INTERNATIONAL ASSOCIATION OF INSURANCE SUPERVISORS

Public

Holistic Framework for Systemic Risk in the Insurance Sector

Public Consultation Document

14 November 2018

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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Executive summary

1. This consultation document proposes a holistic framework to assess and mitigate systemic risk in the insurance sector, recognising that systemic risk may arise from both the collective activities/exposures of insurers at a sector-wide level as well as from the distress or disorderly failure of individual insurers. With this, the IAIS proposes to evolve its current approach to systemic risk, by:

- Taking into account both relevant sources of systemic risk: the first stemming from the potential knock-on effects from the failure or distress of individual insurers, the second stemming from the propagation or amplification of shocks from even solvent firms, through their collective risk exposures or responses to shocks;
- Addressing cross-sectoral aspects of systemic risk, by comparing the potential systemic risk of insurers with other parts of the financial system, notably the banking sector; and
- Moving away from a binary approach in which certain additional policy measures are only applied to a relatively small group of insurers (the identified G-SIIs), to an approach with a proportionate application of an enhanced set of policy measures to address activities and exposures that can lead to systemic risk targeted to a broader portion of the insurance sector.

2. The key elements of the proposed holistic framework are:

i. **An enhanced set of supervisory policy measures** for macroprudential purposes providing the pre-emptive part of the framework, designed to help prevent insurance sector vulnerabilities and exposures from developing into systemic risk, through on-going supervisory requirements applied to insurers, enhanced macroprudential surveillance by supervisors and crisis management and planning. Most of these policy measures address the same potential sources of systemic risk as those that are addressed by the policy measures that currently only apply to G-SIIs. ;

ii. **A global monitoring exercise by the IAIS** designed to detect the possible build-up of systemic risk in the global insurance sector. This includes a continued annual global monitoring exercise by the IAIS, not only at an individual insurer level (using an updated assessment methodology) but also to assess sector-wide trends with regard to specific activities and exposures;

iii. Where a potential systemic risk is detected, **supervisory powers of intervention** that enable a prompt and appropriate response. Supervisors are required to have at their disposal a sufficiently broad set of preventive and corrective measures to be able to respond appropriately based on the nature of the macroprudential concern. It is recommended that this toolbox of measures includes powers similar to certain G-SII policy measures, namely the power to require a report on the management of systemic risk and the reinforcement of an insurer's financial position;

iv. **Mechanisms that help ensure the global consistent application of the framework,** by having a collective assessment of potential global systemic risk and

a coordinated supervisory response when needed. Recognising that the application of supervisory measures is ultimately the responsibility of the supervisor, these mechanisms are designed to help increase awareness and understanding of potential global systemic risk and ensure a more consistent response to such risk. This would involve, at an individual insurer and sector-wide level:

- A collective discussion at IAIS level on the assessment of potential systemic risks and the appropriate supervisory response; and
- Reporting to the FSB on the outcomes of the IAIS assessment and the supervisory response.

v. Lastly, there is **an assessment by the IAIS of the consistent implementation** of enhanced on-going supervisory policy measures and powers of intervention.

3. There is a feedback loop between the enhanced supervisory policy measures and powers of intervention (element i and iii) and the global monitoring exercise (element ii and iv). The annual monitoring exercise by the IAIS will serve to determine any potential build-up of systemic risk at a global level, as a complement to the macroprudential surveillance by supervisors, which is aimed at monitoring systemic risks building up within a jurisdiction. Also, the policy measures are expected to be implemented by supervisors to address systemic risk within a jurisdiction. This will contribute to global financial stability, and will also be considered as part of the collective discussion at IAIS level on an appropriate supervisory response to the build-up of global systemic risk.

4. The IAIS is of the view that the implementation of the holistic framework should remove the need for an (annual) G-SII identification by the FSB and national authorities. The global monitoring exercise, including data collection, assessment and consideration of any insurer demonstrating a significant level and/or a trend of increasing potential (global) systemic impact from its distress or failure, will continue to be overseen by the IAIS and reported to the FSB. As mentioned above, an enhanced set of policy measures and supervisory powers of intervention will be applied in a proportionate manner to a broader set of insurers by integrating these measures into the holistic framework.

5. A final decision on the need for an (annual) G-SII identification should, however, depend on an assessment of the consistent application of the holistic framework by supervisors and the effectiveness of the IAIS global monitoring exercise. In November 2022, based on the initial years of implementation of the holistic framework, it is recommended that the FSB review the need to either discontinue or re-establish an annual identification of G-SIIs. Between 2020, when the holistic framework is implemented, and 2022, when the review takes place, it is recommended to suspend the annual identification of G-SIIs.

Acronyms

ABA	Activities-based approach
ALM	Asset Liability Management
BCBS	Basel Committee on Banking Supervision (also Basel Committee)
BIS	Bank for International Settlements
CCP	Central Counterparties
ComFrame	Common Framework for the Supervision of IAIGs
EBA	Entity-based approach
ERM	Enterprise Risk Management
FSB	Financial Stability Board
GIMAR	Global Insurance Market Report
(G-)SIB	(Global) Systemically Important Bank
(G-)SIFI	(Global) Systemically Important Financial Institution
(G-)SII	(Global) Systemically Important Insurer
G20	Group of Twenty
GWS	Group-wide supervisor
HLA	Higher Loss Absorbency
IAIG	Internationally Active Insurance Group
IAIS	International Association of Insurance Supervisors
ICP	Insurance Core Principle
ICS	Insurance Capital Standard
IFA	Intrafinancial assets
IFL	Intrafinancial liabilities
KIRT	Key Insurance Risks and Trends
LL	Liability Liquidity
LMP	Liquidity Management and Planning
ORSA	Own Risk and Solvency Assessment
OTC	Over the counter
PFE	Potential Future Exposure
SFT	Securities Financing Transactions
STF	Short term funding

1 Introduction

1.1 Background on the Systemic Risk Assessment and Policy Workplan

6. Under the purview of the Financial Stability Board (FSB) and the G20, the IAIS – along with other standard setters, central banks and financial sector supervisors – is participating in a global initiative to address systemic risk in the financial sector. Part of this initiative includes the identification of global systemically important financial institutions (G-SIFIs): institutions whose distress or disorderly failure would cause significant disruption to the global financial system and economic activity. As part of the G-SIFI initiative, the IAIS adopted in 2013 an assessment methodology to support recommendations on the identification of global systemically important insurers (G-SIIs) and targeted policy measures to apply to these institutions (G-SII policy measures).

7. In 2016, the IAIS published an updated G-SII assessment methodology as part of its three-year review process. In February 2017, the IAIS announced "a workplan to develop a comprehensive framework for assessing and mitigating systemic risk in the insurance sector", recognising that systemic risk may arise not only from the distress or disorderly failure of individual insurers but also from the collective exposures of insurers at a sector-wide level.[1]

8. The workplan includes three work streams: [2]

- Developing of an Activities-Based Approach (ABA) to mitigate systemic risk in insurance through the identification, and (further) development as needed, of relevant macroprudential policy measures;
- Addressing cross-sectoral aspects in systemic risk assessment; and
- Revising the Entity-Based Approach (EBA), namely the 2016 Updated G-SII Assessment Methodology.

9. In developing the policy measures, the IAIS introduced a four-step approach in its interim consultation document published in December 2017:

- The identification of activities that insurers engage in that could potentially threaten global financial stability in case of an insurer's distress or disorderly failure, and/or through failures, distress, or risk exposures of a group of insurers;
- The evaluation of the existing IAIS supervisory material that may help mitigate the potential systemic risk, irrespective of whether those materials have predominantly been designed for micro-prudential purposes;

[1] Where this document uses the term 'insurer', this includes insurance legal entities, insurance groups and insurance-led financial conglomerates. When referring to "individual" insurers or institutions, this is to distinguish clearly to risks stemming from an individual insurer versus risks stemming from collective exposures and does not refer to individual legal entities only. Insurance business refers to the business of insurers and reinsurers, including captives.

[2] See https://www.iaisweb.org/file/65229/iais-press-release-systemic-risk-assessment-workplan. A fourth element of the workplan relates to the revisions of the higher loss-absorbency requirement; this is not part of this consultation document.

- The identification of risks that are not sufficiently mitigated by any existing policy measure. This involves a gap analysis, which looks to determine whether the relevant supervisory tools are insufficient; and
- The development of policy measures or enhancement of existing policy measures, preventive or curative, to address any residual systemic risk. This step also entails the definition of the scope of application of the identified policy measure(s).

10. The cross-sectoral work is being undertaken in conjunction with the Basel Committee on Banking Supervision (BCBS).The third workstream benefited also from the inputs received from this joint work.

11. In developing this consultation document, the IAIS also benefitted from stakeholder input as part of the interim consultation process[3] and, in general, during the development phase of 2017-18.

1.2 Purpose of the consultation document

12. Whereas the interim consultation paper focused on the first work stream only, the current consultation document brings the three work streams together and proposes a holistic framework, thereby integrating the development of an ABA with revisions to the EBA methodology, while ensuring that cross-sectoral aspects are sufficiently considered. To stress the importance of this holistic perspective, the IAIS proposes to move away from using the ABA versus EBA terminology.

13. The purpose of this document is to provide an opportunity for stakeholders to give feedback on the overall holistic framework and its key elements. Amongst other things, the IAIS is soliciting feedback on:

- The proposed amendments to the policy measures to be integrated into the IAIS Supervisory Material;
- The changes to the global monitoring exercise, as well as the frequency, structure and modalities of the additional sector-wide data collection; and
- The cost and benefits for insurers and supervisors of implementing the holistic framework.

1.3 Structure of the consultation document

14. The consultation document is structured as follows: Section 2 describes the sources of systemic risk, including those stemming from collective activities or risk exposures of a group of insurers and from the distress or disorderly failure of an individual insurer. It details the exposures to and transmission channels of systemic risk between the insurance sector and the overall financial system and real economy. Section 3 introduces in more detail the proposed amendments to the policy measures for macroprudential purposes to be implemented by supervisors. Section 4 provides the proposals on the global monitoring exercise, including the changes and refinements to the assessment methodology for individual insurers. Section 5 describes the implementation assessment initiatives at the level of the IAIS.

[3] See https://www.iaisweb.org/page/consultations/closed-consultations/2018/activities-based-approach-to-systemic-risk

1.4 The consultation process and next steps

15. Feedback on this consultation document is invited by 25 January 2019. The IAIS is seeking responses to the specific questions posed in each section. Relevant sections include a number of questions for feedback that aim to help stakeholders provide targeted input to this work and assist the IAIS with finalising the framework for adoption in November 2019. Each section will also include questions for feedback on issues not covered by the specific questions.

16. Questions are structured to require a specific answer mostly in the form of Yes/No answers. Stakeholders are then asked to provide rationale and/or evidence supporting the response. Comments must be sent electronically via the IAIS Consultations webpage. All comments will be published on the IAIS website unless a specific request is made for comments to remain confidential.

17. The IAIS will carefully consider comments from members and stakeholders on this consultation document and will revise the holistic framework where appropriate, including the proposed amended policy measures.

18. The timetable for the finalisation of the holistic framework is summarised in Table 1:

Date	Milestones/activities
14 November 2018	Publication of consultation document on the holistic framework
25 January 2019	Feedback due on consultation document
June 2019	• Publication of resolution of comments on Section 3 of the November 2018 consultation;[4] and • Publication of consultation document on further revised ICPs/ComFrame
November 2019	Publication of resolution of comments on the complete November 2018 consultation Adoption by the Annual General Meeting of: • Holistic framework; and • Revised ICPs and ComFrame
2020	• Revised systemic risk assessment methodology to be applied; and • Implementation of revised ICPs and ComFrame
November 2022	Review of the holistic framework

Table 1: Holistic framework timetable

19. The holistic framework will take effect in 2020. While the IAIS continues the development of the holistic framework in 2019, the following will apply:

- The IAIS will continue the annual global monitoring exercise, including:
  - the annual data collection from individual insurers based on the 2016 G-SII data collection template and instructions;
  - reporting to the FSB on the IAIS assessment of systemic risk in the global insurance sector and of the supervisory response;

[4] With the aim of providing background for the consultation on revised ICPs and ComFrame.

  - the disclosure of results to the Group-wide Supervisor (GWS) and insurers in the Insurer Pool;[5] and
  - the disclosure of a Public Report.[5]
- The relevant GWSs have committed to continue applying existing enhanced supervisory policy measures, as described in this consultation document, as applicable:
  - All relevant GWSs have committed to continue to apply existing policy measures related to liquidity management and planning (LMP), supervisory colleges and crisis management groups (CMGs), and recovery planning, because these are proposed to be integrated in the ICPs and ComFrame (see sections 3.3.1, 3.4.1 and 3.4.2);
  - GWSs will apply policy measures on systemic risk management plans (SRMP) at their discretion (see section 3.5); and
  - GWSs will apply policy measures on resolution planning as necessary taking into account the activities, lines of business and number of jurisdictions in which the insurer operates, the complexity of the group structure, and the potential impact of failure of the insurer on the financial system and the real economy (see section 3.4.3).
- The IAIS will continue the monitoring of implementation of enhanced supervision policy measures.[6]

[5] These disclosures are described in the transparency paragraphs of the 2016 Updated G-SII Assessment Methodology, and will be applied to the extent relevant, as will be done also in 2018. See https://www.iaisweb.org/page/supervisory-material/financial-stability-and-macroprudential-policy-and-surveillance.

[6] See https://www.iaisweb.org/page/supervisory-material/implementation-and-capacity-building/assessments/file/71951/aggregate-report-on-phase-1-assessment-of-g-sii-policy-measures-and-supervisory-colleges.

2 Sources of systemic risk from the insurance sector

20. This section discusses sources of systemic risk from the insurance sector, both from an individual insurer and a sector-wide perspective. This is the outcome of step one of the four-step approach as described in the Introduction. Subsection 2.1 starts with some general considerations related to systemic risk. Subsection 2.2 discusses in more detail the exposures of insurers that may lead to an amplification of systemic risk. Subsection 2.3 then discusses how such systemic risk may transmit from the insurance sector to the wider financial system and real economy.

2.1 General considerations

21. Systemic risk, as defined by the IMF, BIS and FSB in 2009[7], refers to a risk of disruption to financial services that is caused by an impairment of all or parts of the financial system and has the potential to have serious negative consequences for the real economy. Fundamental to the definition is the notion of negative externalities from a disruption or failure in a financial institution, market or instrument.

22. Three aspects are important to investigate further: the source of the systemic risk, its time-varying nature, and the cross-sectoral dimension.

23. The **source of systemic risk** can either be related to an individual financial institution or multiple institutions. Related to the former, is the concept that distress or failure of a particular institution identified as systemically important financial institution (SIFI), because of its size, complexity, lack of substitutability and interconnectedness, could cause significant disruption to the wider financial system and real economy. As the focus is on the impact caused by an individual institution, such an approach to the source of systemic risk has been referred to as an EBA. In contrast, when examining systemic risk stemming from a group of institutions, the focus is on collective actions or distress of institutions that operate in the same markets or are active in the same financial instruments, and thus are jointly exposed to certain risks. This is often referred to as an ABA. It is based on an assessment across firms of the risk transmission of activities that either in themselves or as a result of common behaviours of firms cause significant disruption to the wider financial system and economic activity. The term “activity” is broadly used to encompass business lines and operations that have the potential to cause, or contribute to, systemic risk. Furthermore, the activity is interpreted substantively based on the risk exposure stemming from the activity, net of risk mitigations, rather than narrowly based on its legal form.

24. The activities and exposures that an ABA and an EBA target are similar, but the propagation of the risks is different. The EBA takes an impact given default approach, whereas the ABA focuses on common exposures and behaviours across the sector that could collectively result in systemic risk propagation. As such, in the ABA, the failure of an individual insurer is not the prerequisite of systemic risk propagation. If these activities and exposures become concentrated in an individual insurer, then this may become a systemic concern in the

[7] See IMF, BIS, FSB (2009): *Guidance to Assess the Systemic Importance of Financial Institutions, Markets and Instruments: Initial Considerations Report to the G-20 Finance Ministers and Central Bank Governors*, https://www.imf.org/external/np/g20/pdf/100109.pdf.

event of its failure. Therefore the IAIS proposes to take a holistic perspective and to move away from using the ABA versus EBA terminology.

25. As also acknowledged in the 2009 report by the IMF, BIS and FSB, the assessment of systemic risk is likely to be **time-varying** depending on, for instance, the economic environment, the financial infrastructure and crisis management arrangements. While some components of the financial system, such as the banking sector, may be consistently assessed as highly systemic, the significance of other sectors like the insurance sector may differ depending on a number of factors, including the state of the overall economy, the relative size of the activities or the overall resilience of financial markets.

26. The **cross-sectoral** dimension of systemic risk is another aspect to take into account. The assessment of systemic risk in the insurance sector would be incomplete if undertaken in isolation. Insurers are an integral part of the financial system, and hence need to be assessed in the broader context. A cross-sectoral view ensures that drawn conclusions are proportionate to the actual risk, and takes into consideration that the systemic impact of the insurance sector may depend also on the functioning of other elements, such as the robustness of markets and market infrastructure.

27. The IAIS approach aims to be holistic by taking both sources of systemic risk into account; acknowledging its time-varying nature and considering cross-sectoral aspects.

28. The following subsections describe in more detail the different exposures to systemic risk in the insurance sector. This is followed by an illustrative table that visually presents the transmission mechanism of systemic risk; identifying exposures, illustrative examples for relevant activities, the respective transmission channels and the potential impact.

2.2 Exposures potentially leading to systemic impact

29. The IAIS has identified the following key exposures in the insurance sector that may lead to a systemic impact:

a. **Liquidity risk:** this refers to the uncertainty, emanating from business, investment or (re-)financing activities, over whether the insurer will have the ability to meet expected and unexpected payment obligations or collateral needs in time and in full as they fall due in both current and stressed environments.

b. **Interconnectedness:** this refers to interlinkages of an insurer or the insurance sector as a whole with other parts of the financial system and real economy, of which two types can be identified:

    i. **Macroeconomic exposure:** exposure of an insurer or the insurance sector as a whole to macroeconomic risk factors, resulting in their financial position being highly correlated with each other and with the broader financial markets and real economy; and

ii. **Counterparty exposure:**[8] mutual exposure of an individual insurer to counterparties in the broader financial system and real economy resulting from asset-side interconnectedness and liability-side exposures.

c. **Lack of Substitutability:** the difficulty for other components in the financial system to ensure the continuation of supply of insurance coverage after a failure or distress of an individual insurer.

d. **Other sources of risk:** this category reflects potential systemic risks that cannot (easily) be subsumed under the previous vulnerabilities (a to c) or may deserve further attention.

30. The factors under a, b and c above are analogous to previous systemic risk publications by the IAIS. For instance, these vulnerabilities all form part of the 2016 Updated G-SII Assessment Methodology.[9] The fourth category is a reflection of the time-varying and fluid nature of systemic risk and includes both risks whose potential systemic risk is yet to be assessed (such as cyber risks) as well as new risks that may emerge in the future.

