 2020.
[26] For further details see IAIS - "Systemic Risk from Insurance Product Features (previously referred to as Non-traditional Non insurance activities and products)", 2016.

reliable information. Consequently, the ILR does not include separate factors for policies that primarily provide protection.

The surrender value relative to market value or the possibility to lower the policy surrender value could also influence the policyholder decisions. In fact, compounding policy characteristics, such as a surrender value higher than the market value of the underlying assets, may increase the policyholders' likelihood to surrender and earn a premium. Supervisory measures could also influence policyholder surrenders. Other mitigating and/or exacerbating factors include: the possibility to replace the coverage for comparable costs, 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 and the share of insurer portfolio invested in liquid or illiquid assets. Finally, it is important to notice that some mitigating and/or exacerbating factors may vary over time. For example, the tax regime is an endogenous factor that may change over time, hence influencing the policyholders' choices and triggering lapses.

Standardised factors 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 this reasons, the time restraints and the economic penalty have been identified in the IAIS 2016 Methodology[27] as key quantifiable factors determining the factors that liabilities receive under the liability liquidity indicator.

These two factors, unlike the other potential mitigating and exacerbating factors described above, can be categorised into discrete quantitative buckets capturing the sensitivity to policyholder withdrawal. On the one hand, these simplifying characteristics may not fully capture the policyholders' behaviours, the heterogeneity of markets and the different policy conditions of the products. On the other hand, these assumptions embed information on the propensity of policyholders to surrender and allow to compare in a standardised way insurers' exposures and to assess their liquidity needs deriving from surrenders, withdrawals or terminations.

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

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

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.

The larger the economic penalty that counterparties must bear on surrender, the smaller the incentive to withdraw funds. Conversely, the smaller the costs that counterparties must bear on surrender, 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 case of panic).

Table 4: Liability liquidity: Retail

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

Table 5: Liability liquidity: Institutional

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

The factors are lower for insurance contracts with high contractual penalties and long delays in accessing the surrender value because both these conditions disincentivize 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 factor that liabilities receive under the IIM liability liquidity indicator according to the above tables[28].

Different factors apply to policies held by retail policyholders 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 decision-making process with regards to surrenders and withdrawals. Table 4 describes the factors applied to those policies written to natural persons, while Table 5 contains the factors for policies written to policyholders that are not natural persons, such as institutions. Because 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 assessment scoring.

In order to highlight firms that are more sensitive to the underlying assumptions, the IAIS will conduct further sensitivity analysis on these factors in 2021. This analysis will assess the insurance liability liquidity by applying a common, suitable factor to all types of surrenderable liabilities, regardless of reported penalty and time restraint. IIM surrender value data cannot easily be verified and has not always been reliable. Additionally, because policy loans can substitute for surrenders and withdrawals, the IAIS will consider how best to measure this

[28] For further information on the weights defined in Table 5, please refer to the IAIS 2016 Methodology.

liquidity risk. For the 2020 IIM Exercise, the IAIS requested information on policy loans available to be taken.

Different approaches and criteria are used by ratings agencies to define the factors related to liquidity needs metrics. For example, S&P Life for the United States and Canada uses a 70% base factor for most annuity contracts and 35% factor for most life contracts. These factors are cut in half for policies with a surrender charge equal or greater than 5% or those with market-value adjustments.[29] Outside of the U.S. 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% weigh 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 be an abnormally high lapse rate.[30]

Question 10: Do you agree with the treatment of liquidity risk from surrenders and withdrawals from insurance products in the ILR? If not, please explain how this could be improved.

Question 11: How should the IAIS capture liquidity needs from policy loans? Should these be incorporated into the ILR or be an alternative metric?

Question 12: Do you agree with the factors applied to retail insurance products being half of the factors applied to institutional products? How should the factors applied to retail and institutional policies differ?

3.3.1.2 Unearned Premiums

The ILR's unearned premium and catastrophe elements capture two of the main liquidity needs of non-life insurers.

Unearned premiums can potentially generate liquidity stress in cases where policyholders have the ability to cancel policies and receive premium refunds.[31] Cancellations can generate unplanned cash outflows that stress an insurer.

An example of a major liquidity stress intensified by a policyholders' run on unearned premiums is that of the National Surety Company, a U.S. company that had to be resolved during the Great Depression. National Surety was a large insurance company that experienced a major crisis in 1933 due to losses from its financial guarantees. A liquidity crisis

[29] 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.

[30] 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.

[31] Unearned premiums can be defined as premiums paid-in but not earned that the insurer is legally or contractually obligated to repay on request by the policyholder. For further details, please see: IAIS – "Technical Specifications for the 2020 Individual Insurer Monitoring (IIM) Data Collection Exercise", 2020.

ensued, as policyholders staged a massive run on the company, demanding the return of their unearned premiums. The New York State Insurance Department Superintendent stepped in with a reorganisation plan that split the company in two, out of fear that a disorderly liquidation would have systemic consequences given the sheer number of the company's counterparties, scattered all across the United States.[32]

Like for policyholder surrenders, the factor applied in the ILR for unearned premiums would depend on whether the business was retail (individual) or institutional. As before, this granularity reflects different levels of awareness of market stress and sophistication in making a decision to terminate a policy. Therefore, institutional customers are assigned a higher factor (25%) than retail customers (10%). The factors chosen reflect the relative likelihood that there will be a stressed liquidity need during the ILR's one-year time horizon.

The factor for unearned premiums would be applied only to the portion of unearned premiums that the insurer would be legally or contractually obligated to repay on request by the policyholder. This value may differ from the amount an insurer reports on their financial statements, which may include premiums that are not eligible for return to the policyholder and have merely been deferred from an accounting perspective.

The proposed ILR factors are in general less conservative than those applied by rating agencies. S&P Life U.S. and Canada and AM Best U.S. Life assign a factor of 50% to all segments of accident and health insurance and long-term disability insurance. For credit insurance, AM Best Life U.S. assigns a factor of 25%, which is comparable to the factor for institutional investors.

Question 13: Do you agree with the treatment of unearned premiums in the ILR? If not, how can it be improved?

3.3.1.3 Catastrophe Claim Payments

Catastrophic claim payments are a significant liquidity need for non-life insurance companies. Insurers have been asked to report in the 2019 Individual Insurer Monitoring exercise both the estimated outflow (including claims and related expenses) in the greater of a 1 in 250 years global event across all non-life 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 one-year of the start of the catastrophe scenario, both gross and net of reinsurance recoveries.

For the purposes of the liquidity metric the current set up uses the one-year claims and expenses forecasts net of reinsurance. The 100% factor reflects both the expected settlement payment and the ability/willingness of insurers to make full use of their reinsurance coverages to cover the outflows in that timeframe.

A sensitivity analysis could consider non-forecasted catastrophe claims amounts or, alternatively, a lower factor for reinsurance recoverables capturing also potential liquidity risk

[32] "The Resolution of a Systemically Important Insurance Company During the Great Depression, Jonathan Rose, FEDS Working Paper No. 2016-5, 8 February 2016.

arising from the exposure to the reinsurer counterparty. Related to the latter, for example, AM Best US Life assigns a factor of 50% to the recoverables from reinsurers.

Question 14: Should the IAIS apply standardised factors to insurers projected ultimate catastrophe losses or rely on company projections for the speed of catastrophe payments and reinsurance recoveries?

Question 15: Do you agree with the proposed treatment of catastrophe insurance claims? If not, how can it be improved?

