Holistic Framework for Systemic Risk in the Insurance Sector:

Global Monitoring Exercise

November 2019

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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Acronyms

ARV	Absolute Reference Value
BCBS	Basel Committee on Banking Supervision (also Basel Committee)
FSB	Financial Stability Board
GIMAR	Global Insurance Market Report
GME	Global Monitoring Exercise
GRMS	Global Reinsurance Market Survey
G-SIB	Global Systemically Important Bank
G-SII	Global Systemically Important Insurer
IAIG	Internationally Active Insurance Group
IAIS	International Association of Insurance Supervisors
ICP	Insurance Core Principle
IFA	Intrafinancial assets
IFL	Intrafinancial liabilities
IIM	Individual Insurer Monitoring
KIRT	Key Insurance Risks and Trends
LL	Liability Liquidity
OTC	Over the counter
SFT	Securities Financing Transactions
STF	Short term funding
SWM	Sector-wide monitoring

1 Objective of the global monitoring exercise

1. To support its mission of effective and globally consistent supervision to protect policyholders and to contribute to global financial stability, the International Association of Insurance Supervisors (IAIS) adopted in November 2019 the holistic framework for the assessment and mitigation of systemic risk in the global insurance sector ("holistic framework"), as described in the overarching document.[1] This document describes in more detail the objectives and process of the IAIS' global monitoring exercise (GME). As a key element of the holistic framework, the GME serves to assess global insurance market trends and developments and to detect the possible build-up of systemic risk in the global insurance sector. This includes an annual assessment by the IAIS of potential systemic risk arising from sector-wide trends with regard to specific activities and exposures, but also the possible concentration of systemic risks at an individual insurer[2] level (using an updated assessment methodology) arising from these activities and exposures.

2. The GME includes the following elements:

- Sector-wide monitoring (SWM);
- Individual insurer monitoring (IIM);
- Data analysis by the IAIS to assess any potential systemic risk stemming from a sector-wide or individual insurer level, considering also broad financial market developments;
- Collective discussion[3] of the results of the assessment within the IAIS. This discussion has the following key aspects:
    - Assessment of trends and any systemic risks identified at a sector-wide level;
    - Consideration of trends in risks and increasing levels arising from potentially systemic activities and exposures concentrated in an individual insurer, that could ultimately have a global systemic impact in case of its distress or disorderly failure; and
    - Consideration of appropriate supervisory responses, including enhanced supervisory policy measures and/or powers of intervention, taking into account the assessment of those supervisory policy measures and/or powers of intervention that have already been implemented.
- Reporting to participating insurers, IAIS Members, the Financial Stability Board (FSB), and the public.

3. The GME supports the IAIS in its 2020-2024 Strategic Plan[4], specifically High Level Goal 1: The IAIS assesses global market trends and developments in, or relevant to, the

[1] See https://www.iaisweb.org/page/supervisory-material/financial-stability

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

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

[4] See https://www.iaisweb.org/page/about-the-iais/strategic-plan

insurance sector and responds to issues that present opportunities, challenges and risks relevant to the IAIS' Mission.

4. The holistic framework also allows for the introduction of a feedback loop between the global monitoring by the IAIS and macroprudential surveillance and supervision at the jurisdictional level. Vulnerabilities building up in certain jurisdictions may have cross-jurisdictional implications. Additionally, understanding jurisdictional and regional trends facilitates understanding of global trends.

1.1 Individual insurer monitoring

5. The IIM is aimed at assessing systemic risk stemming from an individual insurer's distress or disorderly failure, recognising that potentially systemic activities or exposures may become concentrated in an individual insurer, such that its distress or disorderly failure would pose a serious threat to global financial stability. The IIM is one of the two main components of the GME together with the SWM. Under the holistic framework, an updated assessment methodology has been adopted to support this assessment. However, the assessment methodology is only one input to the broader IIM, see notably Chapter 4.1 for a full overview of the analyses that form part of the IIM.

6. The IAIS initially developed a methodology for identifying global systemically important insurers (G-SIIs) in 2013 ("the 2013 Methodology"). 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 adopted an updated methodology ("the 2016 Methodology"). The 2019 IIM assessment methodology replaces the 2016 Methodology as part of its regular three-year review. The 2019 Methodology will first be applied during the 2020 global monitoring exercise.

1.2 Sector-wide monitoring

7. The SWM is aimed at assessing sector-wide trends with regard to specific activities and exposures and consists of both a qualitative and quantitative part. It is a complement to the IIM, and both their outcomes will feed into the IAIS's assessment of systemic risk as well as in the IAIS collective discussion. The SWM brings together existing IAIS efforts related to macroprudential surveillance and broader market surveillance, including the:

- IAIS Key Insurance Risk and Trends (KIRT) Survey: a voluntary, annual survey amongst IAIS Members about their qualitative assessment of risk;
- IAIS Global Reinsurance Market Survey (GRMS): a data collection amongst relevant IAIS Members, the results of which are annually reported to the general public within the Global Insurance Market Report (GIMAR); and
- IAIS GIMAR: which provides an overview of trends and developments in global insurance markets along with a series of topical chapters which allow to develop a global view on relevant issues from the perspective of insurance supervisors.