31. It should be noted that size and global activity, that form part of the G-SII Assessment Methodology, are not mentioned separately as a source of risk. This, however, does not mean these factors are irrelevant in the determination of systemic risk in the insurance sector. In fact, they could work as risk amplifiers. In other words, for any of the four risks mentioned above to become systemic at a global level, they would have to be of sufficient size to have potential for global impact.

32. While the focus of this consultation document is on the risks that insurers may pose to financial stability, the potential for insurers to play a stabilising role in the financial markets and real economy should not be ignored.

2.2.1 Liquidity risk

33. Liquidity risk may be both a microprudential and a macroprudential concern. It arises as a result of an imbalance between liquidity sources and needs – for instance due to liquidity transformation. It becomes a macroprudential concern if a shock (the trigger event) leads to wide-spread reactions or the actions of a significant player in a particular market.

34. Examples of how such exposure to liquidity risk could be generated or aggravated, which are also captured in the 2016 Updated G-SII Assessment Methodology, are:

- **Derivatives**: Many derivatives contracts require collateral or margin to be posted for mark-to-market declines in the value of the contract. These derivatives, used to hedge market risk arising from investments and liabilities, transform capital risk into liquidity risk. A significant macroeconomic shock against their hedges, while potentially improving their capital position, could trigger calls for additional margin or collateral, forcing insurers to raise liquidity;

[8] Counterparty exposure has been included following stakeholder comments, thus allowing the holistic framework to capture both direct and indirect interconnectedness.

[9] See http://www.iaisweb.org/page/supervisory-material/financial-stability-and-macroprudential-policy-and-surveillance/file/61179/updated-g-sii-assessment-methodology-16-june-2016.

- **Securities lending transactions**: If the collateral is reinvested in illiquid assets, sudden demands for collateral could force the lender to sell these assets. In a stressed market, these sales could impact the insurer's creditworthiness, triggering more collateral demands and leading to a price spiral as the lender sells assets to meet collateral needs; and
- **Backing liquid liabilities with Illiquid assets:** Some products offered by insurers contain provisions whereby a policyholder can withdraw cash from the policy with little notice or penalty. When insurers do not adequately match such liabilities with sufficiently liquid assets, this may lead to a liquidity shortage in certain circumstances and ultimately trigger fire sales. Interconnectedness

35. Interconnectedness is another important factor in the assessment of systemic risk in insurance. As explained above, there are two main aspects to interconnectedness: macroeconomic exposure and counterparty exposure.

2.2.1.1 Macroeconomic exposure

36. One way that systemic risk can arise is through common exposures to macroeconomic risk factors across institutions. In such cases, the underlying exposures are highly correlated with each other and with the market, limiting the potential to diversify through the pooling of idiosyncratic risks. If a firm's financial position is highly correlated with the broader economy, the systemic impact upon failure increases.[10] Similarly, correlated exposures increase the probability of correlated behaviours of insurers, when they react to certain events. Insurers' common macroeconomic exposures increase the likelihood that many insurers will have correlated weakness leading to correlated losses from other shocks, and an increased potential for a "too many to fail" scenario.

37. Macroeconomic exposure in the insurance sector can accumulate through some types of insurance liabilities or may be created through non-insurance activities. Examples are:

- Some **savings-oriented products** (or protection-oriented products with a savings component). These products offer a guaranteed return on policyholders' premium payments. Such guarantees, often combined with embedded options for policyholders, are economically similar to financial derivatives. When an insurer does not sufficiently hedge, the aggregate risk of the system could increase. Compared to guarantees on underwriting risks, which in general should diversify over a large number of policies, retained market risk is much harder to diversify. Also, an environment of prolonged low interest rates can provide the grounds for a search for yield behaviour;
- Insurers with **significant unmatched guarantees** are also more sensitive to changes in asset prices. Adverse movements in asset prices may force insurers to sell assets to preserve their solvency ratio. Insurers with significant guarantees may exhibit this behaviour when subjected to a macroeconomic shock.[11] In addition, margin calls and higher haircuts due to worsening solvency may force the insurer to sell assets in order

[10] See IAIS (2016): *Systemic Risk in Insurance Product features*, https://www.iaisweb.org/file/61174/systemic-risk-from-insurance-product-features.

[11] See Ellul, A., et al (2018): *Insurers as Asset Managers and Systemic Risk*, https://ssrn.com/abstract=3096147.

to obtain liquidity. Both mechanisms may affect other market participants through declining asset prices and increased margin calls. In this way, macroeconomic exposure may closely interact with liquidity risk;

- Products embedding features such as **automatic asset sales triggered by asset value decreases.**[12] These products can procyclically aggravate market movements, which can lead to "buy high, sell low" asset trades, especially if the automated strategies are used to control the insurer's downside risk. Even where the guarantees do not require automatic reallocation, dynamic hedging could create procyclical effects by requiring the insurer to sell equity futures when volatility is rising; and
- **Derivatives contracts** such as financial guarantee products including credit default swaps (CDS) that are not used to hedge risk. The speed of CDS price adjustments adds a systemic dimension to the insurance sector by potentially triggering defaults or substantial liquidity demands through margin or collateral calls.

2.2.1.2 Counterparty exposure

38. Counterparty exposure refers to direct exposures between an insurer and other (financial) institutions, which leads to both institutions being vulnerable to distress or failure of the other. Counterparty risk may become a systemic concern, depending on various factors, such as the concentration of the exposures (both in absolute terms and relative to the insurer's balance sheet), the correlations of exposures across the insurance sector, and the type of counterparty (whether the counterparty itself is systemic).

39. Examples of direct exposures are asset holdings (such as debt or equity securities, derivatives, or other financial transactions), towards specific entities, sectors or asset classes such as other financial institutions or sovereign positions. Another example of a source of counterparty exposure could be reinsurance contracts.[13]

40. In addition, insurers, especially life insurers, are interconnected to the real economy by providing funding to the corporate sector as well as to the financial sector. In some markets, insurers provide a significant source of funding and liquidity to the banking sector through holdings of bank debt and loans of high quality securities from their bond portfolio. [14] Bank-insurer interconnectedness also arises through securities financing transactions (SFTs)[15] and

[12] Examples of such products include (but are not limited to) certain variable annuities with minimum guarantees, volatility control funds, dynamic hybrid unit-linked products, or Constant Proportion Portfolio Insurance products.

[13] For a more detailed elaboration, see IAIS (2012): *Reinsurance and financial stability,* https://www.iaisweb.org/file/34046/reinsurance-and-financial-stability.

[14] See IMF (2016): *Global Financial Stability Report April 2016,* https://www.imf.org/en/Publications/GFSR/Issues/2016/12/31/Potent-Policies-for-a-Successful-Normalization and ESRB (2015): *Report on systemic risks in the EU insurance sector,* https://www.esrb.europa.eu/pub/pdf/other/2015-12-16-esrb_report_systemic_risks_EU_insurance_sector.en.pdf

[15] Securities Financing Transactions (SFTs) are transactions such as repurchase agreements, reverse repurchase agreements, security lending and borrowing, and margin lending transactions, where the value of the transactions depends on the market valuations and the transactions are often subject to margin agreements.

reverse repurchase agreements, direct lending or holdings of insurance company debt securities or equity.

41. The counterparty risk associated with these exposures may have the potential to affect financial stability, for example through the build-up of leverage, maturity/liquidity mismatches and contagion channels for risk propagation across financial sectors. As mentioned, an important factor to consider is the level of concentration of particular exposures (to specific companies, sectors or asset classes).

2.2.2 Lack of Substitutability

42. When focussing on potential systemic risk stemming from an individual financial institution, the lack of substitutability is a key concern, particularly where the product or service is critical to the functioning of the real economy.

43. While some types of insurance business are considered to be predominantly local, competition in many lines of business, in general, tends to be global and strong. Exceptions nevertheless may arise through high supplier concentrations in certain market niches. In monopolistic or oligopolistic market niches, the failure of a dominant insurer could create temporary distortions materialising in the unavailability of cover and sharp price increases. Lack of substitutability can thus be a concern, as historical experience in some jurisdictions indicates, and therefore deserves close monitoring.[16]

2.2.3 Other sources of systemic risk

44. There is a range of different risks that cannot easily be classified into the other categories but that may lead to a systemic impact. The addition of this category is a reflection of the time-varying nature of systemic risk. IAIS will continue to monitor these type of risks.

45. One example relates to **cyber risk**. For insurers, cyber security incidents can harm the ability to conduct business, compromise the protection of commercial and personal data, and undermine confidence in the sector. Also, insurers may be affected in cases where they provide specific insurance coverage for cyber risk themselves, or have inherent cyber risk exposure in their existing insurance portfolios. In 2016, the IAIS published an Issues Paper that describes cyber risk to the insurance sector and the mitigation of such risks.

46. As discussed in the Issues Paper, potential adverse consequences resulting from insurance sector cybersecurity incidents may include: loss or corruption of confidential or sensitive data, disruption of business due to own system failures or due to failures of service provider (such as outsourced services like IT and common platforms), physical loss (eg, damage to hardware), financial loss and reputational damage. Also, insurers may be affected in cases where they provide insurance coverage for cyber risk. Cyber losses tend to be correlated and do not necessarily diversify across geographies or industries. Moreover, cyber risk is a relatively new field for insurance and actuarial techniques are relatively underdeveloped compared to other risks. The resulting difficulties in pricing can leave gaps in

[16] For instance the failure of HIH Insurance in Australia: The HIH Royal Commission (2003): *The Failure of HIH Insurance, Volume I: A corporate collapse and its lesson*, Canberra.

coverage and potentially lead to concentrations of risk in a small group of providers that may not be able to withstand a significant cyber-attack.

47. A second example, highlighted in a paper by EIOPA on systemic risk in the insurance sector[17], relates to the risk of **wide-spread under-reserving without the possibility to re-price the risk**. In its paper , EIOPA points out that under-reserving or under-pricing may become a systemic concern due to correlated actions resulting from competitive markets especially for the long-term business of life insurance that is more difficult to price and adequately reserve for from the outset. New insurance businesses may expose companies to the risk of inadequate provisioning/mis-pricing due to the lack of expertise and/or lack of historical data. Underwriting contracts for which premium income does not adequately cover claims, or for which the assumptions used for the calculation of the provisions are not appropriate, may lead to distress at the insurer-level. Consequently, reactions of insurers may generate systemic impacts through wide-spread asset liquidation or reallocations, and/or the eventual collective failings of several insurers. This would also capture insurance exposures that may impact a significant part of the insured population, such as pandemic, or long-term mortality trends.

48. Another potential emerging risk which deserves further investigation before concrete systemic risk scenarios can be identified, is **climate risk.** Climate risks affecting insurers can be grouped into two main categories: physical risks (arising from climate trends and shocks, such as a natural catastrophe) and transition risks (arising from disruptions and shifts in asset prices associated with the transition to a low-carbon economy)**.** The first category could potentially result in wide-spread under-reserving or under-pricing. The Issues Paper on Climate Risk to the Insurance Sector, published by the Sustainable Insurance Forum and IAIS, describes this topic in more detail.[18]

Question 1: Is the list of key exposures that may lead to a systemic impact and its description appropriate? Please elaborate.

Question 2: Are there any other key exposures that are missing? Please elaborate.

2.3 Transmission channels of systemic risk

49. For the above mentioned exposures within the insurance sector to have a wider systemic impact on the financial market, they need to propagate to other market participants or the real economy. The IAIS identified as the main transmission channels: asset liquidation, exposure channel, and critical functions. Potential systemic risk may propagate simultaneously through multiple channels. Even if certain transmission channels dominate for a particular vulnerability (eg asset liquidation for liquidity risk), they are not mutually exclusive and could often work as an exacerbating factor to one another.

[17] See EIOPA (2018): *Systemic risk and macroprudential policy in insurance*, https://eiopa.europa.eu/Publications/Reports/Systemic%20risk%20and%20macroprudential%20policy%20in%20insurance.pdf

[18] See https://www.iaisweb.org/page/supervisory-material/issues-papers/file/76026/sif-iais-issues-paper-on-climate-changes-risk

2.3.1 Asset liquidation

50. Asset liquidation, as the name suggests, refers to the sudden sale of assets on a large scale that could trigger a decrease in asset prices and significantly disrupt trading or funding in key financial markets or cause significant losses or funding problems for other firms with similar holdings. Such behaviour may have a more significant impact for smaller, less liquid markets or in a stressed environment.

51. If **liquidity risk** materialises for an insurer or a group of insurers, this could trigger a downward spiral in the financial markets. If insurers have to accept sizeable haircuts on their assets to satisfy outflows, they could face losses and may even be forced to sell additional assets, which could aggravate the systemic impact. Through these price impacts, shocks could be transmitted to other parts of financial markets and the real economy by triggering write-downs on similar assets at other firms, distorting the signalling function of prices or impacting the ability of firms to fund activities.

52. Additionally, **macroeconomic exposure** may contribute to procyclicality and may compound the transmission through assets liquidation when insurers reduce exposures during business cycle downturns or when conditions trigger automatic asset sales through increases in market volatility, as discussed in Section 2.2.2.1. Even where the guarantees do not require automatic reallocation, dynamic hedging could create procyclical effects by requiring the insurer to sell equities when volatility is rising and buy equities when volatility is falling. If conducted in sufficient quantities, these trades can exacerbate volatility and lead to further disruptions in markets.

2.3.2 Exposure channel

53. The exposure channel includes the following two elements:

- indirect exposure stemming from macroeconomic exposures, because institutions are exposed to the same or similar asset classes or because their exposures are highly correlated with the financial market; and
- direct exposure, in case of direct interlinkages between institutions. Distress at the level of an individual insurer may then propagate through transferring directly or indirectly losses to the rest of the financial system.

54. An insurer with significant **macroeconomic exposure** can indirectly spread distress to the global financial system through its funding of other financial intermediaries and businesses. Insurers may react to macroeconomic shocks by actively de-leveraging/de-risking by retrenching and suspending their purchases of particular asset classes such as equities or corporate bonds. This could, for example, lead to reduced funding available for firms that rely on those instruments.

55. **Counterparty exposure** can directly transmit stress originating from an insurer to its counterparties such as banks or other (re-)insurers. This can take several forms such as price declines in the bank's or other (re-)insurer's asset portfolio, potential failure to meet claims or failure to fulfil existing contracts, eg SFTs, such as securities lending or repurchase agreements, or derivative contracts. In all those circumstances, counterparties would suffer losses on their claims, which could then create potential negative impacts beyond the insurance sector.

56. **Liquidity risk** may be an exacerbating factor, for instance when insurers lend out high quality securities to allow other financial firms to meet liquidity requirements. A liquidity need at the insurer level could force them to recall their loaned securities and transmit the stress to their counterparties, who may no longer meet their own liquidity requirements. By constraining funding or liquidity to the banking sector, the effects of the initial liquidity shock will be exacerbated.

2.3.3 Critical functions

57. Interruption of services of an individual insurer may have a systemic impact if two conditions are met: first, the insurer provides services that are important for the functioning of the financial sector and real economy and, second, there are few, if any, readily available substitutes ie an insurer has a large market share or even a monopoly. To the extent insurers fulfil a critical function, lack of substitutability of individual insurers may become an issue in certain markets that are considered to be significant and highly concentrated, such as catastrophe coverage, marine, aviation, export credit or mortgage guarantee.

Question 3: Is the description of the transmission channels of systemic risk appropriate? Please elaborate.

Question 4: Are any key transmission channels missing? Please elaborate.

2.3.4 Brief summary of the transmission mechanism for systemic risk in insurance

58. Figure 1 provides a schematic illustration of how systemic risk may materialise, by looking both at the relevant exposures (left-hand, blue part of the diagram) and at how this may propagate to the rest of the financial sector (right-hand, amber part of the diagram). The exposure to one or more vulnerabilities may generate externalities which may propagate through the transmission channels determining systemic events as illustrated in the last column of the diagram. For instance, liquidity risk may become a systemic concern if the sudden liquidation of assets happens on a scale that exacerbates market movements and contributes to asset price volatility. Similarly, macroeconomic exposure can turn into a systemic concern if holdings of highly correlated exposures result in similar reactions by insurers (and/or policyholders). Counterparty exposure may lead to direct losses and facilitates the propagation of risks across different market players. Lastly, the failure of a particular firm with a large market share in a critical niche market may become a systemic concern if this leads to financial problems for its counterparts, especially if these counterparties are critical financial market participants themselves.

59. The illustrative examples of activities do not necessarily, on their own, represent systemic concerns. The actual exposure to the mentioned vulnerability depends on how such an activity is managed. Then, the exposure could become a systemic concern only under certain circumstances, for instance depending on the overall state of the financial markets or the manner in which the activity is conducted by a company.

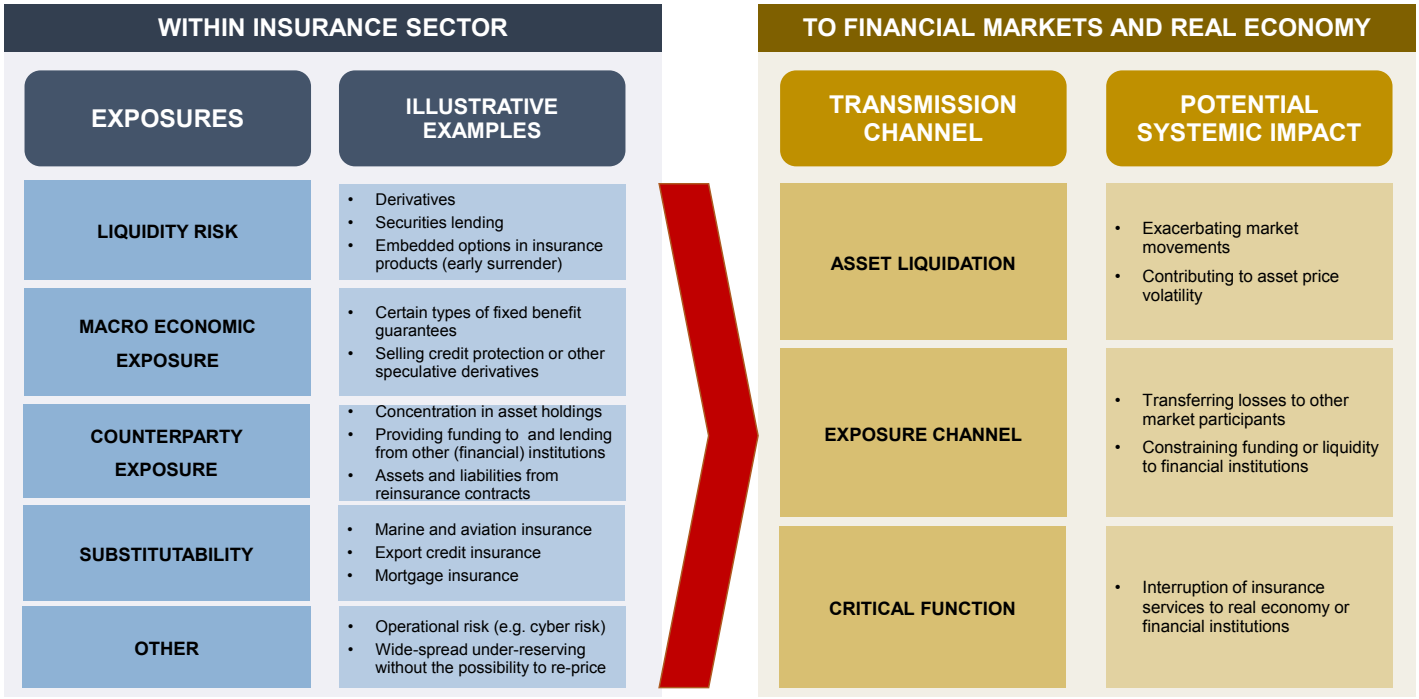

Figure 1: Systemic risk transmission mechanism

Question 5: Are there any further considerations on Section 2? Please elaborate.