3.3.2 Non-Insurance

3.3.2.1 Bank deposits and contingent funding

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.[33] To mitigate this risk, many governments guarantee certain bank deposits.[34] 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 factors including 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 prefunded,
- 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.

The ILR would include a less granular treatment of bank deposits. Most insurers do not control a depository institution and do not rely on bank deposits for funding. Table 6 displays the proposed ILR factors for deposit liabilities:

Table 6: ILR Bank Deposit Factors

Liability	Factor	Rows
Retail and small business time deposits	25%	24.3.a

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

Retail and small business demand deposits	25%	24.D.a
Commercial time deposits	50%	24.3-24.3.a-24.3.b-24.3.d
Commercial demand deposits	100%	24.D-24.D.a-24.D.b-24.D.d

The proposed factors were influenced by the BCBS's LCR and NSFR factors. Because the ILR would use 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 proposed 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 the banking supervision. This was done due the ILR's longer time horizon (1 year) 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 proposed 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, overall, 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 (i.e. products that do not transfer significant insurance risk) would be assessed using the factors for insurance products.

Consistent with the treatment by the BCBS, the ILR would exclude time deposits that cannot be withdrawn within one year.

Question 16: Should the proposed treatment of deposit liabilities include more or less granularity? If so, what additional dimensions (eg the presence of an effective deposit insurance scheme) should be captured or left out?

Question 17: Should the proposed factors be modified? If so, please explain how and why.

Question 18: Should insurance contracts without significant exposure to insurance events be captured by these factors, or included with other policyholder liabilities?

3.3.2.2 Derivatives

The ILR would include estimated potential cash flow needs from derivatives. Insurers should maintain liquid assets sufficient to settle derivative liabilities within the next year.

The ILR's treatment of derivatives leverages the approaches 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 (i.e. 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 would be calculated by contractual netting sets. The insurer would calculate the replacement cost of the derivatives covered by each qualifying master netting agreement and derivative contracts not subject to a qualifying master netting agreement. ILR gross derivative liabilities is the sum of the netting sets that have a negative fair value from the perspective of the insurer.

The ILR adjusts for Eligible Cash Variation Margin. An insurer's liquidity needs are decreased by any cash payments already made on their derivative contract. These cash payments would be offset from derivative liabilities to the extent 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.

Similar to the NSFR, the ILR would include 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 assets contributed to a central clearing party would be included as liquidity need. This reflects that insurers that intend to remain as going concerns will have a continued need for some liquid assets that can be posted as initial margin.

Table 7: ILR Derivative Factors

Liability\Exposure	Factor
ILR Gross Derivative Liabilities - Eligible Cash Variation Margin Offset[35]	100%
Initial Margin	85%
ILR Gross Derivative Liabilities	20%

Question 19: Do you agree with the treatment of derivatives? If not, please explain and suggest an alternative treatment.

3.3.2.3 Other Funding Liabilities and potential liquidity needs

The ILR would also capture 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,

[35] The Eligible Cash Variation Margin Offset would be used to ensure cash variation margin is not double counted or excluded. Cash collateral posted by an insurer would offset against ILR Gross Derivative Liabilities to the extent that the cash collateral or associated receivable is not otherwise included in the ILR Numerator.

investors are assumed to exercise any options that would shorten the maturity of outstanding debt or draw upon any contingent funding the insurer provides.

Securities lending transactions and repurchase agreements would be measured at 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 would represent a liquidity need in the denominator, the assets securing this funding would also represent a liquidity source.

The ILR would also include as a liquidity need any potential payments as a result of a credit downgrade. Currently, the IAIS collects information on the amount of potential collateral requirements at certain different downgrade levels. The IAIS will evaluate which downgrade severity requirement to use when finalising the ILR while also considering the reliability of the data provided by participating insurers.

Table 8: ILR Funding Liability Factors

Liability	Factor	Rows
Short-term debt and the current portion of long-term debt	100%	25
Long-term debt that can be accelerated	100%	25.A + 25.B
Gross repurchase agreements and security lending transactions	100%	(42.4 - 42.4.S)+ (43.4 – 43.4.S)
Pledged contingent funding including credit facilities	25%	12.1
Potential liquidity needs from a downgrade	100%	33.F (subrow to be determined)

Question 20: How should the ILR treat debt with financial covenants that may be triggered under stress?

Question 21: How should the ILR assess potential liquidity needs from a downgrade?

3.4 Limitations of the ILR

Like other simple measures of liquidity risk, the ILR has limitations. The IAIS will consider these limitations when interpreting future ILR results. The IAIS will also supplement the ILR with supervisory judgment and the use of other metrics with different limitations.

The ILR assumes specific liquidity stresses over a one-year horizon and does not capture other aspects of liquidity risk. Variations of cash flows within the one-year horizon are not

captured. Liquidity needs may be concentrated earlier in the period than liquidity sources would be available.

The factors within the ILR do not account for the full complexity of liquidity sources and needs. For example, as discussed in the insurance liquidity needs section, many factors influence policyholder surrenders. Many of these cannot be easily quantified or incorporated into the ILR. Additionally, the ILR cannot capture all the differences across jurisdictions that may impact available liquidity sources and needs, including differences in products, legal and regulatory systems, markets, and cultures.

The ILR measures enterprise-wide liquidity risk. Although monitoring liquidity risk at the enterprise level is valuable, liquidity is not perfectly fungible among affiliated legal entities. Similarly, the ILR would not capture potential liquidity issues arising out of currency mismatches.

The ILR is also dependent on the quality of data submissions. Currently, the IAIS relies on voluntary data submissions from participating institutions. Supervisory authorities and the IAIS attempt to validate these data; however, some data is hard to verify. In particular, certain non-public liability information cannot easily be checked and can materially impact the calculation.

The ILR would not directly measure the systemic risk related to a company's liquidity risk profile. In some cases, sales of the assets included in the liquidity sources calculation could materially impact markets. Additionally, the ILR would not capture the potential systemic impact of sales of separate account or unit-linked assets. While the liquidity risk on these products is ultimately borne by policyholders, large liquidations on these funds could impact markets.

The ILR would also not address any interactions between liquidity and capital. In some cases, the sales of assets used as liquidity sources with the assumed haircuts may exhaust the insurance company's capital resources. While ideally these risks could be looked at jointly, this would add a significant complexity, and supervisors typically look at these risks separately using different tools.

Question 22: Do you agree with the discussed limitations and mitigations of the ILR? What other limitations should the IAIS consider and how can these be mitigated when the IAIS monitors liquidity risk?

4 Next steps

The IAIS welcomes feedback on the proposed ILR.

In response to the comments and further analysis, the IAIS will revise the Technical Specifications for the 2021 IIM Data Collection Exercise. The IAIS will also update these technical specifications to collect data needed to implement the proposed ILR if this data has not previously been collected. For example, previously the IAIS assessed the potential liquidity needs on derivative contracts by evaluating the potential future exposure of the derivatives based on their notional value and other characteristics. This paper proposes a different, simpler approach, which will require different data. Additionally, the IAIS will modify the

instructions for certain other rows for consistency with this proposal, including expanding the reporting on encumbered assets. The IAIS will evaluate the impact of these changes before finalising the ILR.

The IAIS will also continue to examine the proposed factors and certain issues using rows that were added to the 2020 IIM Data Collection Exercise, which has been delayed due to Covid-19. This analysis may lead to revisions of the approach or further consultation on aspects of the ILR in 2021. For example, the IAIS will evaluate the treatment of assets issued by financial counterparties on which additional data was requested in the 2020 IIM.

