Peer review of enterprise risk management for solvency purposes relative to the standards set out in Insurance Core Principle 16

October 2024

About the IAIS

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

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

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

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

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

This document was prepared by the IAIS Expert Team of the Peer Review Process on ICP 16 in consultation with IAIS members.

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

Content overview

Executive summary

1. This report provides the aggregate assessment results and observations from the IAIS Peer Review Process (PRP) on the topic of "Enterprise Risk Management for Solvency Purposes", covering standards set out in Insurance Core Principle (ICP) 16.[1]
2. A total of 67 authorities participated in the PRP, of which 20 responses came from IAIS members in Financial Stability Board (FSB) jurisdictions and 28 from IAIS members in Organisation for Economic Co-operation and Development (OECD) jurisdictions. Both figures include the four United States (US) member states and two IAIS members from Canada that participated. Every IAIS region was represented.[2]
3. The assessment questionnaire was developed by the PRP Expert Team and consisted of 65 questions in total. Fifty-five questions in part 1 of the questionnaire were used to assess the level of observance, covering the 16 standards applicable to Enterprise Risk Management for Solvency Purposes (ICP 16).
4. The 10 open-ended questions in part 2 of the questionnaire were focused on supervisory practices. Additionally, three optional questions were included to collect responses on specific risk categories. Based on the answers received, the Expert Team identified illustrative examples which offer valuable insights into the effective implementation of the standards. These illustrative examples can be found in Section 3 of this report, along with the selected standards for ICP 16.
5. Table 1.1 provides a summary of the results (by nature of jurisdiction and based on the final individual reports of each member):

Table 1.1

ICP 16 results	FSB jurisdictions	Other OECD jurisdictions[3]	Other jurisdictions[4]	Total respondents
Observed	3	1	1	5
Largely Observed	14	10	18	42
Partly Observed	3	2	14	19
Not Observed	0	0	1	1
Not Applicable	0	0	0	0
Total	20	13	34	67

6. The observance rate for ICP 16 suggests the overall observance of the standards is high, though full observance is a challenge. In total, 70% of members scored either "Observed"

[1] As adopted in November 2019.

[2] Annex 2 sets out the categorisation of participating IAIS members by IAIS region and according to membership of the FSB and OECD.

[3] Fifteen FSB jurisdictions are also OECD jurisdictions. "Other OECD jurisdictions" refers to the authorities from jurisdictions that, while members of the OECD, are not represented at the FSB.

[4] "Other jurisdictions" refers to the authorities from jurisdictions that are not OECD or FSB members.

(7%) or “Largely Observed”. The majority of members scored either “Largely Observed” (63%) or “Partly Observed” (28%). The assessment methodology provided that an ICP will be considered observed whenever all the standards are deemed to be observed. ICP 16 contains sixteen standards, and the length of this Principle Statement makes full compliance more challenging.

7. Full compliance with the Principle Statement is low due to only a few jurisdictions having fully implemented comprehensive enterprise risk management (ERM) and own risk and solvency assessment (ORSA) frameworks. A wide range of risk-based approaches/transition and solvency regimes are being adopted across member jurisdictions, with varying levels of sophistication and risk sensitivity. Additionally, ICP 16 was revised and certain standards were adopted in November 2019 following the adoption of the Holistic Framework, including requirements on liquidity risk management and on recovery planning, for which member jurisdictions are working towards achieving full compliance and effective implementation.

8. When categorised by nature, FSB jurisdictions (15% Observed; 70% Largely Observed) and other OECD jurisdictions (8% Observed; 77% Largely Observed) exhibited the highest level of observance; by region, Western Europe (15% Observed; 85% Largely Observed) demonstrated the highest level of observance.

9. In terms of observance per standard, the majority of members observed Standards 16.1, 16.3, 16.7 and 16.8. For Standards 16.2, 16.5, 16.6, 16.9, 16.12 and 16.15, observance levels were relatively lower, suggesting these are potential areas where members may need additional support.

10. Annex 4 (restricted to IAIS members only) shows the high-level results of each jurisdiction for ICP 16. This annex is not public and is available on the IAIS’ Members Extranet.

11. The Expert Team completed the initial draft of individual reports for each of the 67 participating members. These reports were sent to the members for their review and comment, and 292 comments were received. The Expert Team took into account feedback from members and accepted corrections, provided there was sufficient supporting information.

12. Individual reports sent to each participating member do not include jurisdiction-specific recommendations for enhancing observance. The IAIS Targeted Jurisdictional Assessment (TJA) [5] and Member Assessment Programme (MAP) offer a more intensive and comprehensive review of a jurisdiction’s implementation of supervisory material and, therefore, more in-depth feedback with regard to gaps or recommendations are reserved for those programmes.

[5] The scope and assessment approach of the TJA, as set under the Holistic Framework for the assessment and mitigation of systemic risk in the insurance sector (HF), differ from the PRP. The PRP relies on self-assessment across various jurisdictions and a desktop peer review, attaching equal importance to each standard. While the assessment outcomes of the TJA and PRP may be viewed as mutually supplementary, they cannot substitute for each other.

Introduction

13. The mission of the International Association of Insurance Supervisors (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
- Contribute to global financial stability.