8. Combining these efforts allows the IAIS to gain a more holistic view on systemic risk and trends in global insurance markets.

9. With the holistic framework, the IAIS enhances the qualitative KIRT Survey by adding a quantitative component to further support global macroprudential and broader market surveillance.

10. The SWM enhances the existing IAIS macroprudential surveillance efforts and is facilitated by an annual data collection exercise that contains the following elements:

- Quantitative and qualitative information from IAIS Members, based on:
    - A quantitative data collection that aggregates data from legal entities operating in IAIS Member jurisdictions in specific categories; and
    - A qualitative information request that covers supervisors' assessments of macroprudential risks, in terms of probability, impact and trends.
- Data collection by the IAIS Secretariat for other broad market and macroeconomic surveillance indicators, based on public sources.

1.3 Regular review

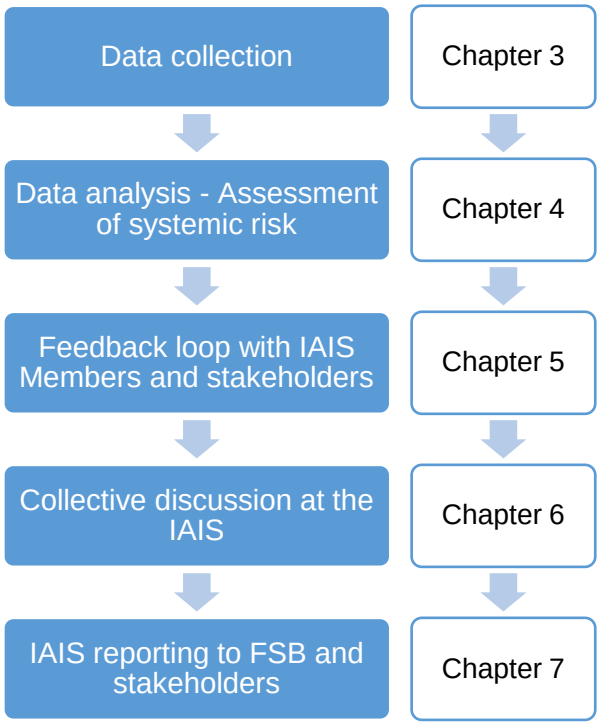
11. The GME will continue to evolve, including through a regular review of the IIM assessment methodology and the SWM every three years, in order to capture improvements suggested by IAIS Members, developments in the insurance sector, changes in insurers' activities or products, growth in the global insurance markets, and improvements in methods and approaches for measuring systemic importance in the insurance sector and the broader financial sector.

12. The first review will thus take place in 2022 and will serve as an input to the FSB's review of the holistic framework, which includes the decision to either discontinue or re-establish an annual identification of G-SIIs.

13. In addition, the IAIS will annually review and, if necessary, revise IIM and SWM data collections in order to continue to improve and streamline the data collections for upcoming years, taking into account the costs and benefits.

1.4 Process of the global monitoring exercise

14. The GME follows the following process (each step is described in detail further in this memorandum):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2 Monitoring categories

2.1 Overview of SWM and IIM categories

15. The GME serves to assess relevant global insurance market trends and developments as well as the potential global build-up of systemic risk, by monitoring the following ten categories:

- Size
- Global activity
- Interconnectedness – Counterparty exposure
- Interconnectedness – Macroeconomic exposure
- Asset liquidation
- Substitutability
- Underwriting & Solvency
- Policyholder behaviour
- Emerging risks
- Economic environment

The rationale behind each of these categories is briefly described below.

Size

16. Size and global activity are not sources of risk on their own. However, they may work as risk amplifiers and are relevant in the assessment of systemic risk in the insurance sector.

17. The importance of a single component (a sector or an insurer) for the functioning of the financial system generally increases with the amount of financial services that the component provides. It should be recognised, however, that in an insurance context, size is also a requisite for the effective pooling and diversification of risks.

18. An insurer's distress or disorderly failure is more likely to damage the global economy or financial markets if its activities comprise a large share of the global insurance activity. The larger the insurer, the more difficult it may be for its activities to be quickly replaced by other insurers and, therefore, the greater the chance that its distress or disorderly failure could cause disruption to the financial markets in which it operates. The distress or disorderly failure of a large insurer is also more likely to damage confidence in the insurance system as a whole.

Global activity

19. This category is aimed at identifying components of the financial system whose failure can have large negative externalities on a global scale and to capture the components' global footprint. The international impact of an insurer's distress or disorderly failure is likely to vary in line with its global footprint. The greater its global reach, the more difficult it may be to coordinate its resolution and the more widespread the spill over effects from its failure.