During 2021, the IAIS will also work to further develop other liquidity metrics for monitoring. These other metrics will include a company-projection approach, as discussed in Section 2. The IAIS plans to consult on these other metrics in 2021.

The IAIS plans to finalise a set of liquidity monitoring metrics in 2022.

Annex 1: Existing Liquidity Regulatory Frameworks

Banking sector regulatory ratios

Following the failure of many banks to adequately measure, manage and control their liquidity risk in 2007 and in subsequent years, the Basel Committee on Banking Supervision (BCBS) introduced two liquidity standards as part of the Basel III post-crisis reforms:

- the Liquidity Coverage Ratio (LCR); and
- the Net Stable Funding Ratio (NSFR).

The LCR enhances banks' short-term resilience to liquidity shocks while the NSFR aims to promote resilience over a longer time horizon (beyond one year) by creating incentives for banks to fund their activities with more stable sources of funding.

The Liquidity Coverage Ratio (LCR[36])

The LCR is designed to ensure that banks hold a sufficient reserve of high quality liquid assets (HQLA) to allow them to survive a period of significant liquidity stress lasting 30 calendar days. The LCR has a relatively short-term horizon. The 30-calendar-day stress period is the minimum period deemed necessary for corrective action to be taken by the bank's management or by supervisors. The LCR requires internationally active banks to hold a stock of HQLA at least as large as expected total net cash outflows over the stress period, as summarised in the following formula:

$$\frac{\text{Stock of HQLA}}{\text{Total net cash outflows over the next 30 calendar days}} \geq 100\%$$

However, this floor for HQLA can be breached during periods of stress. Supervisors are expected to provide guidance on the usability of HQLA according to circumstances.

HQLA are cash or assets that can be converted into cash quickly through sales (or by being pledged as collateral) with no significant loss of value. A liquid asset can be included in the stock of HQLA if it is unencumbered, meets minimum liquidity criteria and its operational factors demonstrate that it can be disposed of to generate liquidity when needed. HQLA include Level 1 assets, which can be included without limit, and Level 2 assets, which cannot exceed 40% of the liquidity reserve. Level 2 assets are themselves subdivided into Level 2A assets, whose value is subject to a 15% haircut, and Level 2B assets, which are subject to higher haircuts but cannot exceed 15% of the stock of HQLA.

Estimating net cash outflows

Total net cash outflows are defined as the total expected cash outflows minus the total expected cash inflows arising in the stress scenario. The total expected outflows are determined by multiplying the outstanding balances of various categories of liabilities and off-balance sheet commitments by the supervisory rates at which they are expected to run off or

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

be drawn down. Total expected cash inflows are estimated by applying inflow rates to the outstanding balances of various contractual receivables.

Implementing the LCR

The original focus when developing the LCR had been large internationally active banks; however, national supervisors may extend it to all banks in their jurisdictions. They may also impose more stringent liquidity requirements because the LCR, like all BCBS standards, is a minimum requirement. Furthermore, they need to use monitoring tools developed by the BCBS to supplement the LCR and should review the characteristics of the assets that banks use as HQLA and their cash flow assumptions as part of their Pillar 2 Supervisory Reviews. Moreover, jurisdictions that do not have enough assets in their own currency to meet banks' needs for HQLA may use alternative liquidity approaches. These include the provision of central bank liquidity facilities, the coverage of liquidity needs in the domestic currency by foreign currency HQLA, and the use of additional Level 2 assets but subject to a higher haircut.

The Net Stable Funding Ratio (NSFR[37])

The NSFR has a relatively long time horizon. The NSFR seeks to ensure that banks maintain a stable funding structure. The goal is to support financial stability by helping to ensure that funding shocks do not significantly increase the probability of distress for individual banks, a potential source of systemic risk. The NSFR is expressed as a ratio that must equal or exceed 100%. The ratio relates the bank's available stable funding to its required stable funding, as summarised in the following formula:

$$\frac{\text{Total Available Stable Funding (ASF)}}{\text{Total Required Stable Funding (RSF)}} \geq 100\%$$

Available Stable Funding (ASF)

A bank's total ASF is the portion of its capital and liabilities that will remain with the institution for more than one year. The broad characteristics of an institution's funding sources and their assumed degree of stability are the basis for determining ASF. An ASF factor is assigned to the carrying value of each element of funding. ASF factors range from 100% – meaning that the funding is expected to be still fully available in more than a year – to 0% – reflecting that funding from this source is unreliable. The three other ASF factors are 95%, which applies, for instance, to well divided retail deposits, 90% and 50%. The total amount of ASF is the sum of the ASF amounts for each category of liability.

Required Stable Funding (RSF)

A bank's total RSF is the amount of stable funding that it is required to hold given the liquidity characteristics and residual maturities of its assets and the contingent liquidity risk arising from its off-balance sheet exposures. For each item, the RSF amount is determined by assigning an RSF factor to the carrying value of the exposure. These range from 100% to 0%. An RSF factor of 100% means that the asset or exposure needs to be entirely financed by stable

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

funding because it is illiquid. This is, for instance, the case for all loans to financial institutions with a residual maturity of 12 months or more. An RSF factor of 0% applies to fully liquid and unencumbered assets. The other RSF factors are 85%, 65%, 50%, 15%, 10% and 5%. The total RSF amount is the sum of the RSF for each category.

Implementing the NSFR

The NSFR became a minimum standard applicable to all internationally active banks on a consolidated basis on 1 January 2018, although national supervisors may also apply it to any subset of entities of large internationally active banks or to all other banks. Banks must meet the NSFR requirement on an ongoing basis and report on a quarterly basis. Because of its impact on maturity transformation, and since its implementation may have unintended consequences, the NSFR is subject to an observation period, which started in 2011.

A stock market liquidity ratio: the illiquidity ratio[38]

The ILR is a measure of the elasticity dimension of liquidity. Elasticity measures of liquidity try to take into account how much prices move as a response to trading volume (i.e. price impact). The Amihud [2002] measure is calculated as

$$ILR_{i,T} = 1/D_T \sum_{t=1}^{T} \frac{|R_{i,t}|}{VOL_{i,t}}$$

where

- D_T is the number of trading days within a time window T,
- $|R_{i,t}|$ is the absolute return on day t for security i,
- and $VOL_{i,t}$ is the trading volume on day t.

The Amihud measure is calculated over different time intervals, such as days, months or quarters. It is standard to multiply the estimate by 10^6 for practical purposes. The Amihud

[38] AMIHUD, Illiquidity and stock returns: Cross-section and time-series effects, *Journal of Financial Markets*, 5:31-56, 2002; AMIHUD, MENDELSON and PETERSEN, Liquidity and asset prices, *Foundation and Trends in Finance*, 1(4):269-363, 2005

measure is called an illiquidity measure since a high estimate indicates low liquidity (high price impact of trades).

Insurance industry and existing supervisory practice

In the supervisory community liquidity risk is not typically seen as the most important risk that insurers have to face. Insurance regulations usually address this risk via measures related to risk management, without any harmonisation or quantitative reporting.

EIOPA[39] highlights the need to elaborate additional reporting[40] on liquidity risk as well as to develop liquidity risk ratios. Typically, a risk assessment framework based on prudential liquidity indicators could be developed that captures the level of liquidity risk at market level, the main implementing challenges being: a precise definition of high quality liquid assets (HQLA) and the definition of thresholds that, once breached, would trigger supervisory action.