14. In support of this mission, the IAIS has identified the implementation of the Insurance Core Principles (ICPs) by insurance supervisors as one of its strategic priorities. This priority was reaffirmed in the 2020–2024 Strategic Plan and Financial Outlook (SPFO). The IAIS' By-Laws state that IAIS members commit to "undergo periodic self-assessments and peer reviews".

15. The IAIS' Assessment Programme consists of three distinct but complementary assessment processes:

- A Peer Review Process (PRP), which is a thematic assessment tool for use by a wide range of IAIS members, conducted regularly for different ICPs;
- Enhanced access to self-assessment tools with the establishment of a Self-Assessment Tool (SAT), allowing IAIS members to undertake a self-assessment on demand; and
- A Member Assessment Programme (MAP), which provides a comprehensive, more in-depth, review of the implementation of supervisory material by an IAIS member.

16. The objectives for the PRP are to:

- Identify and analyse the level of observance of the standards relating to the assessment theme, including a reference to regional and global implementation status;
- Assess the effectiveness of implementation of the standards in a consistent and coherent manner;
- Identify findings and illustrative examples that should be communicated to the participating IAIS members to encourage effective implementation in their supervisory practices; and
- Provide input to implementation partners on areas where there are regional or global implementation challenges.

17. One of the key differentiating features for the PRP is the inclusion of illustrative examples in the aggregate report. Illustrative examples provide valuable information as to how the ICPs could be implemented in an effective manner. This report includes a synthesis of illustrative examples for selected standards in cases where the Expert Team thought that examples of implementation could benefit members' observance of the standards.

18. The Expert Team that conducted this PRP consisted of Harald Eschmann (Germany, BaFin), Liyana Ahmad Shukri (Malaysia, BNM), Susan Berry (United States, NAIC/Illinois), Stuart Bingham (Australia, APRA), Michael Porth (Germany, BaFin), Nathalie Quintart (France, ACPR) and Mpho Ramathuba (South Africa, PA). The IAIS Standards Assessment

Working Group (SAWG) and the Secretariat are grateful to the Expert Team volunteers, who put in many weeks of hard work to assess the participating authorities.

19. The Expert Team's work was supported by Sharon Lin, Manuela Zweimueller and Conor Donaldson from the IAIS Secretariat.

Acronyms

ALM	Asset-Liability Management
CEET	Central, Eastern Europe and Transcaucasia
ERM	Enterprise Risk Management
ExCo	Executive Committee
FSB	Financial Stability Board
IAC	Implementation and Assessment Committee
IAIG	Internationally Active Insurance Group
IAIS	International Association of Insurance Supervisors
ICP	Insurance Core Principle
MAP	Member Assessment Programme
OECD	Organisation for Economic Co-operation and Development
ORSA	Own Risk and Solvency Assessment
PRP	Peer Review Process
SAT	Self-Assessment Tool
SAWG	Standards Assessment Working Group
SPFO	Strategic Plan and Financial Outlook
TJA	Targeted Jurisdictional Assessment

1 Scope and assessment methodology

1.1 Scope

20. This PRP covers the thematic topic of **Enterprise Risk Management for Solvency Purposes** relative to the standards set out in ICP 16. The PRP assesses the standards which apply to insurance supervision in all jurisdictions regardless of the level of development or sophistication of insurance sectors, and the type of insurance products or services being supervised. The ICPs are applicable to the supervision of all insurers within a jurisdiction, which includes internationally active insurance groups (IAIGs). However, ComFrame standards, which provide additional standards and guidance applicable only to the supervision of IAIGs, were not in scope of this PRP assessment.

21. The current version of ICP 16 as adopted in November 2019 was used as the basis for the assessment.[6]

22. In March 2024, the IAIS also launched a public consultation on proposed revisions to ICP Standards 16.6, 16.9 and 16.15 (supervisory material related to the Holistic Framework[7]) that modify standards and guidance material related to liquidity risk, counterparty risk appetite and contingency funding plans in ICP 16. The revisions aim to clarify the standards and address any perceived over-prescriptiveness, as well as update the material related to recovery plans to ensure consistency in determining insurers in scope of the requirement, and to align the standards with the FSB Key Attributes of Effective Resolution Regimes for Financial Institutions.

1.2 Assessment methodology

23. The ICPs set forth the objectives of insurance regulation and supervision and are the basis for assessing the regulatory framework and supervisory practices within a jurisdiction. The ICP Assessment Methodology sets out the factors that should be considered in assessing observance of the ICPs and describes how observance should be evaluated.

24. The Principle Statement for the ICPs is general, recognising that supervisors require flexibility to determine how to achieve the objectives in their particular domestic context (eg legal and market structure). The standards set forth requirements that are fundamental to the implementation of each ICP and provide the basis for assessing observance.

25. This PRP follows the ICP Assessment Methodology:

In general, an ICP will be considered **Observed** whenever all the standards are considered to be observed or when all the standards are observed except for a number that is considered not applicable. The supervisor must have and must exercise, when required, the legal authority and supervisory practices to effectively satisfy the requirements of the standard. An ICP will be considered **Not Applicable** when the standards do not apply given the structural, legal and institutional features of a jurisdiction. For an ICP to be considered

---

[6] See 191115-IAIS-ICPs-and-ComFrame-adopted-in-November-2019.pdf (iaisweb.org).