Interconnectedness

20. Interconnectedness refers to interlinkages with other parts of the financial system and the real economy. Two main aspects of interconnectedness are counterparty exposure and macroeconomic exposure.

Interconnectedness – Counterparty exposure

21. Counterparty exposure refers to direct exposures between an insurer and other institutions, which lead to both institutions becoming vulnerable to the distress or disorderly failure of the other. Counterparty risk may become a 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). 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. 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.

Interconnectedness – Macroeconomic exposure

22. One way that systemic risk can arise is through common exposures to macroeconomic risk factors across institutions, such as interest rates, FX rates, real estate and equity prices. 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 of failure increases.

23. Similarly, correlated exposures increase the probability of common behaviours of insurers, when they react to certain events. Insurers' common macroeconomic exposures increase the likelihood that many insurers will have correlated weaknesses, leading to correlated losses from other shocks and an increased potential for a "too many to fail" scenario. For example, a prolonged low interest rate environment could result in insurers offering unmatched guaranteed returns in search of better yields, potentially increasing their vulnerability to credit risk related shocks.

Asset liquidation

24. Asset liquidation is the sale of assets at a speed or scale that has the potential to exacerbate market movements and trigger losses for firms with similar holdings. One common cause of asset liquidation is the materialisation of liquidity risk.

25. Liquidity risk arises as a result of imbalances between liquidity sources and needs – for instance, liquidity needs can increase due to material policyholder lapse or increasing margin calls from derivative activities. It becomes a macroprudential concern if a shock (the trigger event) leads to reactions causing liquidity shortages in a particular sector.

26. If liquidity risk materialises for an insurer or a number of insurers, this could trigger a downward spiral in the financial markets. If insurers have to accept sizeable cuts on their asset values 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.

Substitutability

27. The systemic importance of a single insurer increases in cases where it is difficult for other insurers of the financial system to provide the same or similar services on similar terms in the event of failure. The degree of concentration or competitiveness in the relevant market may give an indication of the risk of disruption of supply of insurance coverage in that market.

Underwriting & Solvency

28. This category is included to monitor underwriting and solvency risks, to provide insight into general trends and developments in the insurance sector, its resilience, profitability and other characteristics.

29. Wide-spread under-reserving, without the possibility to reprice, may also have a systemic impact due to correlated actions resulting from competitive markets, especially for 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/mispricing 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.

Policyholder behaviour

30. This category is included for general monitoring of trends and developments in the insurance sector, focusing on indicators such as lapse rates or persistence.

Emerging risks

31. This category covers other emerging risks with potential systemic implications, which are not captured by the other categories and may emerge and accelerate in the near future. This category may include environmental developments and increasing cyber and FinTech activities that may increase the systemic risk footprint. This category includes, for example, climate risk, catastrophe risk, cyber risk and their impact on operational risk.

Economic environment

32. This category includes publicly available macro variables that may be used for broader macroprudential monitoring and analysis. The economic environment category captures, for example, GDP, employment and unemployment rates, population, labour force, wages development, productivity and labour costs, inflation and fiscal balances. Monitoring the economic environment is aimed to provide background and to support and facilitate the IAIS

assessment of systemic risk. It may provide additional nuance, the environment in which insurers operate as well as provide insight in possible risks building up outside the insurance sector that may ultimately affect insurers.

2.2 Mapping between SWM and IIM

33. In order to allow for interplays between SWM and IIM, the IAIS mapped the various indicators, using a single set of GME categories. The starting point for the data collection exercise is the exposures that are identified as potentially systemic, as well as the transmission channels. Both monitoring exercises include the following categories:

Category	IMM	SWM
Size	X	X
Global activity	X	
Interconnectedness - Counterparty exposure	X	X
Interconnectedness - Macroeconomic exposure	X	X
Asset liquidation	X	X
Substitutability	X	X
Underwriting & Solvency		X
Policyholder behaviour		X
Emerging risks		X
Economic environment		X

Table 1. Mapping between IIM and SWM

34. For each of the common categories, the IAIS analysis will aim to compare trends and developments at a sector-wide level versus individual insurer level and the Insurer Pool level. For some of the categories, this may be based on a more qualitative assessment, whereas for other categories, the IAIS will perform a quantitative comparison between activities and exposures within the Insurer Pool compared to the global sector developments.

3 Data collection

35. The first step in the GME process is the data collection. The data collection consists of a preparatory phase, including defining the scope for the data collection, the actual collection of data, as well as the data validation.

3.1 Scope of data collections

3.1.1 IIM scope of data collection: Insurer Pool selection

36. Insurers that meet at least one of the following criteria are eligible for inclusion in the Insurer Pool, from which data will be collected – subject to the provisions in paragraph 37:

- Total assets of more than USD 60 billion and a ratio of premiums from jurisdictions outside the home jurisdiction to total premiums of 5% or more; or
- Total assets of more than USD 200 billion and a ratio of premiums from jurisdictions outside the home jurisdiction to total premiums greater than 0%.