The IAIS Insurance Core Principles (ICPs) also point out that the Enterprise Risk Management (ERM) framework "should identify and address all reasonably foreseeable and relevant material risks to which an insurer is, or is likely to become, exposed", including, amongst others, liquidity risk (ICP 16). This document reviews different best practices and targets individual companies but is not a unified framework for assessing liquidity risk.

The CRO Forum[41] shows that standard industry practice is to track more than one metric. The use of a liquidity ratio (liquidity resources divided by liquidity needs, or vice versa) appears to be the most common metric, followed by excess/deficit of liquidity (available liquidity minus liquidity needs).

Though there are no universal definitions of these metrics, there should be clarity on how insurers will evaluate their assets, with a view to determining those deemed the most liquid. In addition, an important area to consider is the time horizon over which the risk appetite is set. While liquidity shortfalls are mostly short-term risks, potential abuse can arise on a longer term, so there is a need to target both short term and longer-term horizons (as it is the case in the banking sector with the LCR and the NSFR).

EIOPA

EIOPA[42] points out that "*the use of a unified framework to measure liquidity risk of insurers is a relatively new field for both undertakings and supervisors. Unlike solvency, there are no standardised indicators to measure and assess liquidity risk in a normal and/or stressed*

[39] EIOPA, 2018, *Other potential macroprudential tools and measures to enhance the current framework*
[40] EIOPA considers that the current quantitative reporting does not contain sufficient information for the supervisor to be able to assess liquidity risk from a quantitative perspective, which makes it difficult to monitor liquidity risk at sector level for macroprudential purposes.
[41] CRO Forum, 2019, *Managing liquidity risk: industry practices and recommendations for CROs*
[42] EIOPA, June 2020, *Second Discussion Paper on Methodological Principles of Insurance Stress Testing*

environment. Also, liquidity risk has many drivers and is very entity specific which makes it difficult to capture in one single indicator."

EIOPA[43] suggests that "the liquidity of the assets shall be evaluated together with the liquidity of the liabilities, namely the time to maturity of the outstanding portfolio and the presence of product characteristics (eg penalties) that might limit the incentives of policyholder to lapse".

EIOPA has proposed several indicators, such as: Liquid assets/technical provisions, Liquid assets/liquid liabilities, Unencumbered assets/total assets, Liquidity resources/liquidity needs, Short term liquidity resources/short term liquidity needs, Gross written premium/surrenders, Assets liquidity (liquid assets / total assets), Surrender ratio (surrenders/premium

EIOPA[44] finds that "meaningful liquidity indicators combine both the liquidity needs and available liquidity sources of an insurer; they are built by comparing liquidity sources with an estimation of potential liquidity needs stemming from on- and off-balance sheet exposures. In practice, one compares assets, which are considered of sufficiently high quality to be transformed into cash when needed, with an estimation of liquidity needs stemming from the liability portfolios (eg surrender values) that the insurer would have to pay in a normal or exceptional situation.", such as in:

$$Liquidity\ indicator = \frac{Liquidity\ sources}{Liquidity\ needs}$$

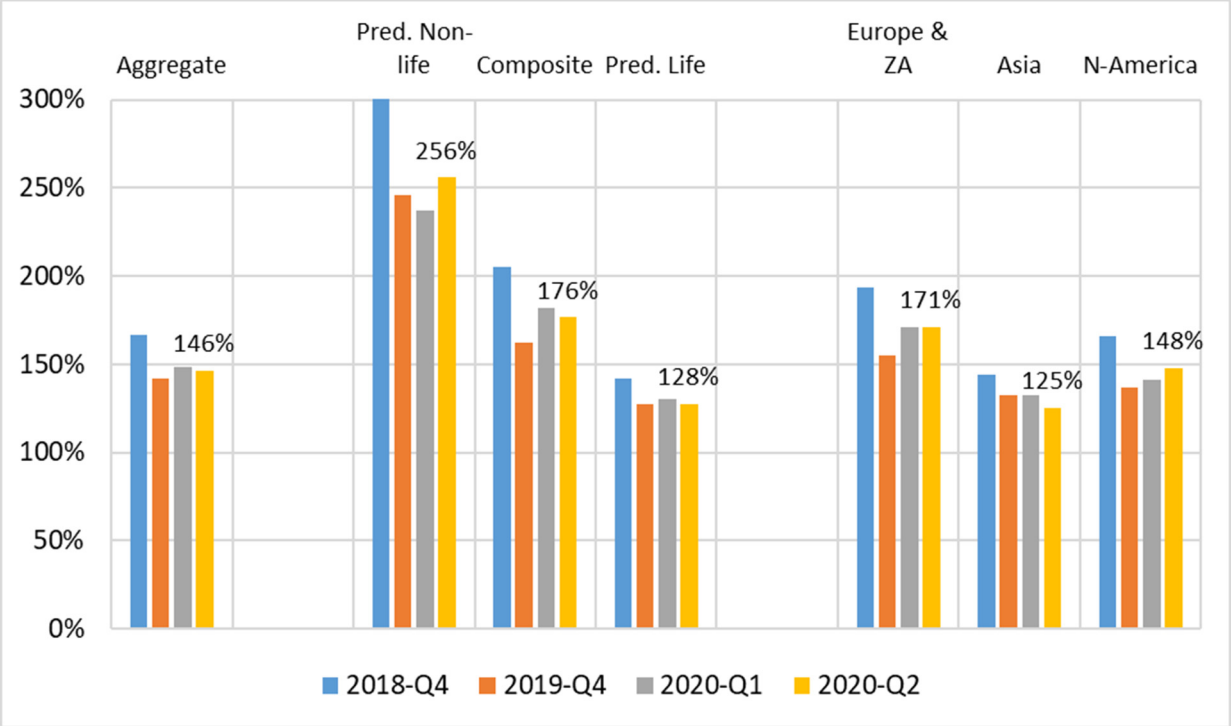
EIOPA is enhancing its approach by complementing the stock based perspective with a stylised flow perspective where the liquidity sources and needs are enriched by the assessment under regular and stressed situation of the standard flows. The stylised flow assessment collects life and non-life business specific flows (eg premia, claims, surrenders), investment related flows (e.g. dividends, coupons, fees, maturing assets) and operational related flows (eg overhead expenses, personnel) to build a net flow position over specific time horizons. The potentially negative net flow position is checked against the availability of liquid assets in order to estimate its sustainability.