[7] The IAIS Holistic Framework aims to assess and mitigate the potential build-up of systemic risk in the global insurance sector. As part of its endorsement by the FSB, the IAIS committed to consider lessons learnt from its implementation, particularly through the TJAs, which are intensive assessments of the implementation of the Holistic Framework supervisory material. Accordingly, the IAIS has reviewed certain ICPs. A public consultation was launched in the first half of 2024 covering revisions to supervisory material that incorporate lessons learnt, enhance clarity on intended outcomes, ensure consistency in interpretation and avoid unintended consequences. The IAIS plans to finalise the revisions by the end of 2024. See IAIS website for more details.

Largely Observed, only minor shortcomings can exist which do not raise any concerns about the supervisor's ability to achieve full observance of the ICP. An ICP will be considered **Partly Observed** whenever the shortcomings are sufficient to raise doubts about the supervisor's ability to achieve observance. An ICP will be considered **Not Observed** whenever there is no substantive progress toward achieving observance.

2 Member participation

26. The IAIS received responses from 67 authorities representing all regions and a range of market sizes. In general, the composition and size of the sample provided a strong base of illustrative examples and global/regional picture of implementation.

27. Every IAIS region was represented. Regarding the nature of the jurisdictions, 20 responses were from IAIS members in FSB jurisdictions, and 28 were from IAIS members in OECD jurisdictions; both figures include four US member states and two IAIS members from Canada that participated. Thirty-four participating IAIS members were from non-OECD/non-FSB member jurisdictions.

Table 2.1

IAIS region	Respondents and participation rate		FSB jurisdictions	Other OECD jurisdictions[8]	Other jurisdictions
North America	7	100%[9]	6	0	1
Latin America	6	55%	2	2	2
Western Europe	13	62%	6	5	2
Central, Eastern Europe and Transcaucasia	13	48%	1	5	7
Asia-Oceania	11	46%	4	1	6
Middle East and North Africa	5	45%	0	0	5
Offshore and Caribbean	6	32%	0	0	6
Sub-Sahara Africa	6	25%	1	0	5
Total	67	42%[10]	20	13	34

[8] Thirteen OECD jurisdictions are not FSB member jurisdictions.

[9] Four US member states participated. In total, there are 56 US states counted as individual IAIS members as well as the US NAIC, which is a member in its own right. For the table above, the North America denominator includes the United States as a whole. In addition, two IAIS members from Canada took part in this PRP; the North America denominator includes Canada as a whole.

[10] Some jurisdictions have more than one member. "158 Members" was used as the denominator as detailed in the IAIS World Directory as of October 2023 when the PRP survey was launched.

3 Assessment results, observations and illustrative examples

3.1 Insurance Core Principle (ICP) 16

ICP 16 Enterprise Risk Management for Solvency Purposes

The supervisor requires the insurer to establish within its risk management system an enterprise risk management (ERM) framework for solvency purposes to identify, measure, report and manage the insurer's risks in an ongoing and integrated manner.

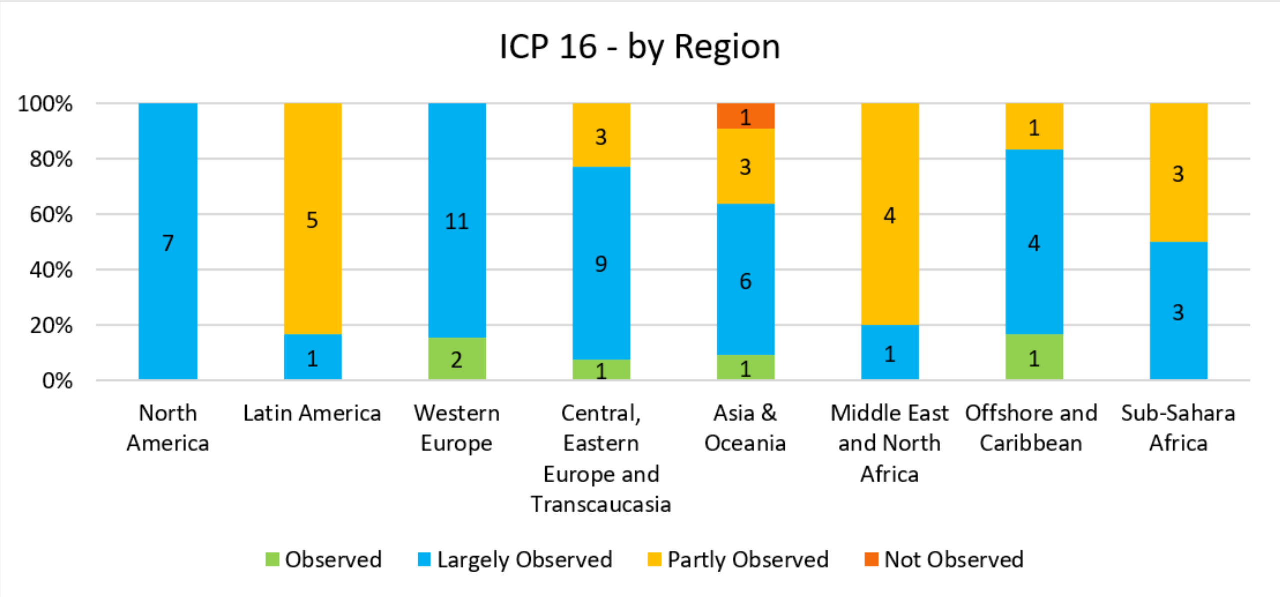
3.1.1 Analysis of observance level

Overall result

28. The majority of members received ratings of either Largely Observed (42 members – 63%) or Partly Observed (19 members – 28%). When categorised by nature, FSB jurisdictions (15% Observed; 70% Largely Observed) exhibited the highest level of observance; by region, Western Europe (15% Observed; 85% Largely Observed) demonstrated the highest level of observance.