The above-mentioned criteria are tested on a group level, including all insurance and non-insurance subsidiaries.

37. In exceptional circumstances that are analytically supported, the IAIS and relevant authorities may choose not to collect data from an insurer that otherwise meets the criteria, or to collect data from an insurer that does not meet the criteria, to allow a more representative Insurer Pool for systemic risk analysis.

3.1.2 SWM scope of data collection

38. The SWM relies on aggregated data from legal entities operating in IAIS Member jurisdictions. Participation in the SWM is open to all IAIS Members. For the purpose of monitoring global trends, there needs to be sufficient coverage of the global insurance sector. Therefore, at least IAIS Members whose insurance or broader financial markets play a significant role in the global financial system are participating in the exercise.

39. As a result, the following criteria allow for broad coverage in terms of global participation:

- The jurisdiction is a member of the FSB; or
- The jurisdiction is a home jurisdiction of at least one Internationally Active Insurance Group (IAIG) and/or of an Insurer Pool participating insurer.

These jurisdictions together account for a global market share of more than 85% percent of gross written premiums, based on 2018 data.

40. As regards the scope within a jurisdiction, it is expected that a jurisdiction provides reasonable coverage and a representative sample (for example, in terms of business models or risk profiles). Given that this is a new data collection exercise, it is expected that the overall data coverage may increase in the first years of implementation of the holistic framework. A minimum reasonable coverage is the greater of:

- the top three insurers; or

- 60 percent of the local insurance market.

3.2 Data collection preparation and launch

41. The IAIS prepares annually an IIM and SWM data collection package. The data collection packages include:

- IIM and SWM Templates;
- IIM and SWM Technical Specifications5;and
- IIM and SWM Questionnaires[6].

Technical specifications for the IIM and SWM are described and defined in the documents "IIM Technical Specifications" and "SWM Technical Specifications" respectively.

3.3 Data validation

42. Data validation of both IIM and SWM data includes but is not limited to:

- Year-over-year analysis of insurers' and SWM data;
- Year-over-year analysis of indicator scores;
- Comparison with annual reports and other publicly available sources of data; and
- Peer reviews and analysis of indicator scores drivers.

[5] Previously referred to as "Instructions".
[6] Previously referred to as "Explanatory Statement".

4 Assessment of systemic risk

43. The second step in the GME process is the assessment of systemic risk.

4.1 IIM assessment of systemic risk

44. The IIM assessment is no longer focussed on identifying prospective G-SIIs, but rather aims to support a comprehensive assessment by the IAIS on the potential build-up of systemic risk in the insurance sector as a whole by looking at potential systemic risk from activities or exposures concentrated in individual insurers. The assessment includes:

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

45. The IIM assessment is based on data collected from five categories that include 14 indicators. Compared to the 2016 Methodology, three indicators were dropped and five indicators were refined (see Annex). This indicator-based methodology is used for calculating scores both on an absolute and relative basis.

46. The categories, indicators and indicator weights are shown in the table below (indicators using absolute reference values (ARVs) are shown with an asterisk):

Category	Indicator	2019 Weight
Size	Total assets	2.5%
	Total revenues	2.5%
Global activity	Revenues outside of home country	2.5%
	Number of countries	2.5%
Interconnectedness	Intra-financial assets	9.4%
	Intra-financial liabilities	9.4%
	Derivatives	9.4%
	Derivatives Trading (CDS or similar derivatives instrument protection sold)	9.4%*
	Financial guarantees	9.4%*
	Minimum guarantees on variable products	9.4%
Asset liquidation	Short term funding	9.4%
	Level 3 assets	9.4%

	Liability liquidity	9.4%
Substitutability	Premiums for specific business lines	5.0%

Table 2. 2019 Methodology categories, indicators and weights

4.1.1 Absolute assessment approach

47. Following the validation of data, for each insurer in the Insurer Pool, the IAIS calculates an indicator-based overall quantitative score. These scores are based on the individual scores for each of the 14 indicators, which are multiplied by the respective weights and, where applicable, are multiplied by absolute reference values and then summed to an overall quantitative score for each insurer. The individual quantitative assessment provides an initial quantitative ranking of the systemic importance.

48. The IIM assessment methodology is predominantly based on an absolute assessment approach (ie calculating scores of insurers against a fixed benchmark based on the sample total in a defined base year). With this absolute approach, scores should better reflect changes in the systemic footprint of each insurer within the sample, compared to the 2013 and 2016 Methodologies which were based on a relative assessment approach. The base year for the absolute methodology is set using denominators from the data exercise year 2018. This will be reviewed during the next regular review.

Absolute reference values

49. ARVs were introduced in the 2016 Methodology as an additional factor to better assess systemic importance of the Insurer Pool within the broader insurance sector or financial system. For example, under the 2013 Methodology, each insurer's score for a particular indicator was calculated by dividing the individual insurer amount by the aggregate amount summed across all insurers in the sample. ARVs are derived from financial market totals and create a scaling factor, which is multiplied by the weight of each of the three indicators to better measure systemic importance.