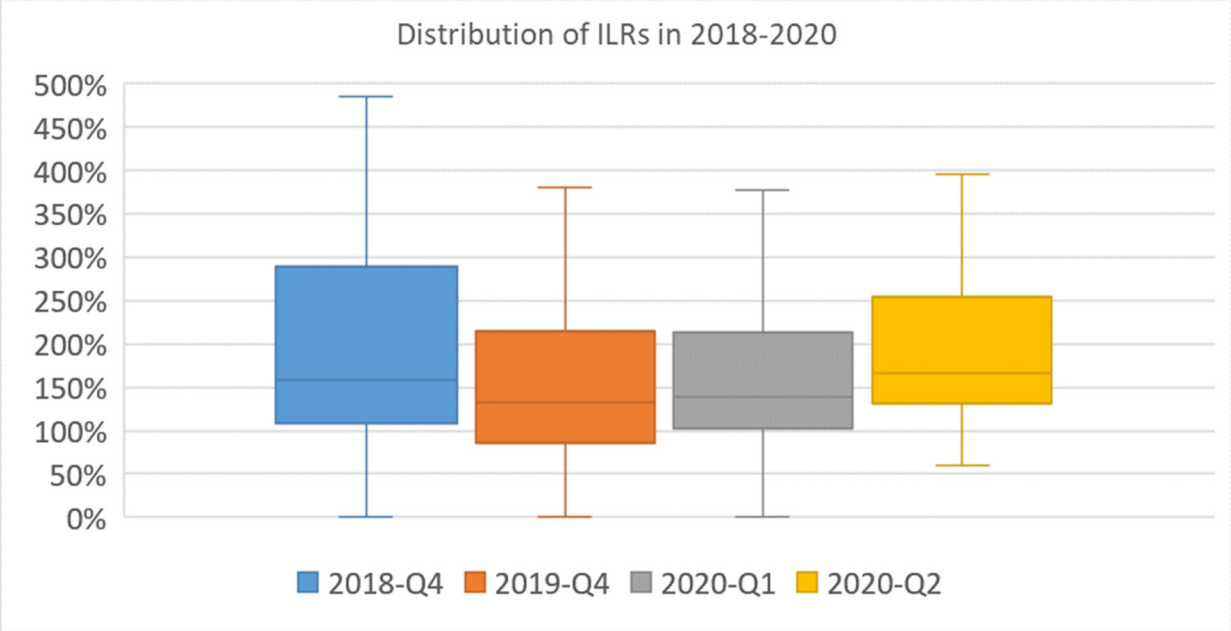
EIOPA considers "the proposed liquidity indicator as the most relevant for a Stress Test exercise given that it offers an integrated view on the liquidity position of an insurer, covering both the liquidity sources and the needs. This does not prevent the calculation of other indicators in specific analyses." Such "indicator can be used to assess the liquidity position of an insurer both in a normal or a stressed situation. Analysing the liquidity indicator in a normal situation allows to identify those insurers with a weaker liquidity position. Comparing the liquidity indicator before and after stress allows for an assessment of the impact of the liquidity stress scenario on the market and the identification of insurers that are more sensitive to liquidity risks."

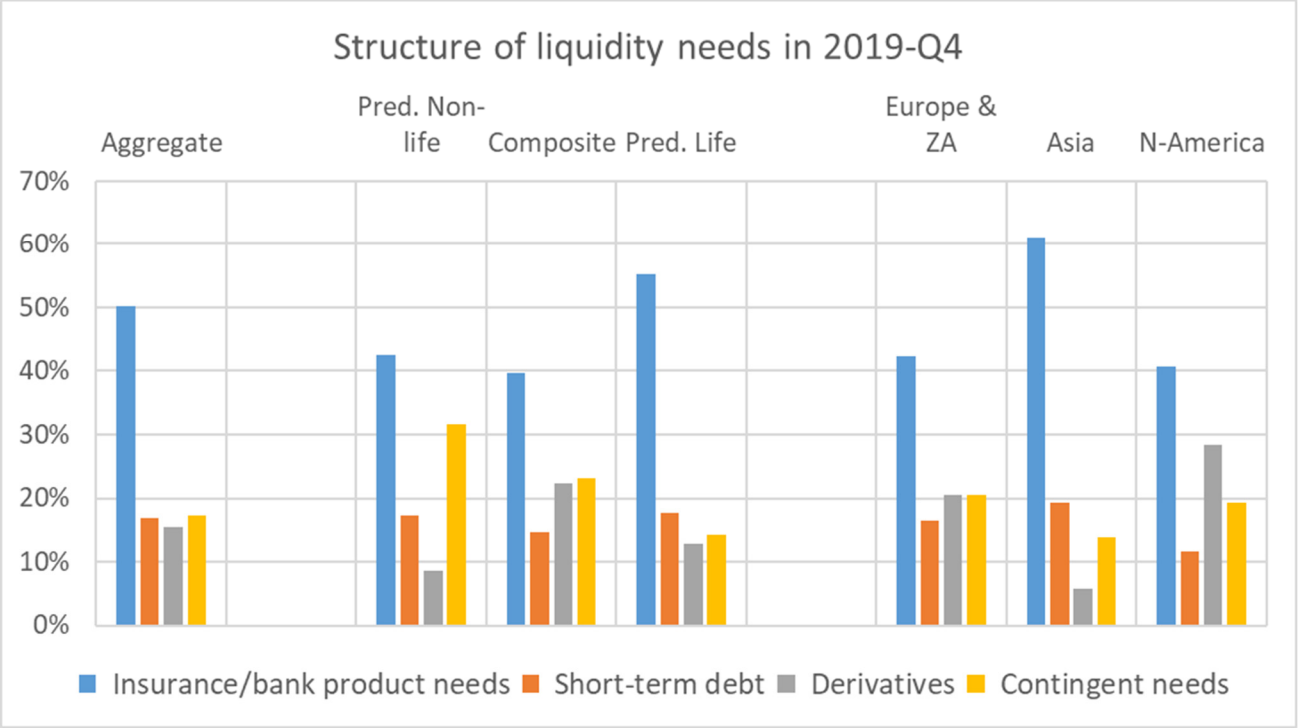
[43] EIOPA, March 2019, *Discussion paper on systemic risk and macroprudential policy in insurance* (EIOPA-BoS-19/131)
[44] EIOPA, June 2020, *Second Discussion Paper on Methodological Principles of Insurance Stress Testing*