29. The assessment questionnaire concerning ICP 16 contained 55 questions (in part 1, mandatory questions) covering 16 standards.

30. Detailed breakdown of results by region (see also Annex 3):



31. By region, the observance level was highest in Western Europe, followed by North America and Offshore and Caribbean, while other regions exhibited larger numbers in the Partly Observed or Not Observed categories, hence the overall level of observance was lower.

Details on the level of observance per standard

32. Almost all standards were either Observed or Largely Observed by at least 70% of participating members. By standard, the Observed/Largely Observed rate varies across jurisdictions, ranging from 57% for Standard 16.15 to 90% for Standard 16.7 and 93% for Standard 16.8.

33. The majority of jurisdictions scored Largely Observed for Standards 16.9 and 16.15, as members continue to develop their ERM framework and to establish more detailed liquidity risk management processes and/or requirements for recovery planning at the time of the cutoff date of the PRP assessment. Both standards exhibited the lowest rate of observance; only 28% and 21% of participating members received ratings of Observed for Standards 16.9 and 16.15, respectively.

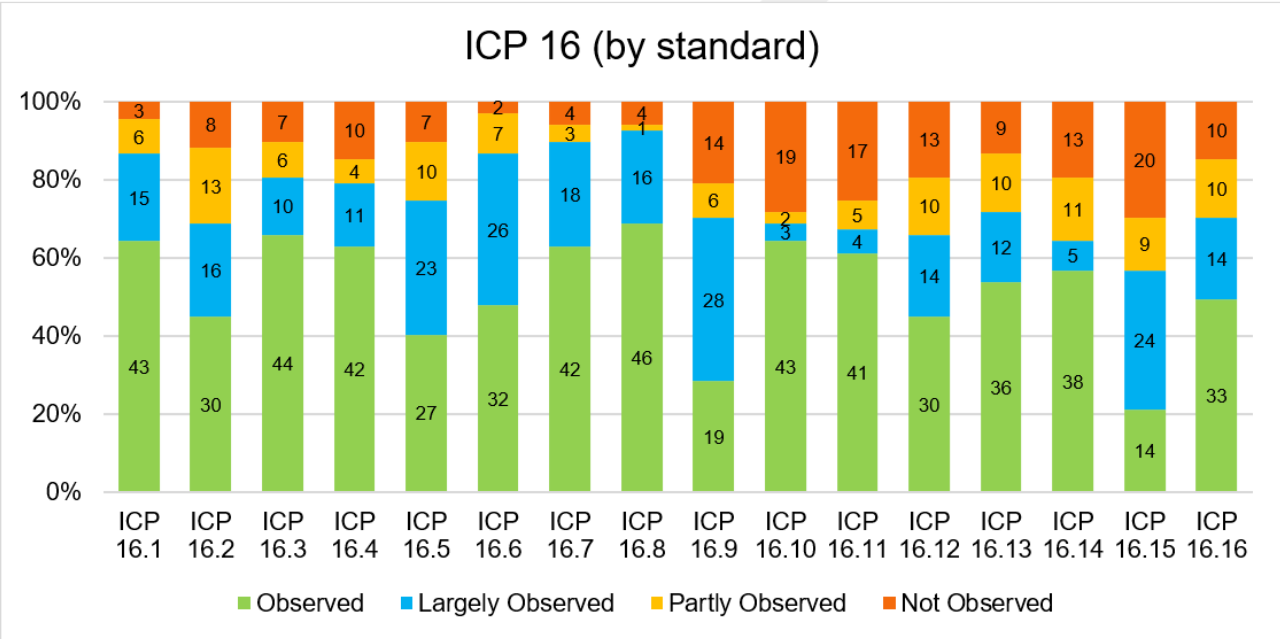
34. The majority of members observed Standards 16.7 and 16.8, which mandate that supervisors ensure the inclusion of an underwriting policy and the incorporation of measures to address liquidity risk within the insurer's ERM framework. Over 90% of members received ratings of Observed/Largely Observed for these standards.

35. In addition, the levels of observance for Standards 16.1, 16.3 and 16.10 were relatively high, with approximately 65% of members receiving the Observed rating. Aspects of insurers' ERM frameworks covering the identification of risks for capital management, the reflection of risk appetite/risk limits/capital requirements, and the performance of ORSA to assess the adequacy of insurers' risk management and current, and likely future, solvency positions, were well addressed.

36. However, for Standard 16.10 the observance level clustered at both ends of Observed (64%) and Not Observed (28%, the second highest non-observed standard). Despite the application of "substance over form" to avoid excessive prescription in assessing ORSA requirements, several members have no requirement or communicated expectation for insurers to regularly perform their own risk and solvency assessments.

37. For Standards 16.2, 16.5, 16.12, 16.13, 16.14 and 16.16, over 15% of members rated Partly Observed. For Standards 16.9, 16.10, 16.11 and 16.15, over 20% of members received ratings of Not Observed (30% for Standard 16.15, the highest non-observed standard). Aspects within the insurers' ERM frameworks that pertain to the measurement of risks, an explicit asset-liability management (ALM) policy, more detailed liquidity risk management, comprehensive ORSA requirements, and possible recovery scenarios showed room for further implementation.