3 Supervisory policy measures

60. Sections 3.2. to 3.5 introduce the proposed supervisory policy measures for the assessment and mitigation of systemic risk, building on the four-step approach as described in the Introduction. The supervisory policy measures are expected to be implemented by supervisors to address systemic risk within their jurisdictions, thereby contributing to global financial stability. This consists of the following components:

- On-going supervisory policy measures:
  - Macroprudential surveillance by supervisors;
  - Requirements on insurers; and
  - Crisis management and planning.
- Powers of intervention for supervisors.

61. Before introducing the policy measures in detail, section 3.1 provides some background on the development of the proposed policy measures, their interaction and how they fit within the other IAIS supervisory material.

3.1 Introduction to supervisory policy measures

62. There is a **feedback loop** between the various supervisory policy measures. For instance, macroprudential surveillance can identify the effectiveness of the policy measures for ongoing supervision and the potential need to resort to powers of intervention. In addition, crisis management related work may help identify the need for more effective assessments and the usefulness of existing policy measures.

63. Some of the policy measures will be explicitly targeted at a certain identified potential systemic risk. For example, liquidity management and planning is targeted at assessing and mitigating liquidity risk, whereas strengthened enterprise risk management (ERM) requirements are targeted at the mitigation of macroeconomic exposure and concentration limits may be used to control the risks stemming from counterparty exposure. Other policy measures will have a broader application to assess and/or mitigate potential systemic risks in general, such as reinforcement of the financial position or recovery and resolution planning.

64. The proposed policy measures are deliberately not labelled as either **microprudential** or **macroprudential** measures. Microprudential supervision aims to ensure the solvency of individual insurers, with the ultimate objective of protecting policyholders. Macroprudential supervision aims to contribute to financial stability, thereby mitigating the potential of negative externalities to the financial system and real economy. By mitigating certain risk exposures, policy measures that primarily have a microprudential perspective may also help increase the resilience of the insurance sector as a whole and/or decrease the probability and magnitude of any negative systemic impact. Likewise, many measures that are primarily aimed at macroprudential analysis, such as supervisory market-wide stress testing, are also microprudential tools.

65. The IAIS international supervisory material, ie the adopted and draft revised Insurance Core Principles (ICPs), draft Common Framework for the Supervision of Internationally Active Insurance Groups (ComFrame) including the Insurance Capital Standard (ICS) version 2.0 and

the G-SII policy measures,[19] serve as the basis of the gap analysis for the policy development. Furthermore, the extent to which other international standard-setters have set forth policy measures that may have influence on the relevant risk exposure are also considered.

66. The **policy measures** will be **integrated in the IAIS supervisory material** as Standards[20] (requirements) and Guidance[21] (recommendations and examples). As stated in the Introduction to ICPs and ComFrame, "the ICPs are applicable to the supervision of all insurers within a jurisdiction, including International Active Insurance Groups (IAIGs).[22] ComFrame provides additional Standards and Guidance applicable only to the supervision of IAIGs. Requirements set out in ICPs and ComFrame are expected to be implemented and applied in a proportionate manner." The Introduction to ICPs and ComFrame also describes the proportionality principle as follows: "Proportionality allows the ICPs and ComFrame to be translated into a jurisdiction's supervisory framework in a manner appropriate to its legal structure, market conditions and consumers. It also allows the supervisor to increase or decrease the intensity of supervision according to the risks inherent to insurers, and the risks posed by insurers to policyholders, the insurance sector or the financial system as a whole. Proportionate application involves using a variety of supervisory techniques and practices which are tailored to the insurer to achieve the outcomes of the ICPs. Such techniques and practices should not go beyond what is necessary in order to achieve their purpose. Risk-based supervision is a related concept but distinct from proportionality; it means more supervisory activities and resources are allocated to insurers, lines of business or market practices that pose the greatest risk to policyholders, the insurance sector, or the financial system as a whole."

67. In the proposed holistic framework, there is no longer a binary approach to the application of a set of policy measures to a particular group of insurers (Identified G-SIIs). Instead, it proposes the proportionate application of various policy measures, including some measures that currently only apply to G-SIIs, to a broader portion of the insurance sector. It is not proposed to integrate all measures in ComFrame only, because this would imply a continuation of the binary approach. Although size and international activity can work as a risk

[19] (i) Higher loss absorbency (HLA) (not yet implemented); (ii) Enhanced group-wide supervision, including for the group-wide supervisor to have direct powers over holding companies and to oversee the development and implementation of a Systemic Risk Management Plan (SRMP) and a Liquidity Management Plan (LMP); (iii) Group-wide recovery and resolution planning and regular resolvability assessments.

[20] Standards set out key high-level requirements that are fundamental to the implementation of the Principle Statement and should be met for a jurisdiction to demonstrate observance with the particular Principle Statement.

[21] Guidance facilitates the understanding and application of the Principle Statement and/or Standards; it does not represent any requirements.

[22] ComFrame provides the two criteria that both need to satisfied and on the basis of which a supervisor, in cooperation with other involved supervisors, determines whether an insurance group is an Internationally Active Insurance Group (IAIG):

- Internationally active: (i) Premiums are written in three or more jurisdictions; AND (ii) Gross written premiums outside of the home jurisdiction are at least 10% of the group's total gross written premiums.
- Size (on a rolling three year average basis): (i) total assets of at least USD 50 billion; OR (ii) gross written premiums are at least USD 10 billion.

amplifier, as discussed in section 2.2, the scope of application of ComFrame (ie IAIGs) is not specifically informed by whether there is a systemic risk. In the holistic framework, supervisors are expected to extend certain ComFrame Standards beyond IAIGs to other insurers as necessary, because of the nature, scale and complexity of the activities that lead to increased systemic risk exposure. Guidance material will provide background on the factors that should be considered when deciding if a requirement should be applied to a particular insurer outside of the final scope of application and when applying the proportionality principle. The exact scope of application will be discussed when introducing the various measures below.

Question 6: Do you agree with the proposed scope of application and of the practical application of the proportionality principle as described above? Please elaborate.

68. This consultation document sets out the main proposals for the amended supervisory policy measures and the expected scope of application, which is highlighted in separate boxes with text in blue and italics. In June 2019, the IAIS plans to consult on the exact language of the proposed revised supervisory material. The references to specific ICP and/or ComFrame numbers in the boxes hence refer to the location of the supervisory material where the gap was identified. The actual location of the proposed revised supervisory material may differ from the location mentioned in the blue boxes in this document.

Question 7: Do you have any other comments on the introductory description of the supervisory policy measures as described in section 3.1? Please elaborate.

3.2 Macroprudential surveillance by supervisors

69. Macroprudential surveillance can be considered the starting point for the supervisory process of mitigating systemic risk, providing a powerful diagnostic tool for risks that are building up either at a sector-wide level or at the level of an individual insurer. It also provides for a solid foundation for the use of policy measures based on a macroprudential concern. Finally, macroprudential surveillance serves as a basis to assess the effectiveness of policy measures.

70. Macroprudential surveillance at a jurisdictional level can be complemented by monitoring efforts at the global level. Therefore, the holistic framework provides for a strengthening of the feedback loop between the global monitoring of risks by the IAIS and the jurisdictional monitoring and assessment (see section 4).

71. ICP 9 (Supervisory Review and Reporting) and ICP 24 (Macroprudential Surveillance and Insurance Supervision) provide a solid foundation for the macroprudential monitoring and assessment by supervisors. The macroprudential assessment by supervisors can take many different forms, and may include, for instance, sensitivity or scenario analysis or (historical) trend analysis.

72. **Draft revised ICP 9** already includes the following recommendations (in Guidance) for supervisors:

- "The supervisor's review of its framework should pay due attention to the evolving risks which may be posed by insurers and to risks to which insurers may be exposed."

- "The supervisor should compare the risk profile of the insurer with its risk-carrying capacity and seek to detect issues that may adversely affect its capacity to meet obligations towards policyholders. The framework should enable the supervisor to analyse trends and compare risk assessments including against any stress test outcomes."
- "The framework should include assessments of the risks which may lead potentially to an insurer's failure and the impact of such a failure, such as on policyholders, the insurance market or the financial markets as a whole".

73. The current draft revised ICP 9, however, mainly focuses on supervisory review and reporting related to microprudential concerns or, at most, on the impact of an insurer's failure on financial markets.

74. The IAIS hence proposes to:

Enhance the existing supervisory material in ICP 9 by:

- *Explicitly incorporating in a Standard the objective to assess any sources of systemic risk related to both the failure or distress of an individual insurer and the collective risk exposures of insurers at a sector-wide level;*
- *Enhancing the Guidance material to refer not only to the impact of an insurer's failure, but also to the collective risk exposures of insurers at a sector-wide level; and*
- *Enhancing the Guidance material to explicitly require the supervisor to calibrate the depth and level of supervision based on above mentioned grounds.*

Question 8: Do you agree with the above proposal to amend the Standards and Guidance on supervisory review and reporting framework? If not, please explain.

75. **Draft revised ICP 24** requires the supervisor to identify, monitor and analyse market and financial developments and other environmental factors that may impact insurers and insurance markets and to use this information to have a macroprudential perspective in the supervision of individual insurers. The data collection, the analysis thereof and the publication of data (where feasible) provide the underpinning of macroprudential surveillance. As a surveillance tool, it enables the assessment of trends, may help to detect the build-up of risks at an early stage and, as such, may serve as an early warning instrument. Specifically with regard to systemic risk, the purpose of ICP 24 is to give supervisors the tools to assess systemic risk stemming from individual insurer's failures as well as collective actions by insurers.

76. The current ICP 24 provides a high level description of what macroprudential analysis in insurance entails, including the (types of) data to collect and the (types of) analysis to undertake. However, further detail is needed on the systemic risk exposures, as identified in Section 2. Also, the focus of much of ICP 24 is on the potential risks to individual insurers and the insurance sector (ie to vulnerabilities as discussed in section 2.2), and less on the systemic externalities that may stem from the insurance sector (ie on the transmission channel as discussed in section 2.3). Exceptions are ICP 24.6 and 24.7 that deal with the potential systemic impact of an individual insurer.

77. The IAIS hence proposes to:

Enhance the existing supervisory material in ICP 24 by:

- *Explicitly incorporating in a Standard and in the Introductory Guidance the objective to assess sources of systemic risk related to failure or distress of individual insurers and collective risk exposures of insurers at a sector-wide level as identified in Section 2;*
- *Supporting the assessment of liquidity risk; Guidance should specify that the supervisor should collect and analyse data that provides sufficient indications on possible asset liquidation by insurers, both at individual and aggregate, market-wide level. That includes, but is not limited to, information on the surrender value of insurance products, specific product features that increase or decrease the propensity for early pay outs under certain circumstances such as penalties or delays in the ability to access the cash value of a policy, the maturity or redemption structure of non-insurance liabilities, and the degree of liquidity of the assets;*
- *Supporting the assessment of macroeconomic exposure, Guidance should specify that the supervisor should collect and analyse data of a sufficiently granular level that enable an analysis of an insurer's as well as the insurance market's vulnerability to macroeconomic shocks (eg sensitivity to interest rate movements) or general market movements (eg sensitivity to equities and fixed income asset movements); and*
- *Supporting the assessment of counterparty risk, Guidance should specify that the supervisor should collect and analyse sufficient data on the concentration of the assets and liabilities, with regard to specific counterparties, markets (eg equity, debt), sectors (eg financial, real estate), and geographical areas.*

Question 9: Do you agree with the above proposal to amend the Standards and Guidance on macroprudential surveillance? If not, please explain.

78. In order to perform the aforementioned analysis, the IAIS recognises the benefits of **stress test exercises** or other methodologies to measure the individual as well as the aggregate, sector-wide exposure to the above risks. Two types of stress tests can be identified: (i) those that are undertaken by insurers to support their ERM and (ii) supervisory stress tests that may have both a micro- and macroprudential objective. The latter can be broken down into top-down stress tests, which are essentially run by the supervisor, and bottom-up stress tests, which are run by insurers based on predefined, common scenarios.

79. The IAIS hence proposes to:

Enhance the existing supervisory material in ICP 24 by:

- *Adding a Standard for supervisors to have in place a framework, including appropriate metrics, for measuring the vulnerabilities, as described in Section 2, both at individual insurer and aggregate, sector-wide level and assess whether this may create or amplify systemic risk; and*
- *Specifying in Guidance that this framework should be based on the development of an appropriate form of supervisory top-down or bottom-up stress testing, which is applied to the market as a whole or to a significant subsample, selected according to the exposures to specific risks to be assessed.*

Question 10: Do you agree with the above proposal to amend the Standards and Guidance on macroprudential surveillance? If not, please explain.

Question 11: What should be the role of supervisory stress testing? Please elaborate.

80. As part of ComFrame, the IAIS is developing a risk-based global insurance capital standard (ICS). ICS Version 2.0 is planned for adoption in November 2019, first to be used during a five-year monitoring period for confidential reporting to GWSs and discussion in supervisory colleges, and to be implemented as a group-wide Prescribed Capital Requirement (PCR) starting in 2025. Even if ICS version 2.0 will not be used as a group-wide PCR during the monitoring period, it would represent a global risk sensitive metric for the measurement of macroeconomic exposure. Thereby, it also contributes to the monitoring and assessment element within the holistic framework.

81. To assist supervisors with implementing the Standards on macroprudential surveillance, an Application Paper may be developed to provide further advice, illustrations, recommendations or examples of good practice.

82. The IAIS hence proposes to:

- *Consider developing an Application Paper on macroprudential surveillance, to provide additional Guidance to supervisors in implementing ICP 24 and designing a framework for macroprudential surveillance and more details on examples of macroprudential surveillance tools, including those aiming at better measuring liquidity risks exposures, as described above. Development of this Application Paper would start only after adoption of the holistic framework in end-2019.*

Question 12: Is the development of an Application Paper on macroprudential surveillance deemed useful? Please elaborate.

Question 13: What elements could be addressed in such an Application Paper?

Question 14: Are the proposals on macroprudential surveillance as described in section 3.1 appropriate? Please elaborate.

Question 15: What are the expected costs and benefits of the proposals on macroprudential surveillance as discussed in section 3.1?

3.3 On-going supervisory policy measures on insurers

83. The policy measures for insurers are explicitly targeted at mitigating the exposures and risk transmissions that are described in Section 2. These measures normally represent requirements that are addressed to individual insurers and are applied in on-going prudential supervision.

3.3.1 Policy measures for liquidity risk

84. Liquidity risk is not a new concept within the suite of IAIS supervisory material. However, except for the G-SII Liquidity Management Plan (LMP) policy measure, existing

policy measures on liquidity risk are mostly microprudential and qualitative in nature. A reference to the proper management of liquidity risk can be found in several ICPs, including ICP 8 (Risk Management and Internal Controls), ICP 9, ICP 10 (Preventive Measures, Corrective Measures, and Sanctions), ICP 13 (Reinsurance and Other Forms of Risk Transfer), ICP 15 (Investment), ICP 16 (Enterprise Risk Management for Solvency Purposes), ICP 17 (Capital Adequacy) and ICP 20 (Public Disclosure).

85. The management of liquidity risk is integral to ERM. Investment and Asset Liability Management (ALM) requirements provide incentives for insurers to properly consider all risks in their asset portfolio and appropriately manage them vis-à-vis their liabilities. Insurers have to select investments that are appropriate to the nature of their liabilities and are required to properly assess and manage the inherent risks.

86. Overall, the current IAIS supervisory material provides an adequate basis on which to build. It is, however, necessary to raise the prominence of liquidity risk in supervisory materials, with explicit references where it can currently only be inferred from the wider context and with an emphasis on the macroprudential perspective. Based on the gap analysis, ERM and disclosure are the areas that would need to be further enhanced in the current ICPs.

3.3.1.1 Enterprise risk management (ERM)

87. ICP 16 currently highlights at several places in the Guidance the importance of proper liquidity risk management. Liquidity risk is, however, always referred to in conjunction with other risks which insurers are exposed to and need to manage. ComFrame material in ICP 16 does include a specific Standard on liquidity risk management: "The group-wide supervisor requires the Head of the IAIG to set minimum criteria for the liquidity and location of its investment portfolio in the group-wide investment policy so that the IAIG can make payments to policyholders or creditors when and where they fall due." Corresponding Guidance further suggests that "the minimum criteria for liquidity may be addressed by reference in the group-wide investment policy to a separate liquidity policy."

88. Given the importance of liquidity risk, including or especially for macroprudential purposes, it is suggested to address liquidity separately and more prominently within ICP 16 and to develop an Application Paper to provide supervisors with further Guidance when implementing requirements on liquidity risk management and planning.

89. A more detailed elaboration on the elements that may be included in such an Application Paper can be found in the "Draft text on liquidity Guidance" in Annex 3, thereby providing an early indication of this Guidance. A separate consultation on a draft Application Paper will follow after revisions to the ICPs and ComFrame.

90. The IAIS hence proposes to:

Enhance the existing supervisory material in ICP 16 and ComFrame material integrated in ICP 16, by:

- *Adding a Standard, with an explicit reference to liquidity management that explains the minimum requirements for an ERM and the enforcement mechanism for the supervisor. The Standard should require insurers to monitor and manage liquidity risk to ensure they have sufficient liquid assets to meet its obligation as they fall due, even under*

stressed conditions, and require IAIGs, and other insurers as necessary, to comply with more detailed requirements on liquidity planning and management; and

- *Adding corresponding Guidance on the main criteria to follow in the management of liquidity risk. The Guidance should include indications, at least, on:*
    - *The governance of the liquidity risk management;*
    - *The consideration of assets and liabilities with respect of the assessment of liquidity;*
    - *The metric used in such an assessment;*
    - *The consideration of stressed scenarios;*
    - *The safeguards in place to address any liquidity shortfall; and*
    - *The report to supervisor.*

The insurer should be able to show that it has in place strategies, policies and procedures to effectively manage its liquidity risk in accordance with its risk appetite. It needs to show that it has a sound process for identifying, measuring, monitoring and controlling liquidity risk, when assessing its expected future cash flows, including the liquidity characteristics of both its assets and liabilities.