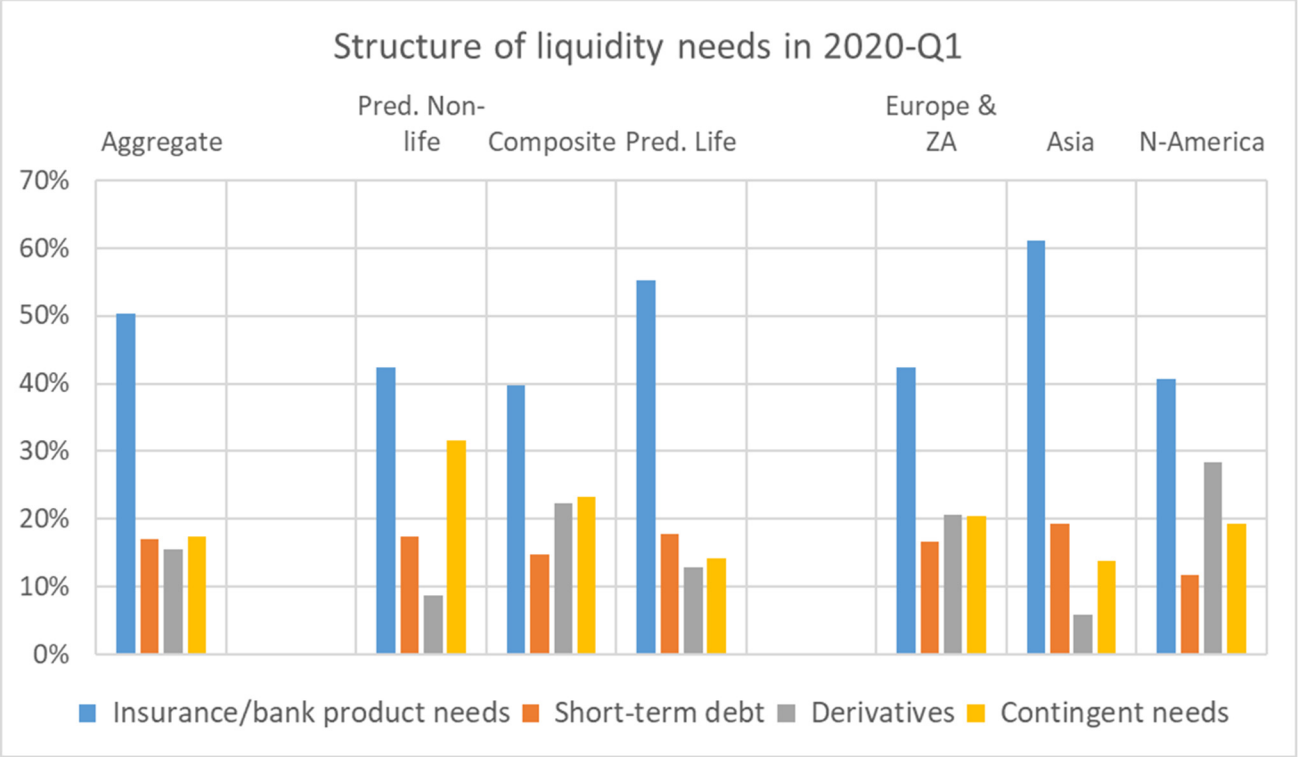
Annex 2: ILR Summary Statistics

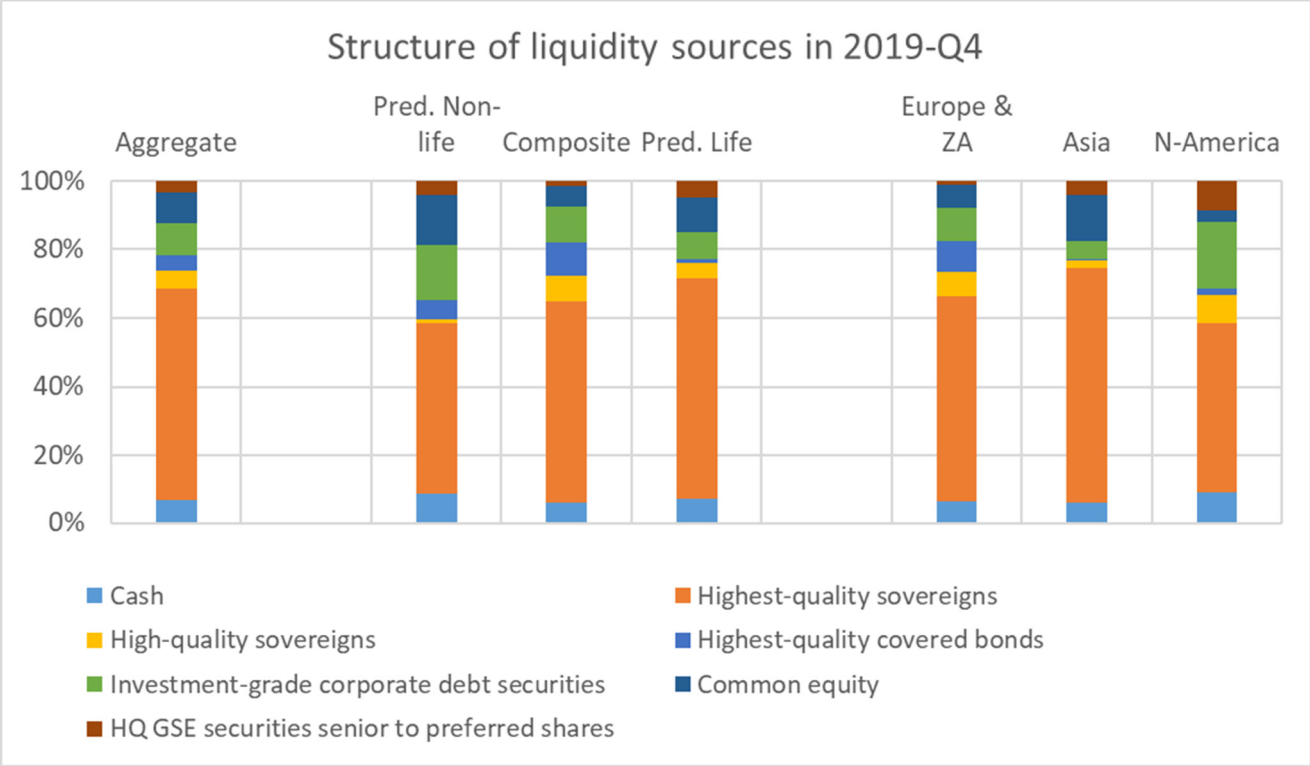
The following chart shows aggregate statistics of the estimated ILR ratios of insurers participating in the IIM, as estimated using currently available information.