38. Detailed breakdown of results by standard:



3.1.2 Areas for improvement

39. Several members received ratings of Partly Observed or Not Observed for Standard 16.2, as the supervisors do not require insurers' ERM frameworks to cover risk quantification and risk interdependencies, nor do they determine the scope of insurers required to perform macroeconomic stress testing on the total balance sheet. While many members observed a wide use of forward-looking quantitative techniques for risk and capital management, a handful that reported such techniques as uncommon or unused in their jurisdiction are encouraged to consider setting up requirements or guidance to ensure insurers adopt suitable approaches to regularly measure risk and to identify timely risk management actions.

40. On ICP 16.5, the majority of members reported not regularly assessing insurers' ALM policies as part of the evaluation of their ERM frameworks, given that such an assessment is generally under the scope of on-site supervisory inspections or only undertaken in cases of supervisory concern. Members are encouraged to require insurers to devise ALM policies that account for off-balance sheet exposures and, where appropriate, to set up separate and self-contained ALM policies for ring-fenced assets.

41. Standards 16.10–16.14 and Standard 16.16 are ORSA-related standards. While a majority of members received ratings of Observed or Largely Observed for Standard 16.10, there are a significant number of members that have no requirements in place for insurers to regularly perform an ORSA. Members are encouraged to implement ORSA requirements for insurers.

42. Members are encouraged to follow the ORSA requirements and emphasise to insurers' boards and senior management that they are required to take responsibility for a robust process to set, approve and oversee the ORSA, along with validating its effectiveness through internal or external validation (Standard 16.11). Members are encouraged to establish processes for determining insurers in scope for the requirements to assess their

resilience against macroeconomic stresses and analyse aggregate counterparty exposures (Standard 16.12).

43. Capital assessment is crucial. Members are encouraged to establish requirements urging insurers to consider additional aspects of available capital resources such as recapitalisation and the impact of group factors on capital resources (Standard 16.13). Members should also establish requirements for insurers to project their future financial position and conduct continuity analysis (Standard 16.14). Members who lack clear legislative power should take action to establish a formal mechanism to facilitate supervisory review of insurers' ERM frameworks, including the possibility of requiring insurers to promptly address supervisory concerns (Standard 16.16).

44. Regarding Standards 16.9 and 16.15, based on the conclusions drawn from the Holistic Framework TJA as noted above, there is a need for enhancing clarity on intended outcomes, avoid unintended consequences and ensuring consistency in interpretation – the latter especially on implementing the provision of "as necessary" requirements. Therefore the IAIS has reviewed these standards and proposed certain revisions to the standards for public consultation. The IAIS is currently reviewing the consultation outcome and the revised standards are planned for adoption by December 2024. The PRP assessment has been conducted based on the current version of the standards (adopted in 2019) and did not consider the proposed revisions.

45. On Standard 16.9, most jurisdictions have established processes or rely on supervisory discretion to determine the scope of application for the more detailed requirements related to liquidity risk management. These requirements include liquidity stress tests, a portfolio of unencumbered highly liquid assets, a contingency funding plan, and a liquidity risk management report. As part of an insurer's ERM framework, liquidity risk management is considered an important component, especially when it is deemed material. A review of these detailed liquidity risk management practices is conducted in various jurisdictions, although not always systematically. The implementation of this standard varies across jurisdictions, with some explicitly applying the requirements and others addressing them only to specific entities (eg IAIGs).

46. On Standard 16.15, many jurisdictions have recognised the importance of evaluating recovery scenarios and establishing recovery plans that identify options to restore an insurer's financial position and viability if it comes under severe stress. While some jurisdictions have established formal processes for determining the scope of application, others have less formal processes or rely on supervisory judgement. These requirements may apply to all insurers or be based on criteria such as size or systemic relevance. Additionally, in some jurisdictions, recovery scenarios or plan components can be included in an ORSA or other documents. The establishment of recovery plans is explicitly required in some jurisdictions, while others address this in general terms or partially. Similarly, the need for necessary information and the regular review of recovery plans varies across jurisdictions. There is a strong awareness of the need for recovery planning, and requirements are already in place or under development in many jurisdictions. As an example, the future EU Insurance Recovery and Resolution Directive (IRRD) will mandate recovery plans for insurers meeting specific criteria, and some European jurisdictions have already anticipated this requirement.

3.1.3 Illustrative examples

47. The IAIS has undertaken this PRP to provide members with a tool to assess their current level of implementation. In addition to providing valuable input for supervisory authorities looking to enhance their ICP observance, the Expert Team considered members' responses to a number of open-ended and optional questions included in the questionnaire, in order to provide valuable insights regarding how authorities have incorporated ICP 16 into their supervisory practices.

48. In total, 10 open questions for six standards (Standards 16.2, 16.9, 16.10, 16.14, 16.15 and 16.16) and three questions relating to specific risk categories as outlined in Guidance 16.1.1, 16.6.8 and 16.12.3 under ICP 16 were included in the questionnaire to seek input on illustrative examples from member jurisdictions.