In order to provide sufficiently detailed indication on how liquidity should be managed by the IAIGs and other insurers as necessary, the IAIS also proposes to develop an Application Paper on Liquidity Planning that:

- *Entails a more detailed description on the requirements and recommendations as set out in the ICP 16 and ComFrame. This would include an overview of liquidity planning, the role of a contingency funding plan, details on governance and the reporting policy; and*
- *Would also include details on the need to have well-defined metrics for the assessment of liquidity risk under different scenario assumptions and on the need to have credible safeguards in place in case the risk materialises.*

91. The supervisory and supporting material would provide a package of requirements with gradated intensity that should be applied in a proportionate manner, in relation to the size and type of business of the insurer and its propensity to create liquidity risk exposure. The ICP and ComFrame Standards would imply that the detailed requirements on liquidity planning should be applied to all IAIGs and, as necessary, by other insurers, taking into account the nature, scale and complexity of the activities that lead to increased liquidity risk exposure as well as the risk amplification effects related to the size of the insurer. The Application Paper will present further background on the detailed indications of this requirement and on the application of the proportionality principle.

Question 16: Do you agree with the above proposal to amend the Standards and Guidance on ERM? Please elaborate.

Question 17: Do you agree with the above proposal to apply the more detailed requirements on liquidity planning and management to IAIGs, and other insurers as necessary? Please elaborate.

3.3.1.2 Disclosure requirements

92. Draft Revised ICP 20 mentions liquidity disclosures as part of the Guidance material, but does not require any specific liquidity disclosures. More robust liquidity disclosures are necessary as there are certain types of insurance products, as well as activities that some insurers engage in, that share similar characteristics with banking products and activities (eg, call risk) that can create liquidity issues for an insurer.

93. By adding a requirement for disclosures on liquidity risk at a Standard level, the IAIS intends to give more prominence to liquidity risk in disclosure requirements. The balance between quantitative and qualitative information as part of disclosures needs to be further elaborated on after the consultation. The IAIS work on a liquidity metric and further Guidance in the Application Paper should be considered in that context as possible inputs to give a relatively higher weight to quantitative elements.

94. The IAIS hence proposes to:

Enhance the existing supervisory material within ICP 20 by:

- *Adding a Standard that the supervisor requires quantitative and qualitative disclosures sufficient to make a meaningful assessment of the insurer's material liquidity risk exposure by users of financial statements; and*
- *Adding corresponding Guidance that the supervisor should require the insurer to disclose both quantitative and qualitative information in sufficient detail to facilitate an understanding of its liquidity risk. These disclosures should include:*
    - *Quantitative information on liquidity sources and uses, including the surrender value of insurance policies. Any meaningful trends, significant commitments and demands should be discussed, and uncertainties or likely events that will result in, or are likely to result in, the insurer's liquidity increasing or decreasing in a material way should also be discussed; and*
    - *Qualitative information on the insurer's objectives, policies and processes for managing liquidity.*

Question 18: Do you agree with the above proposal to amend the Standards and Guidance on disclosure? Please elaborate.

Question 19: Taking into account the objective of the public disclosure requirement, should the disclosure of quantitative information receive a higher weight in the supervisory material compared to the qualitative? Please elaborate.

Question 20: Are the proposals in 3.3.1 on liquidity risk appropriate? Please elaborate.

3.3.2 Policy measures for macroeconomic exposure

95. Similarly to liquidity risk, macroeconomic exposure is partially addressed within the existing IAIS supervisory material (eg indirectly referenced in ICP 8, ICP 15, ICP 16, ICP 17, and explicitly in ICP 24).

96. Under the ICS version 2.0, the capital requirements for market risk are assessed via a stress-based approach that analyses the impact of macroeconomic shocks on the total

balance sheet. As a standardised metric, it could provide useful input for assessing macroeconomic exposure by providing comparable information to supervisors about the exposures of firms in their jurisdiction and to the IAIS about the exposure of firms across jurisdictions. After implementation of ICS 2.0 as a PCR for all IAIGs, it may also incentivise insurers to manage their macroeconomic exposure.

97. Another important tool that insurers may use to support the management of their macroeconomic exposure is the Own Risk and Solvency Assessment (ORSA). ICP 16 provides for a requirement on all insurers to perform an ORSA, including more detailed requirements for IAIGs. The main purpose of the ORSA is to ensure that insurers assess all the risks inherent in their business and determine their corresponding capital needs. In this way, the ORSA is positioned to reveal vulnerabilities in an insurer's risk profile. Given the interdependence between assets, liabilities, regulatory capital requirements and capital resources inherent in the insurance business model, sensitivity and scenario analysis to assess the effects of macroeconomic shocks on the total balance sheet are important tools to mitigate the risks posed by macroeconomic exposure.

98. Insurer stress testing is another tool within the ERM that may help address macroeconomic exposure. Current draft ComFrame material requires all IAIGs to perform stress and reverse stress testing exercises. However, within the ICP this is only part of the Guidance material, as a recommendation, not a requirement.

99. The gap analysis showed that the current supervisory material already provides a solid basis for assessing macroeconomic exposure within an insurer's ERM. However, it lacks an explicit connection between sensitivity analysis and its use in assessing the impact on the insurer's financial condition through the total balance sheet effects of macroeconomic shocks.

100. The IAIS hence proposes to:

Enhance the existing supervisory material within ICP 16 and ComFrame integrated in ICP 16 by:

- *Strengthening ORSA requirements at the Standard level, specifically to raise the importance of sensitivity or scenario analysis in the insurer's ORSA and business planning, as they relate to macroeconomic exposure;*
- *Strengthening ERM requirements at the Standard level and taking into account also the potential impact from correlated exposures between macroeconomic conditions and the insurance portfolio. In the Guidance material, more explicit references to macroeconomic exposure should be added. For example, insurers should assess the potential vulnerability stemming from certain insurance products with embedded guarantees; and*
- *Upgrading the current Guidance material in the ICP 16 on stress testing to the Standard level for IAIGs and other insurers, as necessary, requiring them to carry out stress testing exercises to assess the resilience of the total balance sheet of an insurer against macroeconomic shocks. Guidance material should recommend insurers to take into account macroeconomic shocks when designing adverse scenarios and sensitivity analyses.*

Question 21: Do you agree with the above proposal to amend the Standards and Guidance on macroeconomic exposure and ERM? If not, please explain.

Question 22: Are the proposals in 3.2.2 on macroeconomic exposure appropriate? Please elaborate.

3.3.3 Policy measures for counterparty exposure

101. The existing supervisory material on counterparty exposure mostly consists of microprudential policy measures, again as part of the ERM. These can, however, also serve a macroprudential purpose. Next to that, macroprudential analysis may reveal common behaviour across firms and hence allow supervisors to take appropriate actions.

102. References to counterparty exposure, and concentration risk as an example, in the ICP and ComFrame material include:

- The ComFrame text integrated in ICP 16 requires IAIGs to take concentration risk into account in its ERM;
- The capital adequacy requirements in ICP 17 emphasise the need to address all material risks, including significant risk concentrations to individual counterparties;
- ICS Version 2.0 contains an "Asset Concentration" module that introduces incremental risk charges for large single counterparty and/or property exposures exceeding a specified exposure threshold; and
- ICP 15 also contains measures that may be useful to mitigate risks from quantitative exposure, for instance on rules or restrictions that could be applied directly to investments or other capital charges that could be used as a disincentive for risky investments or high concentrations. ICP 15 also requires "the insurer to invest assets so that, for its portfolio as a whole: assets are sufficiently secure and are held in the appropriate location for their availability; payments to policyholders or creditors can be made as they fall due; and assets are adequately diversified. The associated ComFrame text also "requires the Head of the IAIG to set limits, or other requirements, in the group-wide investment policy so that assets are properly diversified and asset concentration risk is mitigated." In Guidance, a recommendation for IAIGs is to "limit concentrations by type of asset; issuer/counterparty or related entities of an issuer/ counterparty; financial market; industry; or geographic area".

103. Requirements of standard setting bodies in other sectors are worth mentioning here as well, as some of their post-crisis reforms have also helped decrease the counterparty risk for insurers:

- In 2014, the BCBS published its Supervisory framework for measuring and controlling large exposures.[23] The Core principles for effective banking supervision have explicitly noted significant single-counterparty exposures and the need for supervisors to set prudential limits on exposures to single borrowers or groups of related borrowers. The principles do not describe how banks should measure and aggregate exposures to a

[23] BCBS (2014). *Supervisory framework for measuring and controlling large exposures*. https://www.bis.org/publ/bcbs283.pdf

single counterparty or how banks should assess whether separate legal entities form a group of related counterparties. The Guidance establishes a hard 25% (of eligible capital) limit for any single counterparty or group of related counterparties. For identified G-SIBs, the Guidance establishes a hard 15% (of Tier 1 capital) limit to other G-SIBs. Finally, the Guidance sets reporting standards for all international banks to their supervisor, specifically, requesting all exposures, before and after credit risk mitigation and exemptions, over 10% of eligible capital and the bank's 20 largest exposures. It should be noted, however, that the BCBS's Guidance is limited to single counterparties or groups of counterparties and does not take into account sectoral or geographical concentrations or concentrations of funding sources; and

- In September 2009, G20 leaders called for an improvement of the functioning, transparency and regulatory oversight of OTC derivatives market, aimed at reducing counterparty risk.[24] These include requirements for standardised OTC derivatives to be cleared through central counterparties (CCPs), requirements for collateral to be posted against both current and potential future counterparty exposures and requirements that banks hold additional capital against their uncollateralised derivative exposures. Since then, the FSB has been publishing annual progress reports and evaluations to assess whether the initial objectives are being met. The latest report from August 2018[25] concludes that the changes observed in OTC derivatives markets are indeed consistent with the G20 Leaders' objective of promoting central clearing as part of mitigating systemic risk and making derivatives markets safer. For instance, in the market for interest rate swaps, which is an important market for insurers, central clearing levels (as measured by notional amounts outstanding) increased from 24% (in 2009) to 62% (in 2017).

104. The gap analysis shows that counterparty and concentration risk already receive considerable attention within the IAIS supervisory material. The IAIS therefore proposes a number of refinements and amendments to make the link to potential systemic risk transmission more explicit.

105. The IAIS hence proposes to:

Enhance the existing supervisory material within ICPs 15 and 16 and the ComFrame material integrated in ICPs 15 and 16 by:

- *Adding a Standard that requires IAIGs, and other insurers as necessary, to define a counterparty credit risk appetite and to assess aggregate credit exposures to its largest counterparties;*
- *Adding corresponding Guidance to make more explicit in ICP Guidance that insurers should, as part of the investment policy, consider asset concentration by type of investment product, by geographical dispersion, or by credit rating but also by sector. The insurer should consider its aggregate exposure to related entities and different types of exposure to the same entity/group; and*

[24] https://www.g20.org/profiles/g20/modules/custom/g20_beverly/img/timeline/Pittsburgh/G20-declaration-pittsburgh-2009-en.pdf
[25] https://www.bis.org/publ/othp28.pdf

- *Amending the Standard on the ORSA to require insurers to also encompass all reasonably foreseeable and relevant material counterparty exposures and to require IAIGs, and insurers as necessary, to also perform scenario analysis on these exposures in stress events.*

Counterparty risk is further dealt with under 3.4 powers of intervention.

Question 23: Do you agree with the above proposal to amend the Standards and Guidance on counterparty exposure? If not, please explain.

Question 24: Are the proposals in 3.2.3 on counterparty exposure appropriate? Please elaborate.

Question 25: What are the expected costs and benefits of the proposals on on-going supervisory policy measures as discussed in section 3.2?

3.4 Crisis management and planning

106. Policy measures related to crisis management can help reduce the likelihood and impact of a disorderly failure of an insurer. Crisis management tools are aimed at minimising the adverse impact in case of stress. This relates to the impact on the insurer itself, but also on the potential systemic implications of its reactions to a materialising risk exposure or its distress or disorderly failure. Some of the transmission channels above are likely to be stronger when an insurer finds itself in a period of stress. Effective crisis preparation and management can thus contribute to mitigate systemic risk.

107. Effective crisis management measures may need to be applied by the supervisors or resolution authorities themselves, whereas other measures may need to be adopted by insurers. The latter should, in turn, be assessed by the supervisor as part of ongoing supervision. A prerequisite for successfully implementing these policy measures is having in place a crisis management and resolution regime for insurers, including a clear mandate and an appropriate range of resolution powers. Therefore, the draft revised ICP 12 (Exit from the Market and Resolution) and ComFrame material integrated therein require that legislation is established that provides an appropriate range of powers to resolve insurers effectively, including the transfer of assets, restructuring, limiting or writing down liabilities, or initiating the liquidation of the whole or part of an insurer.

108. ICPs 12, 16, and 25 (Supervisory Cooperation and Coordination) and ComFrame material therein are currently being revised and developed. The updated material incorporates elements of the FSB Key Attributes for Effective Resolution that are relevant to the insurance sector. This includes Standards and Guidance on recovery and resolution planning, and on the establishment of crisis management groups. No gap has been identified by the IAIS compared to these updated ICPs, especially because these were updated with – at least partially – a macroprudential concern in mind. Therefore, sections below describe the usefulness of these tools without proposing any additions.

109. The IAIS hence proposes to:

Not change the ICP and ComFrame material in ICP 12, 16.13 and 25 on recovery, resolution and crisis management any further than already proposed in the current draft materials.

3.4.1 Supervisory coordination

110. ICP 25 and the associated ComFrame text set out requirements for GWSs on the coordination of crisis management preparations. Effective crisis management should ensure that preparations for and management of a cross-border crisis are coordinated, timely and consistent and should minimise disruptions to the efficient operation of the insurance sector across jurisdictions. Sharing of information is also an important element in effective crisis management and preparation.

111. The relevant IAIS supervisory material is as follows:

- ICP 25.7: "The group-wide supervisor coordinates crisis management preparations with other involved supervisors and relevant authorities. The main objectives of supervisory crisis management planning should be: to protect policyholders; and to contribute to domestic or international financial stability in order to avoid a potential adverse impact on the real economy."
- ComFrame 25.7: "The group-wide supervisor establishes a crisis management group (CMG) with the objective of enhancing preparedness for, and facilitating the recovery and resolution of the IAIG."

3.4.2 Recovery planning

112. ICP 16 and ComFrame material integrated therein set out requirements on recovery planning. Recovery plans are developed in advance of any stress occurring and insurers themselves are responsible for the development and maintenance of such a plan. A recovery plan requires the insurer to assess what events would be sufficient to cause distress and provide a roadmap for how the insurer could re-establish its financial position.

113. Next to making insurers better prepared for crises, thereby decreasing their probability of default, recovery planning may also help supervisors develop better insights in possible transmission channels of systemic risk, such as herding behaviour, thereby potentially reducing losses to the system in the event of distress or disorderly failure. By benchmarking and assessing recovery plans from multiple insurers in its jurisdiction, a supervisor is able to assess the extent to which market participants may react to certain stress events in similar ways.

114. As regards scope of application, it is worth noting that all G-SIIs are required to develop a recovery plan, and that the draft ComFrame requires all IAIGs to submit a recovery plan as well. The ICPs provide that all insurers may be required to develop a recovery plan, if deemed necessary and on a proportionate basis. Such a requirement could be related to an insurer's risk profile, nature or complexity of business, or more broadly its (relative) systemic importance.

115. The IAIS is currently developing an Application Paper on recovery planning that will provide more details on proportionality and on the different elements of recovery planning.[26]

[26] The Draft Application Paper is available at https://www.iaisweb.org/page/consultations/current-consultations.

3.4.3 Resolution planning

116. Resolution plans require an assessment of the steps to take to resolve a failing insurer that is no longer viable. These plans highlight potential impediments in the group's structure or activities that could complicate the resolvability or threaten the security of policyholder claims, such as shared services around claims management. Moreover, resolution plans would encourage supervisors and/or resolution authorities to consider their existing resolution regimes and where additional powers or procedures might require amendment.

117. As regards scope of application, it is proposed to offer resolution planning as a discretionary policy tool for supervisors and/or resolution authorities, without making it mandatory for all IAIGs. At the Standard level, ICP 12 provides that, "when necessary, insurers should evaluate their specific operations and risks in possible resolution scenarios and put in place procedures for use during a resolution". However, this does not necessarily need to be in the form of a full-fledged resolution plan. The ComFrame material in ICP 12 requires, also at the Standard level, that "resolution plans are in place for IAIGs where the group-wide supervisor and/or resolution authority, in consultation with the crisis management group of the IAIG (IAIG CMG), deems necessary". In considering the need for resolution plans, the supervisor and/or resolution authority should take into account the activities, lines of business and number of jurisdictions in which the insurer operates, the complexity of the group structure, and the potential impact of failure of the insurer on the financial system and the real economy.

Question 26: Do you agree with the proposals on supervisory coordination, including CMGs? If not, please explain.

Question 27: Do you agree with the proposals on recovery planning? If not, please explain.

Question 28: Do you agree with the proposals on resolution planning? If not, please explain.

Question 29: Are the proposals as discussed in section 3.3 on crisis management and planning appropriate? Please elaborate.

3.5 Powers of intervention for supervisors

118. Powers of intervention can be seen as "state contingent" policy measures that the supervisor should have at its disposal to act promptly in response to the building up of systemic risk. They are not intended as a permanent requirement, but should be applied when macroprudential surveillance or supervision identifies an increased systemic risk that needs to be rectified. Such systemic risk may be related to either individual insurers or groups of insurers.

119. If there is an indication of the build-up of systemic risk at the sector wide or individual insurer level, the supervisor should have at its disposal a sufficiently broad set of powers that enables prompt action. In the proposed holistic framework, the on-going supervisory policy measures as described in sections 3.1 to 3.3 therefore need to be supplemented by a set of powers of intervention that supervisors can use to mitigate any actual systemic risk, when identified. The actual application of the policy measures is within the responsibility of the

supervisor as the effectiveness of those measures may be subject to the particular circumstances and cannot be generalised.

120. Draft revised ICP 24 sets out requirements for supervisors to develop an "appropriate supervisory response commensurate with the nature and degree of the risk." However, this is linked only to an individual insurer being identified as systemically important and does not relate to the systemic impact from collective risk exposures of insurers at a sector-wide level.

121. The IAIS hence proposes to:

Enhance existing supervisors material within ICP 24 by:

- *Explicitly incorporating in the Standard an appropriate supervisory response, also the potential systemic risks stemming from the collective risk exposures of insurers at a sector-wide level. A reference may be added to different possible supervisory measures as included in ICP 10.*

Question 30: Do you agree with the above proposal to amend the Standard on powers of intervention based on macroprudential surveillance? If not, please explain.

122. Draft Revised ICP 10 provides for various supervisory measures that the supervisor should apply on microprudential grounds if an insurer seems likely to operate in a manner that is inconsistent with, or fails to operate in a manner that is consistent with, regulatory requirements. The current Guidance material makes reference to the urgency of such interventions in case of financial stability concerns: "If the insurer operates in a manner that is likely to impact its ability to protect policyholders' interests or create financial stability concerns, it should lead to more urgent preventive measures by the supervisor."

123. However, the current ICP 10 does not allow for applying these preventive or corrective measures based solely on macroprudential concerns. Recognising that individual insurers can assess their own risks, but they cannot easily internalise potential accumulation of risks across the sector, the supervisor may need to intervene on macroprudential grounds, even in cases where every individual insurer still operates in a manner that is consistent with microprudential requirements. Therefore, the measures listed in the Guidance material of ICP 10, including to restrict business activities and to reinforce the financial position, may also be relevant in mitigating systemic risk building up in the sector. In addition, some useful tools are proposed to be added to the Guidance material of ICP 10: large exposure limits and reporting on the management of systemic risk. These are described in more detail below:

124. **A report on the management of systemic risk.** In such a report, the insurer would be asked to describe the measures it intends to undertake in order to address specific systemically risky activities as identified by the supervisor. This can be seen as a way to integrate elements of the Systemic Risk Management Plan (SRMP) into the toolbox of supervisors in addressing systemic risks building up within their jurisdiction.