50. As the 2019 Methodology applies the absolute assessment approach, the ARVs that are applied to calculate the scores for the derivatives trading and financial guarantees indicators are fixed based on their year-end 2017 values. This amounts to an ARV for derivatives trading of 16.06% and for financial guarantees of 6.09%. The IAIS will, however, continue to closely monitor the overall developments in these markets and any significant increase in activity and reconsider the ARVs as part of the regular reviews of the methodology.

4.1.2 Relative rankings

51. Relative rankings continue to be calculated as information input for the collective discussions. Relative rankings are calculated using the updated indicators and weighting from the 2019 Methodology as described above, but using the denominators of the relevant exercise year.

4.1.3 Cross-sectoral analysis

52. Cross-sectoral analysis is aimed at comparing the systemic footprint of insurers with other components of the financial system, notably banks. Such analysis includes the comparison of scores of insurers and banks using common indicators. The Basel Committee on Banking Supervision's (BCBS's) Global Systemically Important Bank (G-SIB) exercise provides a useful benchmark for performing such analysis. It is generally accepted that banks may be systemic, and therefore, a comparison to systemic banks provides a useful baseline to assess insurers.

53. The G-SIB methodology includes twelve indicators, spread across five categories (see Table 3). A bank's indicator score is calculated as its market share of each indicator (relative assessment approach is used) and its total quantitative score is a weighted average of the indicator scores. Any firm scoring above 130 is identified as a G-SIB (with severely limited scope for exclusion).

54. Comparison of the insurance scores to the banking scores is possible using common indicators for which data is also collected as part of the IIM. Because this analysis relies only on some indicators in both methodologies, this is only a partial comparison. As part of the IIM, the IAIS will compare trends between the Banking and Insurer Pools as a whole, as well as analyse the relative systemic footprint of individual insurers versus banks.

55. The indicators used in the G-SIB methodology are the following:

Category	G-SIB Indicator	G-SIB Weight
Size	Total exposures	20.0%
Global activity	Cross-Jurisdictional Claims	10.0%
	Cross-Jurisdictional Liabilities	10.0%
Interconnectedness	Intra-Financial System Assets	6.7%
	Intra-Financial System Liabilities	6.7%
	Securities Outstanding	6.7%
Complexity	Notional Amount of over-the-counter (OTC) Derivative Contracts	6.7%
	Trading and Available-for-Sale (AFS) Securities	6.7%
	Level 3 Assets	6.7%
Substitutability	Payments Activity	6.7%
	Assets Under Custody	6.7%
	Underwritten Transactions in Debt and Equity Markets	6.7%

Table 3. G-SIB methodology categories, indicators and weights

4.1.4 Trend developments

56. Trend analysis continues to be performed and used as information input for the overall assessment. Trend analysis includes developments of denominators (for each quantitative indicator), drivers of those developments, identification of outliers and data issues, and impact analysis of foreign exchange rates or sample fluctuations. Trend analysis covers also a comparison of individual insurers' versus Insurer Pool developments.

4.1.5 Ancillary risk indicators

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

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

59. The IAIS will capture technical provisions ceded in the intrafinancial assets indicator which will allow the capture of any link reinsurers have owing to assumed business, and will also reflect primary insurers' exposures to reinsurers. In order for the informational value of reinsurance connections to not get lost in the intrafinancial assets and liabilities indicators, the IAIS considers monitoring the development of reinsurance technical provisions (ceded and assumed) as ancillary indicators.

60. The IAIS may consider developing other ancillary indicators, based on the evolution of the risk profiles of insurers and the potential contribution to assessing the build-up and transmission of systemic risk.

4.2 SWM assessment of systemic risk

61. The SWM data analysis aims to assess the key risks and trends in the global insurance sector, considering the underlying drivers. For the purpose of the holistic framework, the SWM assessment focusses on the identification of systemic risk.

62. The IAIS will carry out assessment of the sector using the above mentioned data sources with focus on nine SWM categories and their interrelations[7].

63. The assessment of the sector includes at least:

- Quantitative assessment;
- Qualitative assessment; and
- Trend analysis.

[7] Cf. Table 1. Mapping between IIM and SWM.

4.2.1 Quantitative assessment

64. The quantitative assessment will use various statistical methods, including:

- Data coverage analysis;
- Level and trend analysis; and
- Interrelation between insurance and macroeconomic developments.

4.2.2 Qualitative assessment

65. The qualitative assessment allows for a forward looking supervisory assessment of the key risks and trends in their respective insurance sector.

66. Supervisors assess the perceived probability of certain risks materialising (low-medium-high), the expected impact should the risk materialise in the local market (low-moderate-high), and the evolution since last year. In addition, supervisors are asked to identify those risks they currently consider as high-priority.