49. Collective insights from participating members regarding implementation of ICP 16 is that many members report having a regular review of insurers' ERM frameworks, conducted annually by the lead analyst following applicable jurisdictional guidance. Insurers' ERM frameworks are evaluated during financial examinations to assess their effectiveness. Factors such as the relationship between risk appetite and risk limits, alignment of investments with risk appetite and investment limits, and monitoring of activities with key parties are considered when evaluating insurers' ERM frameworks.

50. Risk management practices, including ERM, are assessed through on-site inspections, document and policy reviews, and interviews with key personnel. Periodic off-site monitoring is also crucial to review the risk management function, focusing on key metrics, solvency, and liquidity rates. Risk appetite is typically incorporated into frameworks through tier ratings, with more detailed assessments conducted as the risk profile increases.

51. Whereas most, if not all, participating jurisdictions have implemented a risk-based solvency regime, the formal specifics of an ERM framework have not yet been implemented in all jurisdictions. In some cases, legislation is under way, with quantitative requirements becoming effective in future years. Oftentimes an insurer's ERM framework is reviewed individually, keeping in mind the nature, scale and complexity of the insurer. Through a combination of on-site and off-site inspections, insurers' risk management practices (and ERM) are reviewed, typically annually.

52. Detailed results by standard:

Standard 16.2

The supervisor requires the insurer's ERM framework to:

- **Provide for the quantification of risk and risk interdependencies under a sufficiently wide range of techniques for risk and capital management; and**
- **As necessary, include the performance of stress testing to assess the resilience of its total balance sheet against macroeconomic stresses.**

Summary of illustrative examples – Standard 16.2

In most jurisdictions, stress testing is a requirement under ORSA to assess the resilience of an insurer's total balance sheet against macroeconomic stresses. Captive insurers, marine mutual insurers and run-off businesses are commonly exempted from this requirement. Some jurisdictions may have market share-based or discretionary stress testing expectations.

53. A member from Western Europe provided a guideline which applies to authorised insurers, excluding marine mutual insurers, captive insurers, syndicates and insurers in run-off with insignificant portfolios in another jurisdiction. Applicable insurers must conduct stress and scenario testing to assess risk profiles, considering adverse events and macroeconomic stresses. It includes prescribed scenarios for stress testing on interest rates, equity, real estate market values and credit spreads.

54. A member from North America issued a guideline to emphasise robust stress testing approaches for derivative counterparties, capturing correlated tail risks. Risk concentrations should be assessed across various dimensions, including single names, regions, industries, risk factors, indirect exposure via posted collateral or hedge positions, off-balance sheet exposure and reputational obligations. Concentrations can arise based on correlated risk factors that reflect subtler or more situation-specific factors, such as previously undetected correlations between market and credit risks as well as between market and credit risks and liquidity risks.

55. A member from Asia-Oceania required insurers to include liquidity implications in their stress and scenario testing. The supervisor issued key observations to showcase the considerations of liquidity stress testing. Necessary management action should be included and a capital plan with a contingent funding plan in the ORSA Report is recommended. While a separate liquidity risk management report is not required, liquidity risk management should be discussed in the ORSA Report. The supervisor reviews this information annually, along with collecting liquidity information to understand any mismatches and branch operations.

Standard 16.9

The supervisor requires, as necessary, the insurer to establish more detailed liquidity risk management processes, as part of its ERM framework, that include:

- **Liquidity stress testing;**
- **Maintenance of a portfolio of unencumbered highly liquid assets in appropriate locations;**
- **A contingency funding plan; and**
- **The submission of a liquidity risk management report to the supervisor.**

Summary of illustrative examples – Standard 16.9

In deciding whether it is necessary to require more detailed/intense liquidity risk management processes, the nature, scale and complexity of an insurer's activities and the increased liquidity risk exposure are often considered. Requirements to provide detailed information on liquidity risk management in the annual ORSA varies in terms of scope across jurisdictions but is generally applied to IAIGs. In the case of macroeconomic concerns, several jurisdictions chose to focus on certain lines of insurance and require insurers to provide more detailed information such as cash flow projections in shorter intervals (up to weekly).

56. In implementing the "as necessary" standard,[11] several members required insurers to report tracking of all potential vulnerabilities and tools to improve their liquidity position. A member from Middle East and North Africa monitored an insurer's liquidity ratio quarterly during the analysis of the insurer's financial statements as an early warning indicator. The insurer must provide detailed liquidity risk management processes if it is insolvent or has material changes in its balance sheet.

57. A member from North America focused on specific insurers and IAIGs. IAIGs are required to submit an ORSA annually to the insurance regulator. Certain insurers also prepare a contingency funding and capital plan to address capital and liquidity issues. This plan establishes governance and a framework to identify, measure and respond to various internal and external stresses that may affect access to liquidity or capital resources necessary for ongoing operations. The plan includes addressing future concerns, frequent assessment of liquidity and capital adequacy, early warning indicators, and defined procedures for escalation and accountability in crisis situations.