125. **Restrictions on business activities** that may pose a systemic risk. This includes measures like prohibiting the insurer from issuing new policies or new types of products, or to alter its sales practices, restricting the transfer of assets, and restricting activities of a subsidiary.

126. **Directions to reinforce the financial position,** such as requiring measures that reduce or mitigate risks, requiring an increase in capital, restricting or suspending dividend or other payments to shareholders and restricting purchase of the insurer's own shares**.** Requiring an increase in capital, for instance via capital add-ons, may be a useful tool for supervisors in mitigating identified systemic risk. It is a measure to improve resiliency and eventually reduce the risk of a potentially systemic event materialising. As such, it is considered an intervention tool to address risks that supervisors have identified through their monitoring activities. The supervisor should clearly document the rationale for the add-on, including the specific risk it is intended to mitigate or to protect against. Such an increase is not intended to be a permanent uplift. In the event that a supervisor applies a capital add-on to a particular exposure or activity, it would be expected that the capital add-on would return to zero at the end of a pre-determined fixed period (for example, 12 months) from the date that the add-on amount is announced to the firm(s) unless the supervisor announces, to the insurer(s), a decision to maintain the add-on amount or adjust it again before the expiration of the fixed period. An add-on may also help incentivise insurers to reconsider the engagement in these potentially systemically risky activities. For instance, if the supervisor identifies that, in the current economic environment, a product exposes the insurer or a group of insurers to excessive macroeconomic exposure or that the insurer or a group of insurers is overexposed to assets where values are not justified by fundamentals, they may require those insurers to hold additional capital against the risks from these exposures.

127. **Large exposure limits**[27] could come in the form of hard limits, such as a fixed percentage of assets or capital, or soft limits, such as increased supervisory scrutiny or reporting, gradually increasing capital requirements or increasing deductions from capital resources for exposures that exceed a given threshold. Limits would not be restricted to individual counterparties, but would be expected to have broader applications, also covering sectoral exposures[28] or asset class exposures. By imposing limits on certain financial counterparties or on securities issued by the financial sector as a whole, supervisors could mitigate some of the risks posed by counterparty exposure. Concentration limits may be used for the supervisor to intervene when it identifies broader macroeconomic trends that, through insurers' behaviour, could pose a risk to financial stability or other, previously unidentified risks building in the insurance sector.

128. Some other powers that may also be relevant for addressing macroprudential concerns, are proposed to be included as examples. These may include:

- **Temporary freeze of assets/regulatory stays on surrenders**: When the capital adequacy or liquidity of an insurer is threatened or when policyholders' interests are compromised, it may be helpful for the supervisor to have at its disposal the power to limit or temporarily forbid the performance of certain activities. This will then be based on a microprudential concern. In the same vain, it may also be helpful if the supervisor has the ability to take early-intervention action against insurers

[27] This refers to the language in ICP 10.2.2 that was adopted in 2011, which is not included in draft revised ICP 10.

[28] Exposure is defined broadly and, depending on the supervisors' implementation, may include only on-balance sheet exposures or economic exposures which incorporate off-balance sheet positions.

based on a macroprudential concern. For instance, supervisors may want to have the following measures available:

  - Temporarily restrict the exercise of certain transactions or activities, including the acceptance of premiums or payments;
  - Temporarily restrict the free disposal of all or part of the assets;
  - Temporarily limit, for all or part of the portfolio, the payment of the redemption values;
  - Delay or temporarily limit, for all or part of the portfolio, the option of arbitrage or the payment of advances on a contract; and
  - Temporarily restrict the distribution of a dividend to shareholders, remuneration for mutual or parity certificates, or remuneration of shares to members.

- **Lowering the maximum rate of guarantees for new business or introducing an additional reserving requirement**: Supervisors may consider responding to developments in their markets that could potentially threaten financial stability or the safety of policyholders, by introducing an additional reserving requirement to build-up a buffer in their balance sheets. Such a reserve reduces the required future return in order to cover the liabilities. Also, supervisors may respond to changing market environments by changing reserving requirements for new business by lowering the maximum interest rate that insurers are allowed to guarantee. This would only affect new business, but it may help limit one of the potential sources of a search for yield.
- **System-wide lending facilities for market-wide liquidity issues extended to insurers**: This may address short-term liquidity shortages of insurers. The ultimate decision to extend such facilities to insurers will likely be based on an assessment of systemic events in the overall financial market. An insurance supervisor will not usually have this specific power, but it may be available within the jurisdiction.

129. The IAIS hence proposes to:

Enhance the existing supervisory material in ICP 10 by:

- *Enhancing the Standards on preventive and corrective measures to also allow the supervisor to require preventive and corrective measures based on a macroprudential perspective or financial stability concern;*
- *As described in existing Guidance, these should include measures to restrict business activities and to reinforce the financial position. Next to that, the Guidance material should be enhanced to also include large exposure limits and a report on the management of systemic risk; and*
- *Enhancing the Guidance by presenting additional measures (not recommendations, only as examples): (i) Temporary freeze of assets/regulatory stays on surrenders; (ii) Lowering the maximum rate of guarantees for new business or introducing an additional reserving requirement; and (iii) System-wide lending facilities for market-wide liquidity issues extended to insurers.*

These measures may be applied to individual insurers, a group of insurers, or sector-wide, depending on the type of risk.

Question 31: Do you agree with the above proposal to amend the Standards and Guidance on preventive and corrective measures? If not, please explain.

Question 32: Are the proposals in section 3.4 on powers of intervention appropriate? Please elaborate.

Question 33: What are the expected costs and benefits of the proposals on powers of intervention in section 3.4?

3.6 Brief summary of the supervisory policy measures

130. Table 1 provides an overview of the various tools and policy measures that are discussed in section 3 as well as an indication of the scope of application of each of the policy measures. Although no gap was identified, this also includes the policy measures on crisis management and planning.

131. For comparison, the final column on the right shows the current G-SII policy measures in red dots. It shows that the proposed holistic framework includes a proportional application of most of the policy measures that currently only apply to G-SIIs to a broader set of insurers through the ICPs and ComFrame. The differences are:

- A standardised form of a Higher Loss Absorbency (HLA) standard is not part of the proposed holistic framework, but reinforcement of the financial position is proposed to be integrated as a supervisory power of intervention;
- Resolution planning is proposed to be applied to certain IAIGs as necessary; and
- Elements of the SRMP are proposed to be integrated as a supervisory power of intervention.

		Scope		
	Policy measure	*ICP: Legal entity / Group*	*ComFrame: IAIG*	*G-SII Package: G-SII*[29]
Macroprudential surveillance	Enhance link of macroprudential monitoring to the supervisory framework	●	●	●
Requirements on insurers	Liquidity management & planning	○	●	●
	Strengthened enterprise risk management	○	●	●
	Disclosure requirements on liquidity risk	●	●	●
	Higher loss absorbency (HLA)			●
Crisis management and planning	Crisis management groups		●	●
	Recovery plan	○	●	●
	Resolution plan		○	●
Powers of intervention	Preventive and corrective measures based on macroprudential concern	○	○	○
	Including reporting on the management of systemic risk	○	○	● (SRMP)

[ ] Not applicable; [○] Required as necessary only; [●] Required; [●] G-SII Policy measure

Table 2 Overview of supervisory policy measures

Question 34: Are there any further considerations on Section 3? Please elaborate.

[29] As set out in the Introduction to the ICPs and ComFrame, the ICPs are applicable to the supervision of all insurers within a jurisdiction, which includes IAIGs. So a requirement that is in the ICPs, automatically also applies to an IAIG. For ease of comparison, the assumption made here is that also for any G-SII, ICPs and ComFrame already apply.

4 Global monitoring exercise by the IAIS

132. To provide a complete picture of the development of risks and trends in the insurance sector, cross-jurisdictional monitoring and information exchange is essential. The IAIS, as an association of insurance supervisors and regulators from more than 200 jurisdictions, is well placed to contribute to such macroprudential surveillance and monitoring on a cross-jurisdictional level. It also provides a forum for international supervisory cooperation and, given its diverse, cross-jurisdictional membership, could provide technical analysis and additional Guidance as to when and how specific tools could be applied.

133. The annual monitoring exercise by the IAIS will serve to determine any potential build-up of systemic risk at a global level, as a complement to the macroprudential surveillance by supervisors as described in section 3.1, which is aimed at monitoring systemic risks building up within a jurisdiction. This would cover risks building up both at a sector-wide and individual insurer level. The holistic framework also allows for the introduction of a feedback loop between the global monitoring by the IAIS and the enhanced macroprudential surveillance by supervisors. For instance, vulnerabilities building up in certain jurisdictions may have cross-jurisdictional implications. Correspondingly, the interpretation of global trends will benefit from having a better understanding of the underlying trends at the jurisdictional or regional level.

134. The global monitoring exercise will include the following elements:

- Annual data collection from individual insurers (consolidated data), building on the current G-SII data collection template and instructions and using indicators from an updated systemic risk assessment methodology for monitoring purposes;
- A less granular data collection from supervisors (aggregated data from legal entities operating in their jurisdictions) that supports the annual assessment of sector-wide trends with regard to specific activities and exposures;
- Data analysis by the IAIS to assess any potential systemic risk stemming from a sector-wide or individual insurer level, taking into account general financial market developments;
- Collective discussion of the results of the assessment within the IAIS. This discussion would have the following key aspects:
  - Assessment of trends and any systemic risks identified at a sector-wide level;
  - Consideration of an insurer that is demonstrating a significant level and/or trend of increasing potential global systemic impact in case of its distress or failure; and
  - Consideration of the appropriate supervisory response, taking into account the on-going supervisory policy measures as well as supervisory powers of intervention described in section 3.

  This collective discussion will take place in coordination with the GWS where an individual insurer is involved.

- Reporting to:
  - Involved insurers on analysis of their indicators relative to sector-wide benchmarks and trends;

- The FSB, on the outcomes of the IAIS assessment on individual and sector-wide trends and risks and on the outcome of the IAIS discussion on the supervisory response; and
- The wider public on sector-wide trends.

135. Next to this quantitative monitoring exercise, the IAIS plans to continue to undertake and report on various regular and ad-hoc macroprudential assessments:

- Regular and broad monitoring of insurance market developments based on predefined risk categories through an IAIS internal survey of supervisors; the Key Insurance Risks and Trends (KIRT) survey. This work maybe further refined through the development of a risk dashboard, building on the predefined risk categories;[30]
- The enhancement of the annual Global Insurance Market Report (GIMAR), through a stronger emphasis on macroprudential concerns; and
- Publication of issues papers on specific topical issues with a cross-jurisdictional relevance.

136. The annual global monitoring exercise together with the above mentioned broader macroprudential surveillance initiatives will form the backbone of the IAIS assessment of global systemic risk.

137. Acknowledging the costs of any extensive or ad-hoc data collections to the industry and supervisors, the IAIS will carefully assess costs and benefits of the global monitoring exercise and seek to find synergies wherever possible and feasible.

Question 35: Do you agree with the approach to the global monitoring exercise as described above? Please elaborate.

4.1 Global monitoring of individual insurer's systemic importance

138. The basis for the monitoring of systemic risk stemming from individual insurer distress or default is the 2016 G-SII methodology. The data used and the indicators developed, provide the relevant underpinning for the assessment. As discussed in sub-section 4.1.2 however, while using the same input data, the IAIS intends to move to a more absolute approach as the predominant assessment methodology.

139. The analysis intends to help the IAIS recognise any insurer that is demonstrating a high level or trend of increasing potential (global) systemic impact from its distress or failure. In that respect, under the holistic framework, the intent does not deviate from the objectives of the current approach to systemic risk. At this stage, no change to the selection process for insurers to be included in the assessment exercise (the Insurer Pool) is suggested.[31] To detect any

[30] The quarterly risk dashboards by the European Supervisory Authorities may serve as a useful comparator, cf. https://eiopa.europa.eu/financial-stability-crisis-prevention/financial-stability/risk-dashboard

[31] The selection process of insurers for the data collection is currently based on the following criteria: i) total assets of more than USD 60bn and a ratio of premiums from jurisdictions outside the home jurisdiction to total 5% or more; or ii) total assets of more than USD 200bn and a ratio of premiums from jurisdictions outside the home jurisdiction to total premiums greater than 0%.

build-up of risk within certain insurers and to ensure proper assessments based on continuous, sufficiently long time series, the assessment is done on an annual basis.

140. The five phases of the assessment process that were introduced for the 2016 G-SII assessment methodology,[32] have been reconsidered as part of the holistic framework. Phases I and II (with some adjustments as discussed in the following sub-sections) will remain at the core of the quantitative assessment. Instead of focussing on Prospective G-SIIs, Phase III is proposed to be amended such that the focus is on the broader trend analysis as well as any analysis that can support the collective discussion, as presented in sub-section 4.3. This amendment is proposed on the basis that the implementation of the holistic framework should remove the need for an annual G-SII identification by the FSB and national authorities. In that case, Phases IV and V would no longer be relevant.

Question 36: Should the IAIS consider changing the identification process and criteria for the selection of insurers for inclusion in the data assessment? Please elaborate.

Question 37: How should these criteria compare to the criteria used to determine whether an insurance group is an IAIG? Please elaborate.

4.1.1 Proposed changes to the indicators and weighting

141. For the annual data collection and analysis of the drivers of systemic risk, and to assess the potential systemic impact of an individual institution, as part of a global initiative, the IAIS developed a methodology for identifying G-SIIs in 2013. As stated therein, the assessment methodology is to be reviewed every three years in order to capture improvements noted by IAIS Members, developments in the insurance sector, changes in insurers' activities or products, growth in the global insurance markets, and improvements in methods and approaches for measuring systemic importance in the insurance sector and the broader financial sector. Therefore, in 2016 the IAIS published an updated methodology. As part of its next three-year review, this consultation document proposes further improvements to the current methodology.

142. This section includes suggested improvements to the methodology, in particular with respect to the data underpinning the relevant indicators and the appropriate aggregation across those indicators. These adjustments have also been made to achieve consistency of the G-SIB and G-SII methodology, where justified.

143. The G-SIB and G-SII assessment methodologies, developed by the BCBS and the IAIS, both employ an indicator-based approach to assess the systemic footprint of financial institutions across several dimensions. It is recognised that banks and insurers vary in their business models, structures and activities, and that systemic importance can differ significantly across sectors. This is reflected, for instance, in the different choice for specific indicators or weighting between indicators. At the same time, it is important that the identification and assessment of systemic importance is coordinated between the BCBS and the IAIS, with the endorsement and support of the FSB. This joint effort is necessary to achieve comparability of

[32] Phase I: Annual data collection, Phase IIA: Quality control and scoring phase, Phase IIB: Determination of quantitative threshold, Phase III: Discovery phase, Phase IV: Exchange with Prospective G-SIIs, Phase V: IAIS recommendation to the FSB

SIFIs' systemic footprints. Therefore the joint BCBS-IAIS task force was created with the mandate to assess and improve the cross sectoral consistency of G-SIB and G-SII methodologies.

144. One of the elements of improving consistency is the analysis of and, where suitable, adjustments to a set of common indicators used by the G-SIB and G-SII methodologies. The BCBS-IAIS task force identified six indicators that can be considered as common between the two methodologies. These six indicators aim to measure and assess the same activities, and the same risks, irrespective of the group's legal structure (bank or insurance). The other indicators are considered to be specific to a bank or insurance business model. The recommendations on these indicators from the BCBS-IAIS task force were all endorsed by the IAIS and are incorporated in the table below.

145. In order to improve the responsiveness of the indicators and the consistency with the banking methodology, where relevant, the following changes to the methodology are proposed (further details can be found in Annex 1). The proposed changes were subject to an impact assessment in 2018. The IAIS will continue to assess the impact in 2019, together with consultation feedback, before finalising its proposed changes to the assessment methodology in November 2019:

Intrafinancial assets (IFA)	**Capturing some previously excluded risks and improvement of cross-sectoral consistency** through inclusion of the current exposure and potential future exposure of over-the-counter (OTC) derivatives with net positive fair value, SFTs with a net positive current exposure and any deposits with unaffiliated financial counterparties; and improved clarity on the exclusion of central banks and other public-sector bodies. **Include reinsurance assets** as an item within IFA, which replaces the reinsurance indicator, is considered to better capture potential intrafinancial exposures between primary insurers and reinsurers.
Intrafinancial liabilities (IFL)	**Capturing some previously excluded risks and improvement of cross-sectoral consistency** through inclusion of the current exposure and potential future exposure of OTC derivatives with a net negative fair value, SFTs with a net negative current exposure and the undrawn portion of committed credit lines and improved clarity on the exclusion of central banks and other public sectors bodies. **Include reinsurance liabilities** as an item within IFL, which replaces the reinsurance indicator, is considered to better capture potential intrafinancial exposures between primary insurers and reinsurers.
Derivatives	**Limit the derivatives indicator to OTC derivatives**, because they are generally considered to be more complex when compared to derivatives traded on an exchange and this improves cross sectoral consistency.

Level 3 assets	**Drop the Level 3 ratio sub-indicator.** To-date, the indicator has been composed of two sub-indicators, namely, (i) absolute value of Level 3 assets, less physical holdings of real estates; and (ii) the ratio of those Level 3 assets to total assets measured at fair value on a recurring basis. This ratio sub-indicator has been intended to provide an indication of the likelihood of an insurer being forced to sell Level 3 assets, but has not indicated the scale of those sales, and therefore, has not signalled a measure of the potential systemic impact.
Non-policy holder liabilities and non-insurance revenues	**Drop the indicator.** Experience in recent years has shown a number of areas where the indicator could lead to unintended results. Also, further analysis of the elements captured, as requested in the 2018 data collection, revealed that most of the non-policy holder liabilities are either not systemically risky or captured by other indicators, leaving only a small residual of not yet covered elements that will, where appropriate, be monitored going forward.
Short term funding (STF) and Liability Liquidity (LL)	**Rescale the weighting between STF and LL.** Given the large difference in the values reported, the same reported value in the STF indicator implicitly receives a much higher weight than in the LL indicator. Rescaling the weightings by the share of combined exposure is a way to address this. **Include potential future exposure** (PFE, ie the maximum amount of credit exposure that is expected over a given horizon and at a given confidence level) of derivatives, to indicate the variation margin or collateral that the firm would have to post if markets were to move against its derivatives positions. Lastly, it is proposed to exclude from the STF the securities collaterals whose re-hypothecation or reuse is contractually explicitly prohibited.
Turnover	**Drop the indicator.** Experience in recent years shows a number of areas where the indicator could lead to unintended results. For instance, the indicator did not distinguish between maturing investments and sales.