67. Next to the key risks, supervisors also assess the key trends in their insurance sector, for example regarding profitability, underwriting, investment returns, market volatility and reserve adequacy. For each of the key sector trends, supervisors assess whether the trend shows a moderate or strong increase/decrease or if it has remained stable.

68. Finally, also external developments are considered in the qualitative assessment, acknowledging that the insurance sector could be impacted by changes in societal and economic conditions. Supervisors assess whether, in their jurisdictions, any developments were observed during the reporting period that would impact policyholder behaviour. Examples of such developments could be fraud in the non-life and life segments or changes in the surrender rates of life insurance policies.

4.3 Interplays between SWM and IIM

69. To allow for an integrated view on the possible build-up of systemic risk in the global insurance sector, there is a need to combine the outcomes of the SWM and IIM data collections.

70. The two data collections can be complementary, as both target the same risks but from a different perspective. The outcomes of the SWM data collection, which is expected to cover more than 85% of the global insurance market in terms of gross written premiums, can provide a broad overview of trends, complemented by data collected from around 50 insurance groups in the Insurer Pool of the IIM, which is expected to cover approximately 25% of the global insurance market in terms of gross written premiums.

71. The IIM complements the SWM by providing insights into the level of concentration of risks or potential outliers at the level of most significant players in the insurance sector. It also allows a deeper dive into potentially emerging risks and trends identified through the SWM.

72. Looking at sector-wide and individual insurers' trends adds the necessary forward-looking perspective and also includes the assessment of outliers (ie insurers whose exposures develop in a different direction or at a faster pace than those of peers). Increased levels of

exposure and activity, both at the sector-wide and the individual insurer level, also require careful attention. Even in the absence of an individual insurer whose distress or disorderly failure would pose a serious threat to global financial stability, high levels of concentration of certain activities or exposures among several individual insurers or within a number of jurisdictions may lead to more correlated behaviour.

73. External data, which is one of the data sources of the GME, enables the IAIS to perform basic checks, for instance of the representativeness of the Insurer Pool and of the SWM participants in terms of gross written premium.

74. Macroeconomic surveillance indicators and data elements enable the IAIS to link insurance markets developments with the general macroeconomic outlook of the global economy.

5 Feedback loop with IAIS Members and stakeholders

75. The third step of the GME is the feedback loop with IAIS Members and stakeholders.

5.1 Feedback loop with IAIS Members

76. Assessments from supervisors continue to be performed and used as information input for the overall assessment. These supervisory assessments are performed notably for those insurers that demonstrate a significant level and/or a trend of increasing potential (global) systemic impact from their distress or disorderly failure.

77. These assessments are partly based on targeted information from the relevant supervisor, when relevant in coordination with other involved supervisors, on its assessment of risk, any major developments post reporting date, as well as the supervisory response to the build-up of potential systemic risk.

5.2 Roundtable discussions with external stakeholders

78. The IAIS is committed to continue the dialogue with stakeholders on issues relevant to the sector, including financial stability. To this end, the IAIS plans to have roundtable discussions with relevant stakeholders such as Chief Risk Officers, investors and rating agencies on sector developments to facilitate information exchanges and discussions.

79. The roundtable discussions are intended to be held annually and encourage external stakeholders to share their positions and sector insights.

6 IAIS collective discussion

80. The fourth step in the GME process is the IAIS collective discussion.

81. The collective discussion is a platform for IAIS Members to form a collective view on the assessment of systemic risk in the global insurance sector, detect the build-up of systemic risk, and discuss the appropriate supervisory response to systemic risk if it arises. Both the SWM and IIM are key inputs into the IAIS assessment of systemic risk in the global insurance sector and will feed into the collective discussion.

82. The following subsections provide more details on the IIM and SWM inputs to the collective discussion.

6.1 Criteria related to IIM

83. The following criteria are used to assist the IAIS in the determination of the focus of the IIM assessment, as one input to the collective discussion. The level criterion is aimed at indicating an actual threat to global financial stability, whereas the trend and outlier criteria are more forward-looking in nature to indicate the build-up of potential systemic risks. Lastly, the use of quantitative criteria is complemented by expert judgement, acknowledging the dynamic nature of systemic risk.

Level

84. The IAIS uses a predetermined level criterion based on the scores under the absolute methodology to provide an indication of a situation in which potentially systemic activities or exposures become concentrated in an individual insurer, such that its distress or disorderly failure would pose a serious threat to global financial stability. This level of systemic risk is expressed by an insurer's total score.

Trends

85. Trend criteria are intended to identify and monitor significant score movements in one or more indicators. This can be done by looking at total or indicator score increases.

86. Trend criteria focus on significant year-on-year, or multi-year, percentage or basis point increases in the total score of the absolute assessment methodology, or of at least a certain number of indicators. What constitutes a "significant" increase may depend on circumstances, but also on the total score itself. Therefore, it may be considered to use lower percentage increases for insurers with a relatively high score and higher percentage increases for lower scoring insurers.