58. Two members from Western Europe supervised more detailed liquidity risk management processes through analysis of the ORSA reports, which contain information on an entity's liquidity risk management plan (covering both normal and stressed conditions) and on the group recovery plan. More stringent liquidity risk management requirements, including

---

[11] The processes identified in ICP Standard 16.9 are expected to be applied to IAIGs through the application of ComFrame Standards 16.9.a–d, and to other insurers as necessary, based on the nature, scale and complexity of the activities that lead to increased liquidity risk exposures and risk amplification effects related to their size (for more information, please refer to the 2020 application paper on liquidity risk management, id).

contingency funding planning, apply to those insurers in scope of group recovery plans. The outcomes of supervisory reviews inform the annual group supervisory review process. More targeted analysis can be organised as part of on-site inspections. When weaknesses were identified in an insurer's risk management function during on-site inspections, additional analysis was conducted to assess the robustness and reliability of liquidity risk metrics, such as cash flow projections.

Standard 16.10

The supervisor requires the insurer to perform regularly its own risk and solvency assessment (ORSA) to assess the adequacy of its risk management and current, and likely future, solvency position.

Summary of illustrative examples – Standard 16.10

Among the members that have implemented ORSA, there are differences in the integration into other regulatory measures, frequency of submission and requirements. On the one hand, the ORSA reports serve to make supervision more targeted in order to decide which insurers should be monitored more closely in the future, while on the other hand the ORSA process itself is continuously improved.

59. Several jurisdictions use ORSA as part of a range of regulatory measures alongside other obligatory reports including legal filings, annual reports, specific reports such as the risk or solvency reports, actuarial valuations, etc. Two members from North America use ORSA as an indicator of the effectiveness of risk identification. ORSA is integrated as part of the institution's overall solvency assessment and contributes to the generation of a quantitative indicator "risk and impact score".

Standard 16.14

The supervisor requires:

- **The insurer, as part of its ORSA, to analyse its ability to continue in business, and the risk management and financial resources required to do so over a longer time horizon than typically used to determine regulatory capital requirements; and**
- **The insurer's continuity analysis to address a combination of quantitative and qualitative elements in the medium and longer-term business strategy of the insurer and include projections of its future financial position and analysis of its ability to meet future regulatory capital requirements.**

Guidance 16.14.6

Such continuity analysis should have a time horizon needed for effective business planning (for example, 3 to 5 years), which is longer than typically used to determine regulatory capital requirements. It should also place greater emphasis than may be considered in regulatory requirements on new business plans and product design and pricing, including embedded guarantees and options, and the assumptions appropriate given the way in which products are sold. The insurer's current premium levels and strategy for future premium levels are a key element in its continuity analysis. In order for continuity analysis to remain meaningful, the insurer should also consider changes in external factors such as possible future events including changes in the political or economic situation.

Summary of illustrative examples – Guidance 16.14.6

The required time horizon typically spans three to five years, although there are instances where no specific length is mandated for the forward-looking aspect of the ERM assessment. A few jurisdictions encourage considering time frames exceeding five years. The supervisor, in line with its prudential standards, typically requires the insurer to provide detailed information on current and projected capital levels relative to the minimum regulatory capital requirements and target capital levels.

60. A distinction is sometimes made between different types of undertakings and risks. In one jurisdiction from Western Europe, all undertakings that provide long-term guarantees must consider a longer-term time horizon of 10 to 15 years instead of the normal planning horizon of three to five years. In addition, as soon as the risks of climate change are material for the undertakings, climate change scenarios for a period of 15 to 30 years must also be taken into account in the ORSA.

61. One member from North America distinguished different time horizons between insurance segments, such as life/non-life, or line of business, such as property and casualty insurance. Another member from North America indicated that the principle of proportionality applies when determining an appropriate time horizon. The supervisor assesses the suitability of the time horizon for each insurer, taking into account factors such as the insurer's strategy, operating model, product features and other relevant considerations.

Standard 16.15

The supervisor requires, as necessary, insurers to evaluate in advance their specific risks and options in possible recovery scenarios.

Summary of illustrative examples – Standard 16.15

The requirement for a recovery plan is generally linked to the systemic importance of the insurer, the long-term nature of its business or its international activity.

62. Some members have implemented regulatory requirements for insurers to evaluate recovery scenarios in adverse circumstances and develop recovery plans. These plans involve assessing material risks, identifying potential recovery options, and documenting the analysis. Supervisors have developed methodologies to determine which insurers are domestically systemic and require them to establish pre-emptive recovery plans. Similarly, in line with CF 16.15.a, IAIGs are also required to evaluate recovery scenarios and include this information in their recovery plans. These measures aim to ensure preparedness and resilience in the face of challenging situations.

63. A member from Asia-Oceania required all insurers to perform reverse stress testing to identify scenarios that would be the likely cause of business failure and document the management actions required. In addition, systemically significant insurers are subjected to recovery planning requirements, where these insurers must evaluate and identify management actions to address possible adverse circumstances which would result in a deterioration in their capital and/or solvency position.

Standard 16.16

The supervisor undertakes reviews of the insurer's ERM framework, including the ORSA. Where necessary, the supervisor requires strengthening of the insurer's ERM framework, solvency assessment and capital management processes.

Guidance 16.16.3

In assessing the soundness, appropriateness and strengths and weaknesses of the insurer's ERM framework, the supervisor should consider questions such as:

- What are the roles and responsibilities within the ERM framework?
- Is the insurer within its stated risk appetite?
- What governance has been established for the oversight of outsourced elements of the ERM framework?
- What modelling and stress testing (including reverse stress testing) is done?
- Has the model risk management been applied in the ERM framework?
- How does the insurer maintain a robust risk culture that ensures active support and adjustment of the insurer's ERM framework in response to changing conditions?