Table 3: Summary of proposed changes to indicators

146. The proposed changes to the methodology have an impact on the weighting. Based on the following principles, the IAIS suggests to allocate an equal 9.4% weight to all the indicators in the (sub)categories in which there have been changes (See Annex 1):

- The total weighting should add up to 100%;
- It is not desirable to significantly change the underlying weighting scheme between the categories;
- The categories of size, global activity and substitutability should continue to have 5% weighting each, leaving 85% of the total weight to the interconnectedness and asset liquidation categories; and

- When merging two indicators, the impact on the weighting is assumed to be as if one of the two indicators were dropped.

147. It should be noted that while there is a clear rationale for giving a considerably higher weight to the interconnectedness and asset liquidation categories,[33] the exact figures are a matter of judgment. Having equal weights across the relevant indicators avoids a judgment on the relative importance of each indicator in the absence of a scientific underpinning. Impact assessments have been run to understand the impact of additional, alternative aggregation options, such as redistributing the weights linearly between categories or subcategories where indicators were dropped. While these alternative options did not result in a noticeable change in outcomes, they have as a drawback that the weighting becomes dependent on the number of remaining indicators within the (sub-)category.

Question 38: Are the proposed changes to the Intra-financial assets (IFA) and Intra-financial liabilities (IFL) indicators appropriate? Please explain.

Question 39: Are the proposed changes to the Derivatives indicator appropriate? Please explain.

Question 40: Are the proposed changes to the Level 3 assets indicator appropriate? Please explain.

Question 41: Are the proposed changes to the Derivatives indicator appropriate? Please explain.

Question 42: Are the proposed changes to the Short term funding (STF) and Liability Liquidity (LL) indicator appropriate? Please explain.

Question 43: Is the proposal to drop the Non-policy holder liabilities and non-insurance revenues and Turnover indicators appropriate? Please explain.

Question 44: Are the suggested changes to the indicators appropriate in improving the consistency with the banking methodology? Please elaborate.

Question 45: Are the suggested changes to the indicators appropriate in addressing the unintended consequences in the assessment of banking subsidiaries within the Insurance Pool? Please elaborate

Question 46: Are the proposed changes to the weighting scheme appropriate? Please explain.

4.1.2 Considering relative, absolute and cross sectoral aspects

148. A drawback of the current relative G-SII assessment methodology is that the scores of individual insurers do not change in relation to changed systemic importance of the entire

[33] See also: IAIS (2013): Global Systemically Important Insurers: Initial Assessment Methodology for further details.

sample. Also, the ranking between insurers does not provide any information on the systemic importance of insurers relative to the rest of the financial system. In an extreme case where all insurers would double their activities in derivatives trading, the score would not change at all from one year to another. Furthermore, individual exposures are assessed relative to a sample of about 50 insurers. However, those insurers may for some indicators not always be the best reference group. In other words, the relative exposure of a specific insurer could be high but might be comparatively small in absolute terms (or relative to a different reference group, for instance one including banks).

149. The IAIS proposes therefore to move to a more **absolute approach** as the predominant assessment methodology under which insurers will no longer be assessed relative to the rest of the sample. By assessing insurers against this fixed benchmark, scores will reflect changes in the systemic footprint of each insurer within the sample. Under the current relative approach, scores do not decrease or increase if all sample insurers reduce or increase their activity or exposure (to a similar extent).This absolute approach will allow companies to calculate their own scores and better facilitate the tracking of trends by the IAIS.

150. Mechanically, the IAIS will calculate scores for each indicator that incorporate the sample total in the base year as denominator, using the weight under the new methodology and, where applicable, the absolute reference value as calculated in the base year.[34] This denominator would be applied to indicator amounts in place of the sample denominator in future assessments, essentially freezing denominators and reference values at their levels in the base year.

151. The IAIS will further work on the development of an absolute approach during 2019.

152. Furthermore, the **cross-sectoral analysis** can help put into perspective insurers' exposures in certain indicators, where other financial sectors have exposure as well. It can also help provide a better grasp of interconnectedness across sectors, noting insurers' integral role in the financial sector.

153. The IAIS also considered incorporating activity from the banking sector into the denominators used, as an alternative potential approach for an absolute methodology. However, including banking data in the absolute methodology would lead to a distortion between the different risk indicators; implicitly reducing the importance of those where both banks and insurers have activity or exposure. Hence, while the IAIS strongly supports cross-sectoral analysis, it proposes to incorporate this type of cross-sectoral perspective through a supplemental analysis. Cross-sectoral analysis can, for instance, be performed by comparing scores of banks (from the BCBS G-SIB exercise) and insurers (from the Insurance Pool) together based on common indicators from the G-SIB and G-SII methodologies: size, intrafinancial assets and liabilities, securities outstanding, level 3 assets and OTC derivatives.

[34] An adjustment to this factor would need to be made for inflation in the base currency (EUR) to prevent inflation from causing scores to gradually increase over time.

Question 47: Do you agree with the move towards a more absolute approach to the assessment of systemic risk stemming from the failure or distress of individual insurers? Please elaborate.

Question 48: Are there other considerations on the cross-sectoral analysis? Please elaborate.

Question 49: Are there other, additional analyses that the IAIS should apply to support the assessment? Please elaborate.

4.1.3 Setting criteria for the consideration of increased systemic importance

154. In the 2016 G-SII methodology, in Phase IIB the IAIS establishes a quantitative threshold. Insurers that score above the threshold ("Prospective G-SIIs") will then be subject to further analysis in Phase III to V. Although Phase III and IV provide additional information and, as such, some nuance to the scoring of the G-SII methodology, it remains essentially a binary approach. A binary approach to the identification of a G-SII based on a ranking needs some threshold to identify different groupings (G-SII versus non-G-SII). Such a threshold should ideally be predetermined and stable, albeit not fixed over time. This would allow insurers to make informed (policy) decisions and add to the credibility of the approach.

155. Consistent with the change of the objective of the assessment in the proposed holistic framework, namely to facilitate a collective discussion of the results of the assessment within the IAIS, the IAIS now proposes to move away from this binary approach. This implies also a change of the role of a threshold. It would not solely be used to identify a specific status, but rather may be used to trigger further investigations or specific discussions at IAIS level with the GWS on an insurer or insurers that are demonstrating a significant level and/or trend of increasing potential global systemic impact in case of distress or failure.

156. The IAIS now proposes to use a combination of perspectives and criteria to indicate a high level and/or trend of increasing global systemic risk, including the outcomes of an absolute approach (once developed), relative rankings within the insurance sector, cross-sectoral analysis and supervisory judgment. The IAIS will continue to develop these criteria during 2019.

Question 50: Do you agree with the move away from setting a (fixed) threshold that results in a binary classification of insurers as either systemic or not? Please elaborate.

Question 51: Are there any considerations on the criteria that may be used to trigger further analysis or specific discussions within the IAIS? Please elaborate.

4.1.4 Supporting analysis and ancillary indicators

157. In contrast to Phase III in the 2016 G-SII Assessment Methodology, which focussed on Prospective G-SIIs, the emphasis in the proposed global monitoring exercise is on the identification of trends (sector-wide and individual) and, where appropriate, any further analyses that can support the conversation between the IAIS and the GWS, as discussed in

sub-section 4.3. The latter analyses cannot be standardised and are subject to the specific situation.

158. Similar to the 2016 Updated G-SII Assessment Methodology, which saw some indicators of Phase II moved to Phase III, likewise it is proposed for the 2019 Updated Assessment Methodology as part of the holistic framework to continue to monitor the indicators that are proposed to be dropped or merged into other indicators. It is hence suggested to use those indicators as ancillary indicators. Ancillary indicators do not affect the aggregate score, however they may provide additional context that can inform the overall assessment and thus make it less binary. They would not require an additional data collection from insurers in the Insurer Pool. Further investigation will be undertaken to understand the full value of these ancillary indicators (including the three that were identified in 2016, ie large exposures, intra-group commitments and derivatives trading) for the purpose of the assessment and as such whether to drop some of that data from the data collection in the future.

159. Next to that, the IAIS is considering to include more ancillary indicators to further aid the assessment of systemic risk in the global insurance sector. One such indicator is related to **liquidity risk.**

160. To monitor the liquidity risk of individual institutions and the insurance sector, the IAIS intends to develop liquidity risk metrics. These metrics will be subject to consultation at a later date; however, preliminary details are presented here to facilitate comments on the overall framework.

161. The metrics will serve as a tool for the IAIS to assess insurers' liquidity exposures. The metrics will be monitoring tools, rather than binding requirements, and will help to identify trends in insurer and insurance-sector liquidity. They may optionally also be used by supervisors to benchmark insurers' internal liquidity models.

162. At least one metric developed by the IAIS will primarily rely on the existing G-SII data collection to create a liquidity ratio that examines the liquidity sources relative to liquidity needs. Standardized factors will be applied to balance sheet values to assess an insurer's stressed liquidity position. The metric will examine general account liquidity over a one-year time horizon and may additionally use alternative factors to assess liquidity over other time horizons.[35] Examples of liquidity needs captured by the current G-SII data template include short-term debt, securities financing transactions, derivative collateral requirements, and surrenderable insurance liabilities. For liquidity sources, the IAIS is considering using similar liquidity categories to those developed by the BCBS with some tailoring for differences in time horizons and business models. The IAIS will also explore developing metrics that rely more heavily on insurer cash flow projections to supplement and help calibrate this standardized view and also examine the potential for separate account liquidations to adversely impact broader markets.

163. Fungibility has the potential to significantly impact the liquidity of legal entities within groups. The IAIS will explore the best way to address fungibility in its liquidity monitoring. Possible approaches include attempting to quantitatively reflect fungibility in the metrics or monitoring the impact of fungibility using supervisory input and judgement.

[35] Liquidity risk for separate account/unit-linked products, where there is no obligation of the general account, would be assessed by the supervisor through the insurer's internal liquidity risk management.

Question 52: Do you support the development of a quantitative metric to measure liquidity risk? Do you have suggestions for the development of such a metric?

Question 53: Are there any other ancillary indicators that the IAIS should consider?

Question 54: Are there ancillary indicators that should be dropped?

Question 55: What are the expected costs and benefits of the proposals on individual insurance monitoring as discussed in section 4.1?

4.2 Sector-wide global monitoring

164. The current annual data collection from around 50 insurers, as discussed under 4.1, is aimed at capturing systemic risk stemming from individual insurers. Although it may provide indications on sector-wide trends, it may not provide sufficient insights on how systemic risk from sector-wide exposures and activities could unfold. Hence, the IAIS proposes to complement the current monitoring with an additional data collection at the level of the IAIS to assess sector-wide trends with regard to specific activities and exposures.

165. In terms of data needed for the assessment of common behaviours, one could distinguish between three different types: (i) (capital) market data; (ii) exposure data collected from insurers/supervisors, akin to the data collected for the purpose of identifying interconnectedness and asset liquidation in the individual insurer assessment; and (iii) other non-insurer related information that can support the analysis and can be derived from public sources. The aim is to, early on, identify industry-wide trends, growth in asset concentrations or new liquidity exposures, to give a few examples, and to assess the potential consequences thereof under different circumstances. The main focus is on the two exposures that are most relevant in the analysis of collective behaviour and sector-wide trends, namely liquidity risk and macroeconomic exposure.

166. An assessment with the purpose of identifying insurers whose distress or failure could result in systemic risk at the global level can be restricted to a comparatively small number of internationally active and (generally) large insurers. For the assessment of systemic risk stemming from collective action, the conclusion is less clear-cut. It suggests a broad coverage, which needs to be balanced against effectiveness and efficiency grounds, or simply based on cost-benefit analysis. In other words, the challenge is to ascertain the extent to which the sample can be restricted without any loss of quality of analysis.

167. The IAIS will further develop the objectives, scope, structure and modalities of this additional data collection to inform the sector-wide monitoring, with the intention of relying, to the extent possible, on existing data collections and supervisory reporting requirements to limit the burden for insurers and supervisors. The sector-wide data collection should be based on a representative sample of insurers active in relevant jurisdictions (aggregated data from legal entities operating in their jurisdictions) with the aim of monitoring the specific exposures described in section 2. Possible criteria to select the relevant sample, could be the following:

- The sample of jurisdictions: (i) the size of the insurance market compared to the global insurance market; (ii) the level of insurance market penetration relative to GDP or (iii) the importance of the capital market in the respective jurisdiction (and the respective insurer investments). Criterion iii could be chosen on the basis that a dominant channel for collective behaviours is the capital markets; and
- The sample of insurers: the greater of either the top 3 insurers or 60% of the local insurance market.

168. The information from the representative jurisdictional sample is provided by the respective jurisdiction on an aggregate basis from legal entities operating within its jurisdiction, including summary descriptive statistics, such as mean, median and standard deviation.

169. A two-pronged approach to sector-wide monitoring is proposed based on the following rationale: Collective behaviours (such as joint asset liquidations), which are the target of this analysis, are most likely related to a trigger event, which is again likely linked to the state of the business cycle. The same is true for the impact of the collective behaviour. For instance, considerable asset sales by insurers in times of deep and liquid markets are less likely to materialise and will have less of an impact.

170. The two-pronged approach to sector-wide monitoring would consist of the following elements: (i) Sector-wide and standardised annual monitoring and assessment used to identify levels and trends. This baseline monitoring can be based on data collected from national supervisors on an aggregated basis. No individual insurer information is needed for this purpose; and (ii) Building on the baseline monitoring, specific, follow-up analyses can be undertaken if the figures justify further investigation or (for instance) if market developments require a deeper dive. As such, this more specific monitoring work is expected to be undertaken on a less regular basis and may vary in form and substance across time. In addition, assessments/research done at the jurisdictional level can provide additional insights and thus complement analysis at the IAIS level.

171. The IAIS collects a broad array of data for different purposes. In order to limit the burden to the industry, a first step is to identify the relevance of other data collections,[36] such as ICS field testing, for the purpose of macroprudential surveillance.

Question 56: Do you agree that the sector-wide monitoring should have an annual assessment including a possibility for specific, more detailed assessments when needed? Please elaborate.

Question 57: Do you have additional suggestions on how to identify levels and trends for the sector-wide assessment of systemic risk? Please elaborate.

Question 58: Do you agree that the additional sector-wide data collection should be based on a representative sample of insurers from relevant jurisdictions, using aggregate data from legal entities? Please elaborate.

[36] It is noted that data are collected for different samples, different purposes and in different formats, including solo and consolidated data for specific insurers. Furthermore, ICS field testing data represent regulatory information on a regime that is not applied at this stage.

Question 59: Do you have alternative suggestions on how to identify appropriate samples for the additional sector-wide data collection of systemic risk?

Question 60: Do you agree that the IAIS seeks to extend the use of other IAIS data collections for the purpose of sector-wide monitoring, where relevant? Please elaborate.

Question 61: What are the expected costs and benefits of the proposals on sector-wide monitoring as discussed in section 4.2?

4.3 The use of the assessment outcomes

172. As stated in the updated 2016 Assessment Methodology, "following annual completion of Phases I – IV, the IAIS recommends a list of identified G-SIIs, including Phases II through IV analysis supporting that recommendation, to the FSB. The FSB determines whether to accept the IAIS recommendation and, if so, when to publish the recommendation."

173. In the proposed holistic framework, it is instead envisaged that, following the data collection and assessment, the IAIS will have a collective discussion on the assessment of potential systemic risks (arising from both individual insurers and the collective exposures across the sector as a whole) and – in coordination with the GWS where an individual insurer is involved – an appropriate supervisory response. Also, it is proposed that a summary of this discussion, including supporting background information on the outcomes of the data collection and assessment, will continue to be reported to the FSB.

174. The IAIS is of the view that the implementation of the holistic framework should remove the need for an annual G-SII identification by the FSB and national authorities,[37] because:

- The global monitoring exercise as described in section 4.1 to 4.3 is proposed to continue to be overseen by the IAIS and reported to the FSB;
- an enhanced set of policy measures and supervisory powers of intervention will be applied in a proportionate manner to a broader set of insurers by integrating these measures into the holistic framework, as described in section 3; and
- While recognising that the application of supervisory policy measures is ultimately the responsibility of the supervisor, the collective discussion and coordination among IAIS Members and reporting to the FSB are designed to help ensure a more consistent response to potential global systemic risk.

175. A final decision on the need for an (annual) public G-SII identification should, however, depend on an assessment of the consistent application of the holistic framework by supervisors and the effectiveness of the IAIS global monitoring exercise. In November 2022, based on the initial years of implementation of the holistic framework, it is recommended that the FSB review the need to either discontinue or re-establish an annual identification of G-SIIs (Phase V), based on an IAIS assessment of the consistent implementation of the supervisory policy measures and the effectiveness of the IAIS global monitoring exercise. Between 2020, when

[37] This implies also that Phase IV of the 2016 methodology (Exchange with Prospective G-SIIs) becomes no longer relevant.

the holistic framework is implemented, and 2022, when the review takes place, it is recommended to suspend the annual identification of G-SIIs.

4.4 Transparency

176. Similarly to what was introduced for the 2016 G-SII Assessment Methodology, the IAIS intends to continue, upon request by the participating insurer and through the relevant authorities, to inform the insurer of i) the insurer's score on each of the indicators in the absolute assessment approach, including the data elements received from that insurer that were incorporated into the indicator; ii) descriptive statistics including the median scores and the distribution of scores within the Insurer Pool (unless such disclosures could reveal confidential information about other insurers); and iii) the overall score. This information is shared with participating insurers in return for their provision of data. The IAIS stresses, however, that the outcome of the assessment methodology, ie the scores, will form only one part of the wider systemic risk assessment and should not be interpreted in isolation.

177. Furthermore, the IAIS intends to publish aggregate trends in the Insurer Pool, as well as a summary of the sector-wide monitoring. To the extent that the sector-wide, baseline monitoring leads to further analysis, the findings thereof will be shared as well, either as an article in the GIMAR or as a separate publication.

178. Both the data instructions and data template will be published once the holistic framework is adopted in November 2019, and thereafter whenever adjustments are made.

Question 62: Do you agree with the proposal for the transparency towards participating insurers and the public? Please elaborate.

Question 63: Are there any further considerations on Section 4? Please elaborate.

5 Implementation assessment by the IAIS

179. To ensure a global consistent application of policy measures, a robust and transparent implementation assessment is key. Therefore, as part of its mission, the IAIS has a role in assessing implementation of its supervisory material. Such an assessment can be seen as the final step in a mutually reinforcing cycle of activities that consists of monitoring, standard setting and implementation assessment. A transparent process of implementation assessment will help ensure a globally consistent application of the proposed policy measures.

180. In the particular case of the holistic framework, assessment activities would focus on two elements. Firstly, there would be an assessment of observance of those supervisory policy measures that are embedded in the IAIS Standards (ICPs and ComFrame). This would assess whether: i) the supervisor has the legal authority to perform its tasks with respect to the enhanced supervisory policy measures, ii) these measures are embedded in the supervisory frameworks, and iii) these measures are being applied in practice. Secondly, there would be an assessment on the use of the proportionality principle and discretion by supervisors. This would assess how supervisors decide if a certain policy measure is necessary for a particular insurer, and the application of criteria on which those decisions are based.

181. When designing the implementation and assessment process, the IAIS will take into account relevant assessments by other organisations, such as the FSB's current role in monitoring implementation of G-SIFI resolution-related reforms as well as the methodologies and processes developed by the BCBS for its Regulatory Consistency Assessment Programme (RCAP).