Outliers

87. Outlier criteria are aimed at monitoring how activities and exposures of individual insurers develop compared to the Insurer Pool or the sector as a whole (based on the SWM). For instance, significant movements of individual insurers' total or indicator scores against the aggregate trend, or in excess of that trend, may trigger further exploration. Examples of outlier criteria that are considered include certain absolute increases in a single indicator, or increases that are at least a certain amount times higher than the median increase.

Materiality criterion

88. Both the trend and outlier criteria are used subject to a materiality criterion. This is intended to exclude insurers with a very low overall score or exposure, for which a small absolute change results in a significant relative change due to the low starting level of an activity, which does not necessarily warrant discussion at the IAIS level.

Expert judgement

89. Finally, expert judgement is used to acknowledge that relevant developments may be overlooked when only using a defined set of quantitative criteria, given the dynamic nature of systemic risk. Expert judgement may be more qualitative in nature, informed by major business changes or outcomes of the SWM and cross-sectoral analysis. This may also relate to a situation in which an insurer approaches the level criterion but has not yet breached it.

6.2 Sector-wide monitoring

90. Another key input to the collective discussion is the outcome of the SWM by highlighting the potential build-up of systemic risk stemming from activities or exposures from a sector-wide perspective, as well as by putting the outcomes of the IIM into a broader context.

91. The assessment includes at least:

- Quantitative assessment of sectors and activities that could pose a systemic risk;
- Qualitative assessment of sectors and activities, based on the IAIS Members' forward-looking assessment of key insurance risk and trends within their jurisdictions;
- Trend analysis, which monitors evolutions of the risk indicators over time; and
- Interplays with the IIM.

6.3 Content of the collective discussion

92. The collective discussion includes a forward-looking exploration of the assessment of systemic risk in the global insurance sector, both from the sector-wide and individual insurer perspective.

93. This includes a discussion on any identified significant growth in certain markets or activities, or of a specific insurer (or insurers) that shows significant increases or concentrations in activities and exposures. IAIS Members and relevant supervisors will be asked to share their findings on the trends or levels identified within their jurisdiction or at the level of individual insurers with a focus on potentially systemic activities, how they assess the potential systemic risk, and on the supervisory response to address the build-up of potential systemic risk, including supervisory policy measures (enhanced supervisory policy measures and/or powers of intervention) already applied or under consideration. This discussion will be supported by the outcomes of the IAIS' assessment of the implementation of the holistic framework supervisory material.

94. Should there be a situation in which potentially systemic activities or exposures become concentrated in an individual insurer such that its distress or disorderly failure would pose a serious threat to global financial stability, then the discussion would become more

intensive. As outlined in Chapter 6.1, this may be indicated by an insurer approaching or breaching the level criterion. The focus of the discussion is not necessarily on exploring and assessing potential risks, but more so on discussing supervisory responses to address the identified risk.

6.4 Outcome of the collective discussions

95. The outcome of the discussion can be twofold:

- A common IAIS view on the assessment of current and potential future systemic risk in the global insurance sector. Where applicable, this may highlight certain identified risks, which could be at the level of a certain activity, exposure, region or individual insurer.
- Any recommendations for follow-up, which may entail:
    - Recommendations for further analysis at the level of the IAIS, which can be both qualitative and quantitative in nature, to better understand certain identified trends, which can include ad-hoc data collections or a deep dive into a certain identified risk. Outcomes of this analysis may then be shared externally for instance via a topical chapter in the next edition of the (enhanced) GIMAR;
    - Recommendations for developing targeted supervisory or supporting material to help supervisors address specific activities or exposures, or possible additional supervisory capacity building or information sharing fora to share lessons on effective supervisory practices; and/or
    - Considerations on the application of certain enhanced policy measures or powers of intervention to a specific insurer, while recognising that the application of supervisory policy measures and intervention is ultimately the responsibility of the relevant supervisor.

7 Reporting

96. The fifth and final step in the GME process is the reporting to internal and external stakeholders.

97. The IAIS continues to be committed to enhancing transparency and will therefore continue to provide disclosures to the general public, insurers participating in the IIM and jurisdictions participating in the SWM.

7.1 Reporting to participating insurers

98. Following the finalisation of each annual exercise, the IAIS makes an insurer specific report for each participating insurer in the IIM including the following elements:

- The insurer's score on each of the quantitative indicators; and
- For each quantitative indicator, descriptive statistics including the median scores, standard deviation, and quartiles of the scores distribution.

7.2 Reporting to IAIS Members

99. The outcome of the GME can be a valuable input to the entire IAIS Membership and will therefore not only be shared with the Members that participated in the IIM and/or SWM, but with all IAIS Members.

100. The IAIS aims to provide group-wide supervisors with insight into how the individual insurers' risk scores relate to the Insurer Pool score. Descriptive statistics, including the median scores and the distribution of scores within the Insurer Pool, could be shared.