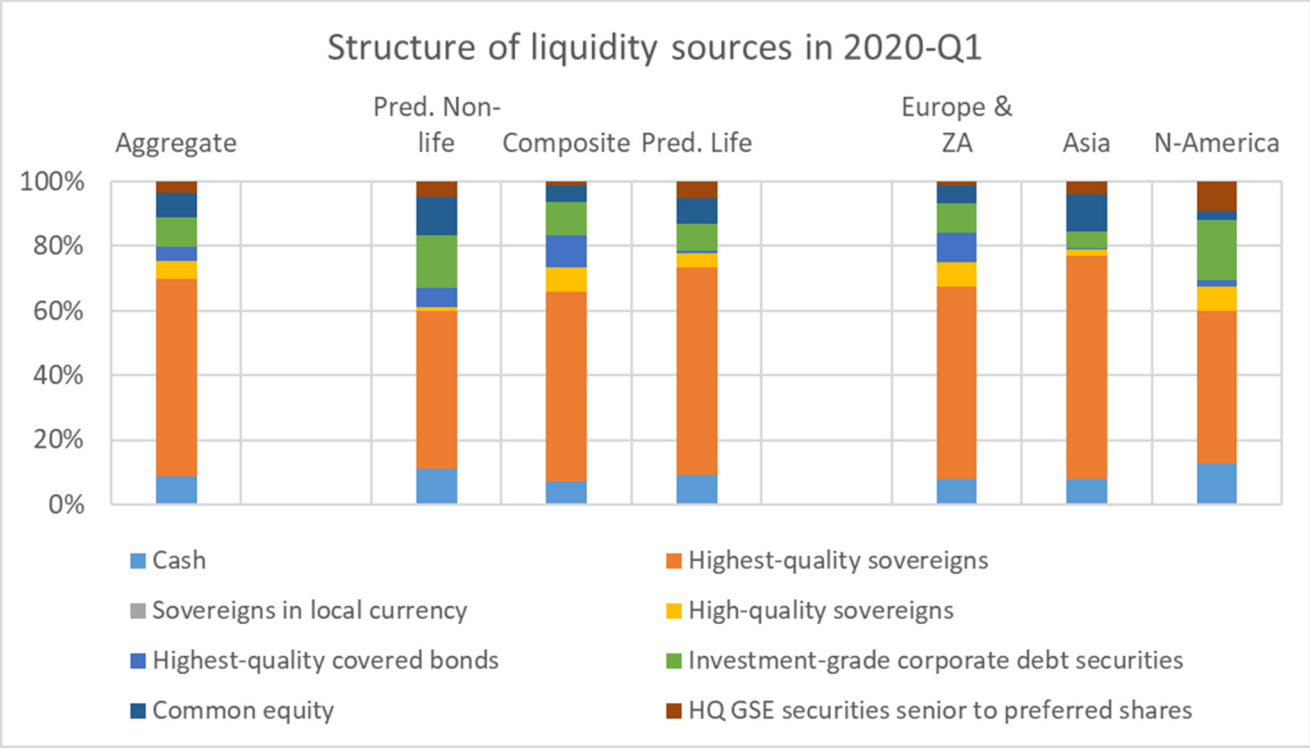


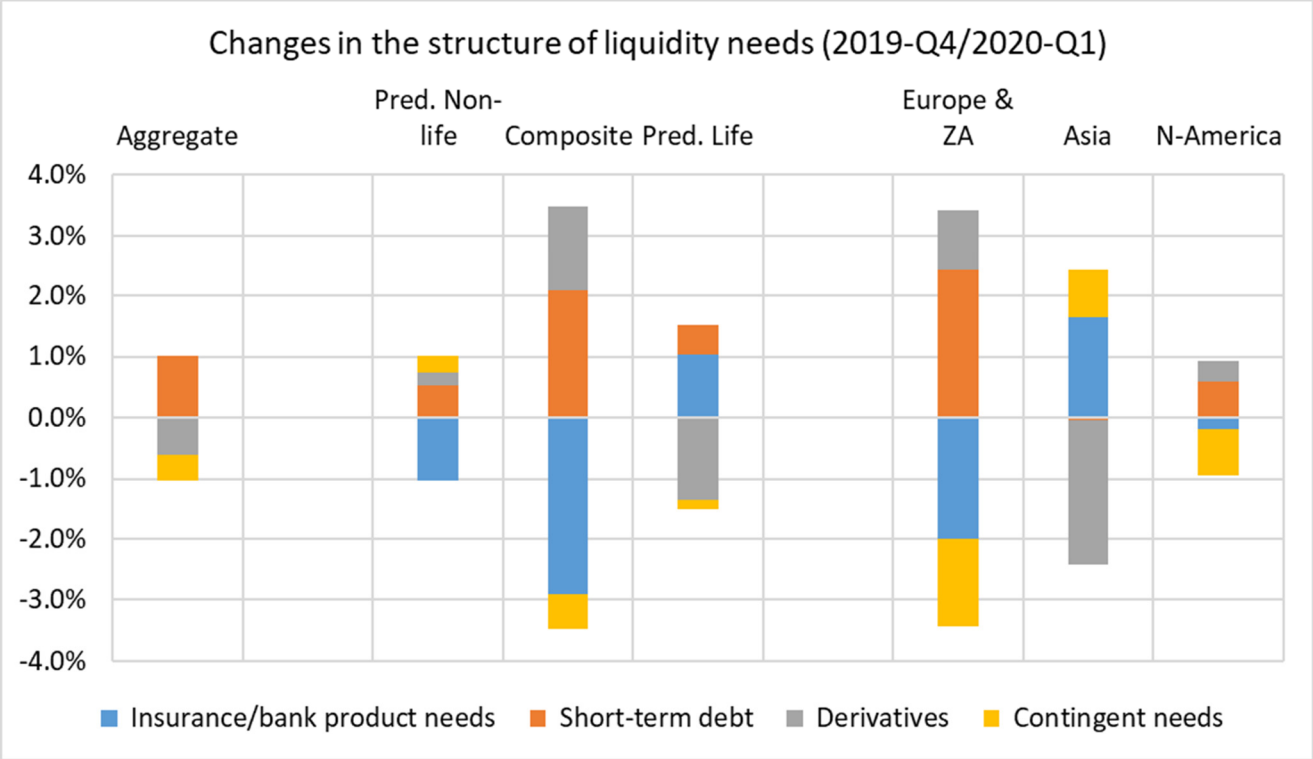


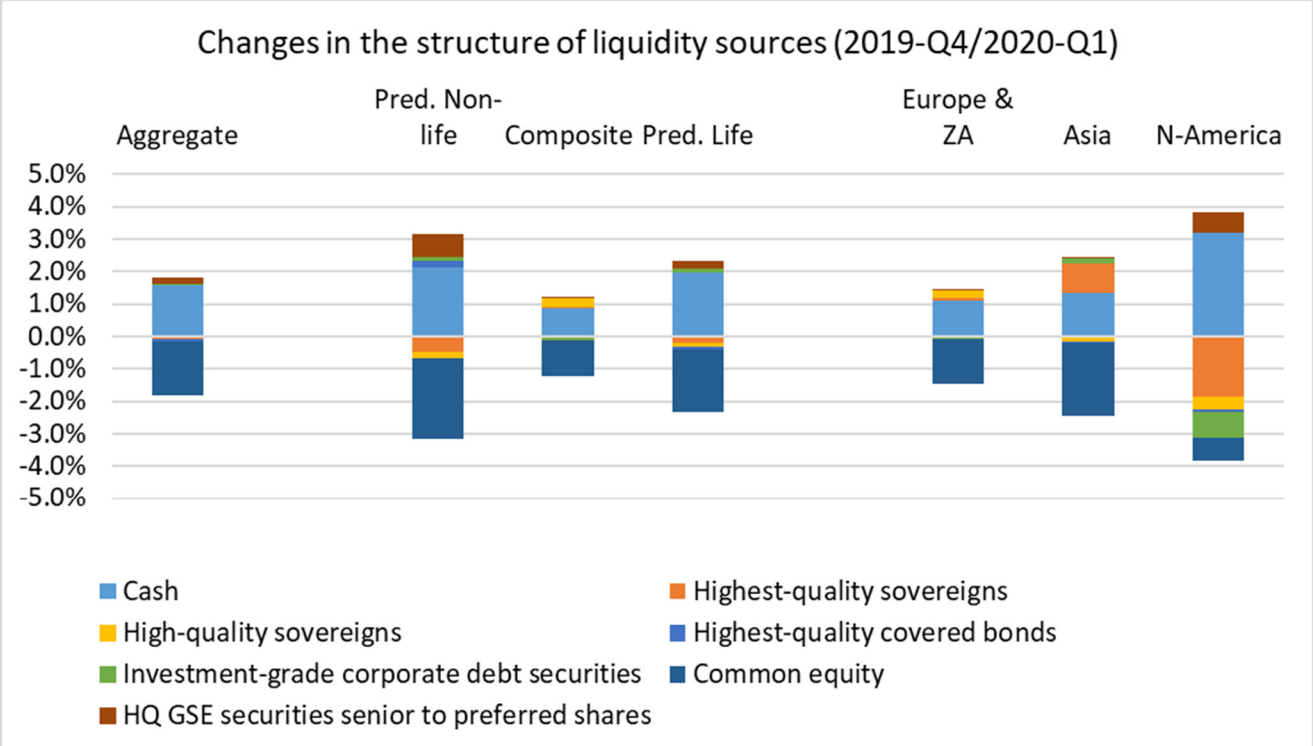

Structure of liquidity needs in 2019-Q4
Aggregate
Pred. Non-life
Composite
Pred. Life
Europe & ZA
Asia
N-America
70%
60%
50%
40%
30%
20%
10%
0%
Insurance/bank product needs
Short-term debt
Derivatives
Contingent needs


Structure of liquidity needs in 2020-Q1
Aggregate
Pred. Non-life
Composite
Pred. Life
Europe & ZA
Asia
N-America
70%
60%
50%
40%
30%
20%
10%
0%
Insurance/bank product needs
Short-term debt
Derivatives
Contingent needs