182. In practice, these activities will build on existing implementation assessment methods for international supervisory material such as the IAIS Peer Review Process (successor of the Self-Assessment and Peer Review). The IAIS, for instance, conducts thematic assessments of Members' observance of supervisory material. The IAIS publishes aggregate findings from these assessments. These reports provide a global and regional picture of implementation and provide a key component of the feedback loop between the IAIS standard setting and implementation activities.

Question 64: Do you agree with the proposed implementation assessment as described in section 5? Please elaborate.

Annex 1 Detailed explanation of revisions to indicators

This section includes suggested revisions to the methodology both with the aim of improving consistency with the BCBS G-SIB methodology and on general improvements to the indicators.

Category	Sub category	Indicator	Current Weight	Proposed adjustment	Adjusted weight[38]
Size		Total assets	2.5%	n/a	2.5%
		Total revenues	2.5%	n/a	2.5%
Global activity		Revenues outside of home country	2.5%	n/a	2.5%
		Number of countries	2.5%	n/a	2.5%
Interconnectedness	**Counterparty exposure**	Intra-financial assets	6.7%	Enhance consistency with G-SIB methodology and extension to cover reinsurance	9.4%
		Intra-financial liabilities	6.7%	Enhance consistency with G-SIB methodology and extension to cover reinsurance	9.4%
		Reinsurance	6.7%*	Delete and merge into IFA and IFL	
		Derivatives	6.7%	Enhance consistency with G-SIB methodology	9.4%
	Macro economic exposures	Derivatives Trading (CDS or similar derivatives instrument protection sold)	7.5%*	n/a	9.4%
		Financial guarantees	7.5%*	n/a	9.4%
		Minimum guarantees on variable products	7.5%	n/a	9.4%
Asset liquidation		Non-policy holder liabilities and non-insurance revenues	7.5%	Drop indicator	
		Short term funding	7.5%	* Add potential future exposure of exchange traded derivatives * Rescale weighting by its share of the combined exposure from short-term funding and liability liquidity	9.4%

[38] Based on the proposal as described in section 4.1.1.

		Level 3 assets	6.7%	Enhance consistency by dropping the ratio of level 3 assets sub-indicator	9.4%
		Turnover	6.7%	Drop indicator	
		Liability liquidity	7.5%	Rescale weighting by its share of the combined exposure from short-term funding and liability liquidity	9.4%
Substitutability		Premiums for specific business lines	5.0%	n/a	5.0%

Table 4: Proposed indicators and weights

1. Intrafinancial Assets and Liabilities

The IAIS proposes to enhance the intrafinancial assets and liabilities indicators to make it consistent with the BCBS assessment methodology for G-SIBs, ie by extending the scope of the indicator to also include exposures arising from OTC derivatives and from SFTs and credit facilities (for liabilities).

As currently structured, this measure of interconnectedness is focused on the provision of funding to the financial sector through direct lending to financial institutions as well as holdings of debt and equity securities, certificates of deposit and ordinary deposits. There are a number of activities, however, that insurers engage in that could also increase interconnections with the financial sector, and therefore increase the potential for transmitting stress from the insurer. In particular, the IAIS proposes to include exposures arising from derivatives, namely the current and potential future exposure of OTC derivatives with a net positive fair value, and the exposure arising from SFTs with a positive current exposure.

In addition to better capturing counterparty exposures, this enhanced indicator would create a similar indicator to what is used in the G-SIB framework. While harmonisation is not the goal, in itself, having comparability would provide the opportunity to conduct a like-for-like comparison between the two sectors. It is not clear that any of the activities proposed for inclusion would be more systemic if conducted by a bank than if conducted by an insurer or that they would yield unexpected results due to a difference in the business model. As a result, enhancing the indicator in this way could be useful in benchmarking the relative systemic risk posed by the insurance and banking sectors.

As to intrafinancial liabilities, this is aimed at indicating transmission of stress by the insurer failing to meet claims or obligations to financial counterparties as they come due. As currently structured, this measure only focuses on borrowing activities, such as loans, drawn credit lines, or the issuance of debt securities. Insurers engage in other activities that could potentially create exposures for financial counterparties and thus increase the stress that the insurer could pass on. These exposures relate to OTC derivatives, SFTs and credit lines. The IAIS therefore proposes enhancing its measure of intrafinancial liabilities by including SFTs with a net negative current exposure, the current and potential future exposure of derivatives with a net negative fair value and the value of undrawn committed credit facilities.

The enhanced indicator would better capture potential exposures arising from insurers' activities and, similarly to intrafinancial assets, generate a more comparable indicator to what is used for G-SIBs. The match would not be exact as the G-SIB indicator includes equity securities. Excluding equity securities may encourage firms to rely more on equity than debt and thus incentivise lower leverage. Through the data sharing agreement developed by the Task Force on Systemically Important Banks and Insurers or through expansion of the indicator for benchmarking, the difference could be addressed, and thus generate a comparable indicator that would provide a useful benchmark.

2. Reinsurance

The IAIS introduced a reinsurance indicator in the Interconnectedness category that captures technical provisions for assumed reinsurance business. This indicator was designed to capture interconnections in the insurance sector through reinsurance to assess the level of interconnectedness between reinsurers and primary insurers. The indicator was amended in 2016 by an Absolute Reference Value (ARV) to reflect its limited scope.

Ultimately, however, reinsurance claims generate intrafinancial exposures. As a result, the IAIS proposes to merge the existing reinsurance indicator into intrafinancial liabilities and to capture technical provisions ceded in the intrafinancial assets indicator. This allows on the one hand to still capture any link reinsurers have due to assumed business. On the other hand, it also now captures primary insurer's exposure to reinsurers.

In order for the informational value of reinsurance connections to not get lost in the intrafinancial assets and liabilities indicators, the IAIS will continue monitoring the development of reinsurance technical provisions (ceded and assumed), as an ancillary indicator.

3. Derivatives

The IAIS proposes to measure the extent of an insurer's activity in the derivatives market using the notional value of OTC derivatives. The use of derivatives may create interconnections with financial markets, though direct exposures are captured in measures of intrafinancial assets and liabilities. Larger involvement in derivatives markets measured by the notional value of outstanding positions may make winding down the positions more difficult or costly if markets move the wrong way or in a resolution scenario. Moreover, derivatives contracts may reflect, to an extent, residual macroeconomic exposure that the insurer is unable to mitigate through ALM. OTC derivatives contracts are less likely to be standardised contracts, compared to exchange-traded contracts, thus potentially making them more difficult to value and thus more likely to create risk.

The current indicator also captures embedded derivatives unrelated to minimum guarantees. While certainly complex and difficult to value, these derivatives are not financial contracts in themselves. As a consequence, they will not be covered in the new indicator

Lastly, the G-SIB framework also focuses its analysis on OTC derivatives, thus making this indicator consistent with the Derivatives indicator of the BCBS, would allow the IAIS to better compare the systemic risk posed by the insurance sector to that of the banking sector.

4. Non-policyholder liabilities and non-insurance revenues

The IAIS proposes to drop this indicator. After further experience with the indicator, the IAIS has noted a number of areas where the indicator could lead to unintended results. The non-policyholder liabilities sub-indicator substantially double-counts items already included in Intrafinancial liabilities and Short-term debt without capturing a new risk dimension.[39] A further analysis of non-policyholder liabilities in 2018 revealed that, other than debt, the most material activities captured did not have clear systemic risk implications.

The IAIS proposes, however, to continue collecting information on this indicator. While this data would not be assessed as part of the formal assessment, it could provide supervisors with useful information about new, non-insurance businesses that firms are engaging in and emerging trends in the insurance sector.

5. Short-term funding and Liability liquidity

Both short-term funding and liability liquidity capture what is, economically, the same risk: namely liquidity risk. By separating short-term financial liabilities and short-term insurance liabilities into different indicators, one activity may be treated differently than the other, despite capturing similar activity. Moreover, because the weight given to the activities is partially based on the amount of activity in the sample, the extent of the discrepancy is not transparent, in this instance. Specifically, every dollar in Short-term funding was weighted roughly 7.2x a dollar in Liability liquidity.[40] This compares to 8.5x in 2016.[41] Without judging on whether the magnitude of the additional weight is appropriate, the lack of transparency and the volatility of the impact do not seem appropriate. As a result, the IAIS proposes to rescale the Short-term funding and Liability liquidity indicators by their contribution to the combined exposure. In this way, the revised indicators will ensure more transparent treatment of liquidity risk within the methodology.

The indicators both are weighted using an additional factor based on the sum of each indicator's exposure divided by the sum of the combined exposure. In addition, elements included in STF will be assigned a weighting factor of 400%. This factor intends to underline that elements in STF are considered to be more liquid and therefore more risky than the most liquid insurance liability. The current differences in the insurer pool between the liability liquidity and short-term funding indicators would imply a relative weight between 700-900%, see also above. Not only is the implied weight volatile, due to changes in the insurer pool, but the magnitude seems unreasonably large. An analysis of historical surrender (withdrawal) rates for both insurance and non-insurance liabilities would seem to indicate, given the current structure of the liability liquidity indicator, that the short-term funding indicator should be

[39] Elements of Short-term debt, for instance, are also captured in Intrafinancial liabilities, though the focus, rather than on interconnectedness, is on potential maturity transformation and liquidity risk. This form of double-counting serves the purpose of capturing different aspects of an activity.

[40] See https://www.iaisweb.org/page/supervisory-material/financial-stability-and-macroprudential-policy-and-surveillance/file/70588/2017-g-sii-exercise-public-report-public-version-final, p. 3.

[41] See https://www.iaisweb.org/page/supervisory-material/financial-stability-and-macroprudential-policy-and-surveillance/file/64000/g-sii-disclosure-public-report, p. 3.

weighted between 250% and 300% of liability liquidity. Nonetheless, in the interest of conservatism, the IAIS proposes to use a factor of 400%.

Lastly, it is proposed to exclude from the STF the securities collaterals whose re-hypothecation or reuse is contractually explicitly prohibited. This change reflects the non-existent liquidity risk exposures from the securities collaterals with such contractual features and hence rectifies the current state of over-statement under the 2016 G-SII assessment methodology.

		Delay in access		
		None (< 1 week)	Low (< 3 months)	High (> 3 months)
Economic Penalties	None	100%	50%	2.5%
	Low (< 20%)	50%	25%	0%
	High (> 20%)	2.5%	0%	0%

Table 5: Combination of time restraints and economic penalties

Question 65: Is the weighting factor above appropriate? Please elaborate.

Question 66: Is the table above from the 2016 G-SII methodology still appropriate? Please elaborate.

6. Level 3 assets

The IAIS is proposing to drop the ratio sub-indicator. Level 3 assets tend to be thinly traded and illiquid. The indicator is composed of two sub-indicators, namely (i) the fair value of assets valued on a recurring basis using Level 3 inputs ("Level 3 Assets"), less physical holdings of real estate; and (ii) the ratio of those Level 3 Assets to total assets measured at fair value on a recurring basis. The ratio sub-indicator intended to provide an indication of the likelihood of a firm being forced to sell Level 3 assets but does not provide an indication of the scale of those sales, and therefore, provides a less useful measure of the potential systemic impact.

7. Turnover

The IAIS is proposing to drop this indicator. Insurers are traditionally long-term investors. Significant trading activity, intended to be measured by this indicator, may point to activities that do not align with this conventional buy-and-hold strategy. After further experience with the indicator, the IAIS has noted a number of areas where the indicator could lead to unintended results. Importantly, the indicator does not distinguish between maturing investments and sales and, moreover, many companies are unable to supply this data when it has been requested. This is of particular concern for short-term securities, which may be rolled over a number of times in the course of a year. Such securities may be used for cash management but, with the current structure of the indicator, receive a high weight because both the maturity and purchase are counted repeatedly.

The second part of the indicator is based on issuance or redemption of funding instruments. Significant issuance and redemption of funding instruments may be indicative of maturity transformation if the debt being rolled over is largely short-term in nature, which is likely duplicative of short-term funding.

Annex 2 Liquidity Risk Management (DRAFT)

1. Introduction

The International Association of Insurance Supervisors (IAIS), as part of its Systemic Risk Assessment Work Plan, released an initial consultation on 8 December 2017, in which it noted the potential for systemic risk arising from activities that expose the insurer to liquidity risk. It stated that the IAIS would, as a short-term measure, develop a liquidity planning framework, with a longer-term initiative to explore developing a quantitative metric that supervisors can use to monitor liquidity risk. Ahead of the publication of an Application Paper on Liquidity Risk Management for consultation, this Annex provides an early indication of the proposed way forward. This Annex is included in this document to facilitate understanding of the holistic framework.

While in the normal course of business, insurers typically rely on premiums, income from investment and other sources, they nevertheless need to maintain adequate liquidity to fulfil expected and unexpected payment obligations and meet funding shortfalls. Liquidity management is essential to the proper operation of the insurer, the protection of policyholders and financial stability. Accordingly, insurers are expected to conduct sufficient and regular reviews of their liquidity adequacy, taking into account the scale, nature and complexity of their activities.

Past experience demonstrates that even solvent insurers may experience material financial distress, including failure, if they do not manage their liquidity prudently. Although many of an insurer's liabilities are long-term in nature or contingent on the occurrence of an event, certain activities may create significant and unanticipated demands for liquidity. When confronted with stress events, insurers with insufficient liquidity may be forced to take remedial actions that can amplify or accelerate stresses through the financial system.

It is important to note the distinction between capital and liquidity. While both capital and liquidity are essential to doing business, liquidity has a "real time" dimension that capital does not. Liquidity risk is generally considered as a "sudden death" risk. As a result, the insurer's capital planning framework may be inappropriate or inapplicable to what would be expected in its liquidity plan.

2. Definitions

Liquidity risk is the uncertainty, emanating from business, investment or (re-)financing activities, over whether the insurer will have the ability to meet expected and unexpected payment obligations or collateral needs in time and in full as they fall due in both current and stressed environments.

(Re-)financing or funding risk is the uncertainty around the insurer's ability to obtain funds as required in due time and on non-punitive terms.

3. Purpose

The purpose of the Application Paper will be to provide Guidance in the development of an appropriate liquidity management and planning framework. The Guidance should be read alongside the relevant Insurance Core Principles (ICPs) and Common Framework for the Supervision of Internationally Active Insurance Groups (ComFrame) material.

The remainder of this Guidance is structured as follows:

- Section 4: Overview of liquidity planning
- Section 5: Contingency funding plan
- Section 6: Governance
- Section 7: Reporting to the group-wide supervisor and the IAIS

4. Overview of liquidity planning

The insurer's ERM framework is required to provide for the identification of all relevant material risks. The insurer is therefore expected to have in place strategies, processes and reporting procedures necessary to identify, measure, monitor, manage and report on liquidity risk. A key purpose of the liquidity plan is to document and demonstrate overall liquidity adequacy, both under current and stressed market conditions. This approach is based on the principle that an insurer must have adequate levels of liquidity resources and that comprehensively it manages and controls liquidity and funding risks. The liquidity plan sets out an insurer's approach to liquidity and funding. It must be clear and self-explanatory so that any outside person familiar with the subject matter can easily assimilate it. It must also accurately reflect the distinctive features, size, nature and complexity of the insurer.

A central component of risk management is a clear articulation of the acceptable level of liquidity risk that the insurer may assume to achieve its strategic objectives. This should be described in a formal risk appetite statement that defines the duration and type of stress or stresses that the insurer aims to survive. This statement should include both quantitative targets, such as excess liquidity and liquidity coverage ratios, and qualitative objectives. The insurer's risk appetite statement should be articulated in a way that all levels of management can clearly understand and apply it to all aspects of liquidity risk management throughout the organization. All elements of the liquidity plan should be consistent with the risk appetite statement.

The insurer's liquidity plan should discuss all strategies, policies and procedures that the insurer has in place to manage liquidity risk and implement its stated risk appetite. In its application of its risk appetite, the insurer should have in place prudent limits on (i) maturity gaps; (ii) concentrations of liquid assets and funding sources by currency, single counterparty, counterparty type, instrument type, and instrument seniority; (iii) liquidity risk arising from insurance liabilities; (iv) non-insurance liabilities maturing or redeemable within various time horizons; and (v) off-balance sheet or other exposures that could create liquidity needs during stressed market conditions. These limits should be thoroughly documented in the insurer's liquidity plan, including how they comply with the insurer's stated risk appetite. To the extent possible, the insurer's liquidity plan should also include a description of the systems and metrics used to monitor liquidity risk.

The insurer should consider all potential vulnerabilities in its liability profile, both insurance-related and non-insurance. The insurer should discuss its outstanding products in sufficient detail so that a reader can understand their features. Particular attention should be paid to any product features that may encourage withdrawals or otherwise create significant liquidity demands under certain circumstances. To the extent the insurer provides bank- or corporate-owned life insurance (BOLI or COLI), it should describe the exposures and assess the potential liquidity needs that could arise from these products. Explicit mention should be made of any deposit-type contracts or similar products.[42] Where a trust or special purpose vehicle (SPV) or other structure is used to transform the maturity of the issued instrument, for example in a funding agreement-backed securities programme, these structures should be elaborated on. The insurer should also describe any non-insurance liabilities that could contribute to liquidity stress. A detailed overview should be provided of any yield enhancing activities, such as SFTs that the insurer engages in, including reinvestment practices and its internal policies regarding such activities.

To complement an analysis of its liabilities, the insurer should also consider all means of raising cash. This includes an assessment of returns on investments, off-balance sheet instruments, such as credit lines, and its ability to issue debt or commercial paper. As part of this analysis, the insurer should detail any legal or operational restrictions, covenants, etc. that might limit its ability to use these means to raise funds under stress. The insurer should also assess the liquidity of its investment portfolio. It should consider and detail any assets that have been pledged, encumbered or are otherwise unavailable to raise cash. The insurer should also assess the extent that it has generally illiquid investments, such as privately placed securities, real estate or commercial mortgages, that it is using to support liabilities that could be subject to material cash demands.

Insurers with significant collateral needs, for example through derivatives, securities financing transactions[43] or reinsurance, should have in place systems and procedures to monitor assets that have been encumbered or are available to be loaned or pledged in such transactions. These systems and procedures should be detailed in the liquidity plan. In addition, the plan should describe how the insurer monitors the levels of unencumbered assets that could be loaned or pledged. The insurer should also take into account any operational restrictions that could impair its ability to pledge certain assets, such as their geographical location or currency.

Where applicable to its business, the insurer should detail the policies it has in place for the monitoring of intraday liquidity risk exposure, including any obligations that must be settled at a specific time within the day or where intraday events could materially and adversely affect the insurer's liquidity position. For instance, where intraday movements of asset prices could force the insurer to rebalance its hedging portfolio, the insurer should describe the procedures it has in place to monitor and mitigate the risk to its liquidity position.

In the normal course of business, the insurer should periodically produce cash flow projections at a group level and for all material legal entities that incorporate (i) anticipated claim and annuity payments; (ii) policyholder options including surrenders, withdrawals and policy loans;

[42] 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, and Funding Agreement-backed or Fixed Annuity-backed securities.