101. In addition to IIM, the supervisor would get insight into how key risks and trends in their jurisdiction(s) compare to global insurance sector.

7.3 Reporting to FSB

102. The reporting to the FSB will help provide an insurance sector perspective for the FSB's broader, cross-sectoral assessment of global financial stability. In the initial years of implementation, the reporting is also aimed at providing sufficient information for the FSB to perform its review by 2022 on the effectiveness of the holistic framework in general, and the GME in particular. To this end, the IAIS has previously agreed with the FSB to provide an annual report on the assessment of systemic risk and the supervisory response. Following completion of each annual GME, the IAIS will prepare a report to the FSB summarising the results of the GME, including the outcomes of both the IIM and SWM, and the IAIS' collective discussion on the outcomes and appropriate supervisory responses.

103. The annual confidential report to the FSB will contain at least the following elements:

<u>Individual insurer monitoring</u>

104. Information will be provided at an Insurer Pool and individual insurer level. This will include at least the outcomes of:

- Rankings and scores of individual insurers within the Insurer Pool, calculated based on the updated absolute and relative indicator-based methodology;
- Cross-sectoral analysis, comparing the systemic footprint of individual insurers and the Insurer Pool with that of banks;
- Trend developments within the Insurer Pool;
- Application of the criteria for a collective discussion; and
- Qualitative assessments where applicable.

Sector-wide monitoring:

105. Information will be provided at a global, regional and jurisdictional level, aimed at assessing potential systemic risk arising from sector-wide trends with regard to specific activities and exposures. This would include at least the outcomes of:

- Quantitative assessment of exposures and activities that could pose a systemic risk, including assessment of systemic exposures and transmission channels;
- Qualitative assessment of sectors and activities, based on the IAIS Members' forward-looking assessment of key insurance risk and trends within their jurisdictions;
- Trend analysis, aimed at monitoring the evolution of the risk indicators over time; and
- Interplays with the individual insurer monitoring, including highlighting any developments counter to the aggregate trend or in excess of that trend.

Collective discussion:

106. Information to be provided on collective discussions include:

- Outcomes of the discussion on the assessment of current and potential future systemic risk in the global insurance sector, at an individual insurer and sector-wide level;
- Outcomes of the discussion on the regulatory and supervisory treatment of these risks, including on the supervisory policy measures already applied at an individual insurer and/or sector-wide level, as well as any additional measures under consideration, taking into account the outcomes of the IAIS' assessment of implementation of the holistic framework at a jurisdictional level; and
- Any agreed recommendations as a result of the collective discussion, which may include follow-up analysis by the IAIS, the development of supervisory or supporting material by the IAIS, or considerations on the application of certain enhanced policy measures and/or powers of intervention to a specific insurer, while recognising that the application of supervisory policy measures and intervention is ultimately the responsibility of the relevant supervisor.

7.4 Reporting to the public

107. Public reporting will contain both a general description of developments in the global insurance sector and the outcomes of the GME as a whole (ie the IAIS assessment of systemic risk in the global insurance sector). The report will provide information on trends, outliers, activities and potential discussions on observations, but without any information on the identity of individual insurers.

108. The section on the outcomes of the IIM will at least include information on:[8]

- The aggregate totals for each indicator;
- Formulas used for calculation of indicator scores;
- The absolute reference values used for the indicators;
- The data template and instructions used in that year's assessment process; and
- An analysis of aggregate trends in the Insurer Pool

109. The section on the outcomes of the SWM will at least include:

- Trends and developments in the global insurance market from a macroprudential supervisory perspective, focusing on the recent performance of the sector as well as key risks faced by it;
- Trends and developments in the broader financial system and real economy, to provide additional nuance on the assessment of systemic risk by understanding the environment in which insurers operate and by providing insights to possible risks building up outside the insurance sector that may ultimately impact insurers; and
- Any findings on the possible build-up of systemic risk in certain markets or activities at a global insurance sector level.

[8]The disclosures on the IIM data collection are similar to those that were in place for the G-SII data collection exercise.

Annex: Detailed explanation of changes to IIM risk indicators

110. In order to improve the responsiveness of the indicators and the consistency with the banking methodology, the following changes to the 2016 Methodology have been made:

Indicator	Description of change
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 OTC derivatives with net positive fair value, securities financing transactions (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** (i.e. 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 collateral that is contractually explicitly prohibited from the re-hypothecation or reuse.
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 4. Summary of changes to indicators

111. The changes to the indicators impacted the weighting. Based on the following principles, the IAIS allocates an equal 9.4% weight to all the indicators in the (sub)categories in which there have been changes, in line with the following:

- the total weighting should add up to 100%;
- it is not desirable to significantly change the underlying weighting scheme between the categories compared to 2016 Methodology;
- 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.

112. It should be noted that while there may be a clear rationale for giving a considerably higher weight to the interconnectedness and asset liquidation categories, the exact weights chosen 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.