Structure of liquidity sources in 2019-Q4
Aggregate
Pred. Non-life
Composite
Pred. Life
Europe & ZA
Asia
N-America
100%
80%
60%
40%
20%
0%
Cash
Highest-quality sovereigns
High-quality sovereigns
Highest-quality covered bonds
Investment-grade corporate debt securities
Common equity
HQ GSE securities senior to preferred shares


Structure of liquidity sources in 2020-Q1
Aggregate
Pred. Non-life
Composite
Pred. Life
Europe & ZA
Asia
N-America
100%
80%
60%
40%
20%
0%
Cash
Highest-quality sovereigns
Sovereigns in local currency
High-quality sovereigns
Highest-quality covered bonds
Investment-grade corporate debt securities
Common equity
HQ GSE securities senior to preferred shares


Changes in the structure of liquidity needs (2019-Q4/2020-Q1)
Aggregate
Pred. Non-life
Composite
Pred. Life
Europe & ZA
Asia
N-America
4.0%
3.0%
2.0%
1.0%
0.0%
-1.0%
-2.0%
-3.0%
-4.0%
Insurance/bank product needs
Short-term debt
Derivatives
Contingent needs


Changes in the structure of liquidity sources (2019-Q4/2020-Q1)
Aggregate
Pred. Non-life
Composite
Pred. Life
Europe & ZA
Asia
N-America
5.0%
4.0%
3.0%
2.0%
1.0%
0.0%
-1.0%
-2.0%
-3.0%
-4.0%
-5.0%
Cash
Highest-quality sovereigns
High-quality sovereigns
Highest-quality covered bonds
Investment-grade corporate debt securities
Common equity
HQ GSE securities senior to preferred shares

Annex 3: Technical specifications for relevant data rows in 2020 GME

Liquidity Sources

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. 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.

Liquidity of invested assets (rows 9.5.X)
All securities must be liquid and readily marketable ie, the security is: 1) traded in deep and active repo or cash markets characterised by a low level of concentration; 2) have a proven record as a reliable source of liquidity, even during stressed market conditions; and 3) are not an obligation of a financial-sector entity or its affiliated entities. Note that all included assets must be unencumbered, defined as those that are purchased outright that are (i) free of legal, regulatory, contractual, or other restrictions on the ability of the reporting entity to monetise the assets; and (ii) not pledged, explicitly or implicitly, to secure or to provide credit enhancement to any transaction.

Exclude all unencumbered assets that are pledged to a central bank or a government-sponsored enterprise. Exclude transactions involving the purchase of securities that have been executed, but not yet settled. 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”).

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.[45] 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.

Covered Bonds (rows 9.5.4.X)
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.

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

Corporate debt securities (rows 9.5.5.X)
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.b: Investment grade corporate debt securities
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 9.5.6: Liquid common equity securities
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.

Government Sponsored Entity (GSE) Securities Senior to Preferred Shares (rows 9.5.7.X)
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.

All securities reported in rows 9.5.x must be liquid and readily marketable ie, the security is: 1) traded in deep and active repo or cash markets characterised by a low level of concentration; 2) have a proven record as a reliable source of liquidity, even during stressed market conditions; and 3) are not an obligation of a financial-sector entity or its affiliated entities. Note that all included assets must be unencumbered, defined as those that are purchased outright that are (i) free of legal, regulatory, contractual, or other restrictions on the ability of the reporting entity to monetise the assets; and (ii) not pledged, explicitly or implicitly, to secure or to provide credit enhancement to any transaction.

Exclude all unencumbered assets that are pledged to a central bank or a government-sponsored enterprise. Exclude transactions involving the purchase of securities that have been executed, but not yet settled. 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").

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**.

Corporate debt/bond investments (rows 65.2.X)
Report the aggregate market value (excl. unit-linked assets), held either outright or through participation in publicly traded collective investment vehicles, invested in any type of corporate debt securities, including commercial paper. Include both covered and also non-covered debt. "Debt securities" include 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).

Report a split of the corporate debt/bond investments by credit quality (above BBB – credit steps better than 4, BBB – credit step 4 and below BBB – credit steps worse than 4) of all corporate debt/bond investments. Report data in monetary units.

Row 65.2.1: General Account Corporate Bonds - Credit Step >4
Report all corporate bonds with credit step better than 4 (above BBB).

Row 65.2.2: General Account Corporate Bonds - Credit Step 4
Report all corporate bonds with credit step equal to 4 (BBB).

Row 65.2.3: General Account Corporate Bonds - Credit Step <4
Report all corporate bonds with credit step worse than 4 (below BBB).

For the credit steps, please refer to the table below.

Credit Rating Steps	S&P	Moody's	Fitch	DBRS	AM Best	NAIC Desig-nations	Chinese ratings	Japan Credit Rating Agency	R&I (Japan)
1	AAA	Aaa	AAA	AAA				AAA	AAA
2	AA / A-1	Aa / P-1	AA / F1	AA / R-1	A+			AA / J-1	AA / a-1
3	A / A-2	A / P-2	A / F2	A / R-2	A	1	AAA	A / J-2	A / a-2
4	BBB / A-3	Baa / P-3	BBB / F3	BBB / R-3	B+	2		BBB / J-3	BBB / a-3
5	BB	Ba	BB	BB	B	3	AA/A1, A/A2	BB	BB
6	B / B	B / NP	B / B	B / R-4	C+	4	BBB/A3, BB, B	B / NJ	B / b
7	CCC / C and lower	Caa and lower	CCC / C and lower	CCC / R-5 and lower	C and lower	5	CCC and lower	CCC and lower	CCC / c and lower

Liquidity Needs

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; and
- potential collateral posting for derivatives.

Row 12.1.c: Pledged credit facilities
Undrawn committed lines of credit outstanding (a part of the contingent financial liabilities).

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[46].
Row 24.3.b: of which is from central banks.
Row 24.3.c: of which is from financial institutions.
Row 24.3.d: of which is from public sector entities.

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

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.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.

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

[46] 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.

Row 25: Short-term borrowing
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:

$$\mathbf{25.1 + 25.2 = 25}$$

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.[47]

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.

[47] 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.

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.
Surrender value of insurance liabilities (normal course of business): Rows 33.A.X
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 if 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.[48]

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,

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;
- 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

[48] 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.

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.

		Time restraints	
		Low (less than 1 week)	Medium (between 1 week and 3 months)
Economic penalty[49]	Low (33.A.1) (no economic penalty)	**33.A.1.1**	**33.A.1.2**
	Medium (33.A.2) (less than 20% economic penalty)	**33.A.2.1**	**33.A.2.2**

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

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.1.2: of which is available within 3 months (Subset of 33.A.1; exclude amounts reported in Row 33.A.1.1).
Row 33.A.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.2.2: 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.7: Policy loans available to be taken
Report the amount of policy loans that may be taken or drawn upon. Specifically, the amount an insurer may be required to lend or that can be drawn upon by policyholders. This should not include amounts already taken.

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

[49] 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.

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. Please 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 Catastrophic Claim Payments:
Report an estimated outflow (including claims and related expenses) in the greater of a 1 in 250 global event across 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.1: Gross of reinsurance

Row 33.G.1.a: The amount in 33.G.1 that would be expected to be paid within 1 year of the start of the catastrophe scenario

Row 33.G.2: Net of reinsurance

Row 33.G.2.a: The amount in 33.G.2 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.

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.