[43] Securities Financing Transactions (SFTs) are transactions such as repurchase (repo) agreements, reverse repurchase agreements, dollar rolls, reverse dollar rolls, security lending and borrowing, and margin lending transactions, where the value of the transactions depends on the market valuations and the transactions are often subject to margin agreements.

(iii) collateral requirements; (iv) expenses; (v) intercompany transactions; (vi) maturities and renewals of funding instruments, including through the exercise of provisions that could accelerate their maturity; (vii) premiums from new and recurring business; (viii) investment income; and (ix) any other potential cash flows that are relevant to the unique nature of the insurer's business and activities. Cash flows should be segregated by operating, investment and funding activities and reported with sufficient detail on the underlying activity and at sufficient granularity with respect to time interval for the insurer to assess areas for potential vulnerabilities. Cash flows from asset disposals should be accounted for separately. In its liquidity plan, the insurer is expected to document and justify all assumptions used in generating the cash flow projections. In the plan, the insurer should also identify and analyse any potential discrete and cumulative cash flow mismatches over various time horizons, as applicable to its activities and business.

Insurers that are part of a group face additional challenges in their liquidity risk management. Such insurers should elaborate on all considerations at a group level and also for all significant legal entities or functional sub-groups of entities. The liquidity plan should consider if and to what extent entities or sub-groups are self-sufficient or dependent on liquidity support from other parts of the group and whether such arrangements are both prudent and expected to be honoured in a stress scenario. As part of its ERM framework, the insurer should ensure the consistent reporting of results at the legal entity level. As part of its liquidity plan, the insurer should document how its risk appetite is applied to all material legal entities and how compliance with the risk appetite is evidenced to the group.

Throughout its liquidity plan, the insurer should demonstrate how the liquidity risk appetite is applied, in particular, how it and the insurer's liquidity plan are integrated into the risk management framework and how they inform business decisions (ie a use test). The insurer should also ensure consistency between its liquidity plan and all other supervisory required documents, such as recovery and resolution plans or ORSAs.

Where the supervisor deems that the insurer's liquidity planning is not appropriate to the nature, scale, and complexity of the insurer, it has a responsibility to use the powers at its disposal to intervene and require effective and timely remedial action by the insurer.

5. Liquidity stress testing

An insurer should have a sound understanding of the ways in which its activities affect its liquidity risk profile under both current and stressed conditions, so comprehensive, robust stress testing is an important part of liquidity planning. The insurer's stress tests should include short-term and protracted macroeconomic, sector-wide, and idiosyncratic events that appropriately reflect the distinctive features of its business. For material legal entities, this includes, where appropriate, locally developed stresses that reflect local business vulnerabilities and market conditions.

Firms are expected to consider in their stress testing the impact of a range of severe, but plausible, scenarios and combinations of scenarios on their cash flows (both inflows and outflows), liquidity resources, profitability, and solvency. Stress scenarios should be chosen to reveal vulnerabilities in the firm's liquidity profile. In this way, the chosen stresses should help management to identify material risks to the insurer. Through its stress testing, the insurer should produce stressed cash inflows and outflows, both at a group level and for all material legal entities that are comparable by segment, activity, and time interval to those produced in the normal course of business. The business-as-usual results can thus provide a comparable

baseline for robust analysis of the firm's liquidity risks. The extent to which stressed cash outflows exceed inflows will be used in determining the liquid asset buffer as defined in the next section.

To ensure that stress tests capture a sufficiently diverse set of risks, the insurer should use a variety of time horizons for their scenario planning. At a minimum, the insurer is expected to consider time horizons of 30 days, 90 days, and one-year. While insurers are generally exposed to, and expected to plan for, medium- to longer-term risks, certain activities, such as collateral calls or withdrawals from large or institutional policies, can result in sudden, large demands for liquidity. Where applicable, the insurer should also use any other planning horizons relevant in its business model, risk appetite and liquidity risk profile. For example, insurers with significant activity in capital markets that could generate short-term liquidity needs should include a 7 day horizon, while firms with longer-term liabilities should consider horizons longer than one-year.

The insurer is expected to make appropriate assumptions, both qualitative and quantitative, in determining its stress scenarios. These assumptions should be described and justified in relation to the scenarios and the risk factors taken into account. It should be noted that stress testing work for capital purposes may not be relevant or adequate for the liquidity plan. It is expected that the degree of conservatism of the scenarios and assumptions will be discussed in the liquidity plan. The following considerations should be taken into account when designing stresses:

(1) Exposure to insurable events

This should include considerations of the nature, frequency and severity of exposures to insurable events, including catastrophic events, that may occur within the time horizon. The insurer should consider its dependence on reinsurance and the possibility that a material portion is uncollectible.

(2) Withdrawals and run-offs from insurance policies

This includes an assessment of the possible withdrawals from different product types, taking into account common features such as guarantees, maturity, interest rate sensitivity, customer type, insurability or withdrawable amount. The insurer should consider liquidity needs arising from both life and non-life products. The insurer should also assess potential reductions in regular premium payments and declines in new business and the impact on its net cash flows.

(3) Contingent off-balance sheet exposures

Where appropriate, the insurer should include an assessment of derivative cash flows caused by maturity, exercise, repricing, margin or collateral calls, changes in the value of posted collateral, and additional costs to rebalancing portfolios as a result of volatile market conditions. The insurer should also consider additional collateral needs that could arise from reinsurance arrangements.

(4) The impact in the deterioration in the insurer's credit rating

The insurer should consider all types of contractual and behavioural outflows resulting from credit downgrades of varying magnitude, the types and quantity of collateral or margin which may be required and the speed of outflow, where appropriate. This analysis should encompass retail and institutional policyholders as well as capital markets and reinsurance counterparties.

(5) The ability to transfer liquidity across entities and countries

The insurer should assess the intragroup support assumed available in stress or the impact of a failure of a group entity to repay loans in a timely manner, where appropriate. This should include considering existing legal, regulatory and operational limitations to transfers of liquidity and unencumbered assets between entities, business lines and countries. The insurer should note that, during periods of market stress, liquidity might not be freely transferable between and within group entities or across national borders. A prudent assumption is that, under stress, liquidity is non-transferrable across legal entities, so it is expected that the insurer will demonstrate that the assumptions it makes regarding fungibility are realistic.

(6) Foreign exchange convertibility and access to foreign exchange markets

Where appropriate, the insurer should assess liquidity needs by individual currency to support an assessment of how shortfalls can be funded in a stressed market with impaired access to foreign exchange markets and loss of convertibility.

(7) The reduction in secured and unsecured wholesale funding

The insurer should identify any wholesale liabilities and assess how they would behave under stressed conditions. This should include the risk of shortening tenors, for example if the funding provider has call options, or refusal to roll over or extend the maturity of funding. A prudent assumption is that, for the length of the stress horizon, funding providers will be unable or unwilling to provide new unsecured borrowings or roll over or extend the maturity of existing funding. Any wholesale funding that provides the counterparty with optionality should be noted and elaborated on.

(8) The correlation and concentration of funding

The insurer should include an assessment that takes into account instrument type, markets, currency and counterparty. This assessment should analyse the effectiveness of the diversification across the insurer's chosen sources of funding.

(9) The impact on an insurer's reputation or franchise

The insurer should bear in mind that responses to a liquidity stress cannot include actions that would significantly damage its franchise. In line with this, the insurer should not assume that it would delay or defer payments under insurance contracts due to the signal that it would send to policyholders and markets more broadly.

The scenarios should incorporate certain assumptions to ensure sufficient conservativism and appropriately account for macroprudential considerations. Stressed cash inflows should not include borrowings from off-balance sheet sources such as lines of credit. While these may provide valuable sources of funding, they may not be available when needed in times of stress. Moreover, they may amplify shocks to the financial system by transmitting the insurer's liquidity demands to other significant financial counterparties. Other potential cash inflows, such as future premiums, may be included in stressed cash flows, though the insurer is expected to make conservative assumptions, in line with the stress scenarios, regarding their availability.

6. Liquid asset buffer

To the extent that cash inflows are insufficient to meet the required cash outflows, the insurer may choose or be forced to sell assets. For the purposes of the liquidity plan, such assets will

be referred to as the “Liquid Asset Buffer”. Any assets that the insurer would include in the buffer should be noted with an appropriate level of granularity.

Assets added to the buffer should be easily and immediately converted into cash, either through repo or outright sale, at little or no loss in value. Such assets should have low credit risk and low market risk, have easy, transparent and accurate valuations and have low correlation with risky assets ie they are “liquid”. These assets should also have active outright sale or repo markets at all times with evidence of market breadth and depth with a diverse group of active buyers and sellers ie they are “readily marketable”. Prices should be timely and observable and exhibit low volatility. Finally, assets should have a proven record as a reliable source of liquidity during stressed market conditions.

As a result, assets generally eligible for inclusion in the buffer would include:

i. Demand deposits; provided that these are sufficiently diversified across institutions so as not to create a concentration risk;

ii. Highly rated securities issued or unconditionally guaranteed by sovereign entities, supranational organizations, such as the Bank for International Settlements, the International Monetary Fund, the European Central Bank, the European Community, or a Multilateral Development Bank, and other non-sovereign public sector entities that are backed by the full faith and credit of the issuing entity;[44]

iii. Other securities issued by a sovereign entity in its own currency used to back liabilities in that sovereign’s jurisdiction;

iv. Securities issued by a government sponsored enterprise that are senior to preferred equity;

v. Highly rated covered bonds;[45]

vi. Investment-grade, vanilla corporate debt securities, including commercial paper;[46]

vii. Investment-grade fixed income instruments issued by public sector entities; and

viii. Common equity shares publically traded on a major exchange.

There are natural differences in the liquidity of these assets that would limit the insurer’s ability to monetize them during a stressed situation. As a result, assets included in items (i) and (iii) plus assets from items (ii) and (iv) with a long-term rating from a nationally recognized credit rating agency of at least AA-/Aa3, for the purpose of this Guidance are classified as Tier 1 assets. Assets from items (ii) and (iv) with a long-term rating from a nationally recognized credit rating agency of below AA-/AA3 and at least A-/A3 and assets from items (v) to (vii) with a long-term rating from a nationally recognized credit rating agency of at least AA-/Aa3 will be classified as Tier 2 assets. Assets from items (v) to (vii) with a long-term rating from a nationally

[44] This will generally exclude special revenue bonds or other obligations which are backed by a specific stream of revenue.

[45] 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.

[46] These securities’ valuation is readily available based on standard methods and does not depend on private knowledge, i.e. these do not include complex structured products or subordinated debt.

recognized credit rating agency of below AA-/AA3 and at least BBB+/Baa1 and assets from item (vii) will be classified as Tier 3 assets.

To minimize financial stability impacts from the monetisation of financial assets, the insurer should not rely on lower tiered assets for shorter stress periods, as it may be unable to monetise these assets without substantial losses, which could affect similar assets held by other institutions. As a result, for stresses shorter than 30 days, the insurer should only rely on Tier 1 assets. For stresses of at least 30 days and less than 90 days, the insurer may rely on assets from either Tier 1 or Tier 2, with Tier 2 assets comprising no more than 40% of the buffer. At the discretion of the group-wide supervisor, assets from Tier 3 could be eligible for the buffer, though up to a maximum up 15% and reducing the maximum amount of eligible Tier 2 assets one-for-one. For periods of at least 90 days, the insurer would be expected to sell assets more strategically to minimize losses. As such, assets from Tiers 1, 2 and 3 could be allocated to the liquidity buffer in any quantity.

Excluding demand deposits, instruments issued by financial institutions will generally not be eligible for inclusion in the buffer due to concerns about wrong-way risk that correlates with the broader economy and may exacerbate stress at the insurer level. Moreover, such securities could contribute to systemic risk by increasing the insurer's interconnections with the rest of the financial sector. The liquid asset buffer may include other assets that the insurer demonstrates to the satisfaction of the group-wide supervisor has low credit risk and low market risk, is liquid and readily marketable and has a proven record as a reliable source of liquidity during stressed market conditions.

The insurer is expected to take a number of additional considerations into account when including assets in the buffer. To avoid double-counting, assets generating cash-flows used as cash inflows, for example through coupon or interest payments or maturities, should not be allocated to the buffer. To ensure their availability to meet the insurer's liquidity needs, assets included in the buffer must be unencumbered. For the purpose of this Guidance, unencumbered is defined to mean an asset that is (i) free of legal, regulatory, contractual and other restrictions on the insurer's ability to promptly sell or transfer the asset and (ii) not pledge or used to secure or provide credit enhancement to another transaction.

Assets included in the buffer should be also sufficiently diversified. Firms should consider the risk of a particular asset class becoming illiquid just when the firm needs to draw down on the buffer. In its liquidity plan, the insurer is expected to assess the diversity of its liquid asset buffer by counterparty, country, and instrument both with regard to its own asset buffer, but also considering the broader market (ie the insurer does not hold a substantial share of the market for a particular counterparty or asset class) to ensure that the market will be able to bear the insurer's sales without adversely impacting the insurer's ability to monetise its liquid asset buffer as planned.

The insurer would be expected to impose a discount to the fair market value of any asset added to the buffer to account for the increased credit risk and market volatility during a stress event. The discounts should appropriately reflect differences in credit quality and market volatility across asset types and the amount of time that the asset would be required to be sold. The assumed haircuts should be disclosed and any assumptions underlying them described.

As part of its stress testing, the insurer would be expected to appropriately address legally or operationally ring-fenced assets. Such assets could include legally insulated separate

accounts, assets held for index-linked and unit-linked contracts, closed blocks[47], with-profits funds or matching adjustment portfolios. These blocks of assets, therefore, should only be included as cashflow sources to back cashflow needs arising from these same accounts. The insurer should also detail how assets in these blocks may affect the insurer's balance sheet through guarantees, hedging programmes or other regulatory requirements to replace or maintain assets.

The insurer should assess their ability to convert their liquid asset buffer into cash in a short time frame. Even where policyholders fully bear the investment performance of these assets, large-scale asset sales or purchases for these policies may still present operational challenges. As such, the insurer should consider their ability to monetize assets without compromising on either speed of disposal or price. As part of this assessment, the insurer should describe and justify all assumptions about the amount of time needed to sell significant blocks of assets or the availability of willing counterparties for repo transactions. The insurer should also consider the impact of their actions on the wider market and on financial stability.

As part of its liquidity plan, the insurer should disclose the ratio of the liquid asset buffer to net stressed cash outflows (inflows minus outflows), under each time horizon, as produced by the stress test. Given the inherent uncertainty embedded in projections of future cash inflows and in the interest of conservativism the insurer should maintain a liquid asset buffer, including haircuts, sufficient to cover the greater of net cash outflows and 25% of stressed cash outflows.

The insurer should consider fungibility in determining the magnitude of the required liquidity buffer and the location where the buffer is held. To facilitate objectives such as protecting policies, insurers are often restricted from transferring liquidity out of insurance underwriting entities. Insurers should not assume that these assets will be available to cover liquidity shortfalls elsewhere in the group. Assets held at regulated entities could be included in the buffer only up to the amount of their net cash outflows as calculated under the relevant internal liquidity stress tests plus any additional amounts that would be available for transfer to all other entities within the group during times of stress without statutory, regulatory, contractual, or supervisory restrictions. Funds held in regulated legal entities that have cash flow surpluses during the stress test and that would not be transferrable within the group cannot be used to satisfy the buffer requirement.

7. Contingency funding plan

As part of its broader liquidity planning, the insurer should also develop a contingency funding plan for responding to liquidity stress, which details the strategies for addressing liquidity shortfalls in emergency situations, including the methods that the insurer would use to access alternative sources of funding. The plan should describe the steps the insurer would take to ensure that liquidity sources are sufficient to maintain normal operations under stress. The plan should take into account the insurer's risk appetite, size, nature and the complexity of its activities.

This plan should include quantitative metrics that, in light of its stated risk appetite, the insurer would use to identify a liquidity stress event, including the level and nature of the effect it would have on the insurer's liquidity position and on sources of available funding. Such scenarios

[47] Closed blocks are discrete pools of assets that are set aside to support the dividend expectations of participating policyholders from the periods prior to demutualization. Typically, changes of their values would be largely offset by future changes in the dividend rates on these participating policies.

could include sharp increases in interest rates, a catastrophic event, steep equity market declines, multiple ratings downgrades or other events that could affect policyholder's or counterparties' perception of the insurer's liquidity or solvency condition.

The insurer should ensure that its plan outlines the strategies, policies and procedures to manage a range of stresses. The plan should establish a clear allocation of roles and clear lines of management responsibility. It should define procedures for identifying early warning indicators for potential liquidity stress events that are based on the distinctive features of its business. Based on these indicators, the insurer should define a process for escalating breaches of its risk appetite. The contingency funding plan should also define the circumstances in which it would execute the plan to respond to liquidity shortfalls for identified stress events.

In designing its contingency funding plan, the insurer should take into account the impact of stressed market conditions on its ability to monetise assets, including market-imposed haircuts or operational limitations, the impact of a freeze in typically available market funding options, the financial, reputational or other consequences for the insurer of executing its contingency funding plan and its ability to transfer liquidity between entities, considering any legal, regulatory or operational constraints.

8. Governance

The insurer's risk appetite statement must be approved by the insurer's Board of Directors, which should be responsible for its effectiveness on an on-going basis. The Board should also periodically review the insurer's liquidity risk practices and performance to determine if it is operating within its stated risk appetite.

The liquidity plan, including the contingency funding plan, should be updated at least annually, or even more frequently when changes to the size, nature and complexity of the insurer's activities suggest that that the current level of liquidity or funding profile is no longer within its stated risk appetite. The liquidity plan should be approved by the Board Risk Committee.

The insurer's senior management is responsible for applying the insurer's risk appetite in pursuit of its strategic objectives. In doing so, senior management is responsible for several key liquidity risk management functions. Most importantly, senior management is responsible for integrating the insurer's risk appetite into day-to-day operations. As such, group-level management should receive clear and timely information from all material legal entities on the entities' liquidity position and emerging liquidity stress events. Senior management should report periodically to the Board of Directors or the Board Risk Committee on the insurer's current liquidity risk profile both at a group level and for material legal entities. Senior Management should also review the insurer's stress testing methodology and results and periodically report them to the Board of Directors, specifically highlighting any vulnerabilities identified and proposing appropriate remedial action.

9. Reporting to the group-wide supervisor

The insurer should report to the group-wide supervisor at least annually on its liquidity management and planning, or more frequently in the event of material changes to its liquidity plan or liquidity risk profile. The frequency of reporting should reflect the insurer's activities,

nature, size and complexity. The report and other relevant information should be shared within the insurer's supervisory college.

The group-wide supervisor should collect additional information on the set of risks that may be relevant for a particular insurer as part of its monitoring of potential vulnerabilities arising from liquidity risk in the insurance sector. The level of granularity requested should take into account the insurer's size and complexity. [48]

[48] See, for example, the Section, *Data Elements and Granularity* in FSB (2015): Transforming Shadow Banking into Resilient Market-based Finance: Standards and processes for global securities financing data collection and aggregation, http://www.fsb.org/wp-content/uploads/FSB-Standards-for-Global-Securities-Financing-Data-Collection.pdf.