Summary of illustrative examples – Guidance 16.16.3

Supervisory authorities choose different ways to determine the effectiveness and adaptability of insurers' ERM frameworks. In many cases, they rely on increased communication with the insurer and, in particular, attempt to incorporate information gained from previous reviews into the ERM framework.

64. One member from Offshore and Caribbean considers whether there is a clear feedback loop from the ORSA results back into an insurer's strategy and risk management framework. The supervisory authority meets on an annual basis with the chief risk officers of its high-impact insurers to understand any changes in risk management frameworks, and to get a feel for the current status of their risk culture.

65. Another member, from North America, performs examinations which include the review and testing of the ERM framework and functions. Results of those examinations are provided to the analysts, who review the ORSA on an annual basis. If there are material changes to the environment, the supervisory authority would engage with the insurer and verify changes upon the next examination.

66. Some members from the Western Europe and Asia-Oceania regions, focusing on macroprudential aspects, described that the supervisor assesses whether an insurer's assumptions and stress scenarios are robust enough. In case of a concern, further evaluations are conducted (eg the impact of inflation on the insurer's underwriting risk or changes in lapse rates in facing liquidity risk). The supervisor may retrospectively examine how the insurer has responded to newly emerging risks or utilise a checklist to ensure the insurer's ERM framework is sensitive to changing conditions and is part of the insurer's risk culture, as good indications of a sound ERM framework.

67. In terms of specific supervisory measures to require strengthening of the insurer's ERM framework for solvency purposes, a member from Asia-Oceania has imposed additional capital requirements on insurers with significant weaknesses in their governance, risk culture and risk management practices. Another member, from Western Europe, placed a "no dividend" direction on an insurer which failed to sufficiently articulate its capital adequacy and liquidity profile.

Specific risk categories as outlined in Guidance under 16.1.1, 16.6.8 and 16.12.3

16.1.1

The scope of risk identification and analysis of risk interdependencies should cover, at least: insurance risk, market risk, credit risk, concentration risk, operational risk and liquidity risk. Other risks may be included, such as conduct risk, legal risk, political risk, reputational risk, strategic risk and group risk.

16.6.8

An effective investment policy and ERM framework should provide for appropriately robust models reflecting relevant risks of complex investment activities (including underwriting guarantees for such complex securities). There should be explicit procedures to evaluate non-standard risks associated with complex structured products, especially new forms of concentration risk that may not be obvious.

16.12.3

In deciding whether it is necessary to require scenario analysis or stress testing as part of the ORSA, and the frequency, scope and type of such scenario analysis or stress testing, the supervisor should take into account, for example, the nature, scale and complexity of the insurer, its business model and products and the size of the insurer's exposures, both in absolute terms and relative to the insurer's portfolio. For macroeconomic exposure, relevant factors may include the characteristics of the guarantees the insurer provides and the extent to which such guarantees are matched or hedged, the characteristics of any (automatic) asset reallocation mechanisms, the use of dynamic hedging, the insurer's activity in derivatives markets or other drivers of volatility in the sources or uses of cash. For counterparty exposure, particular attention should be paid to financial sector counterparties, as these may be more likely to contribute to the build-up of systemic risk, and to off-balance sheet exposures or commitments, as these may be more likely to have an impact during stress.

Summary of illustrative examples – Guidance 16.1.1 (climate risk)

Some jurisdictions have set out guidance for incorporating climate risk into the ORSA. Several members from Western Europe and the Central, Eastern Europe and Transcaucasia (CEET) region have adopted a regional application guidance on running climate change materiality assessments and using climate change scenarios in the ORSA.

68. In the PRP, participating members were given the option of answering the question "To what extent do the ERM requirements in YOUR JURISDICTION require insurers to cover the following specific risk categories when identifying all reasonably foreseeable and relevant material risks?". The specific risk categories were group risk, climate risk and cyber risk. Fifty-two members responded to the optional question on group risk. Most respondents (63%) fully and explicitly addressed the risk, while 15% did not address it. Fifty-one members responded to the optional question on climate risk. Many respondents (37%) fully and explicitly addressed the risk, while 27% did not address it. Fifty members responded to the optional question on cyber risk. Many respondents (42%) fully and explicitly addressed the risk, while 26% did not address it.

69. Regarding climate risk, a member from Western Europe has issued a Supervisory Statement to enhance banks' and insurers' approaches to managing the financial risks from

climate change. A member from North America has issued a Guideline on Climate Risk Management that communicates the expectation that federally regulated financial institutions will develop capabilities to aggregate their climate risk data to identify and internally report on climate-related exposures, including risk concentrations (eg geographies, sectors, products, counterparties). Another member from North America has adopted ERM regulation to address all reasonably foreseeable and relevant material risks including, as applicable, climate change.

70. In addressing specific risk categories, a member from Western Europe has issued additional guidance through its Circular on ORSA, stating further expectations for specific scenarios such as pandemics, cyber attacks and climate change to keep ORSAs up-to-date and flexible when required by external/extraordinary circumstances. The prospective nature of the risks and their development over time should be considered in the ORSA, taking into account the relationship between the risk profile, risk appetite, risk tolerance and business model and strategy of the insurer over at least the time horizon of their business plan. The member assessed the appropriateness and complexity of scenario specifications, the assumptions and rationale underlying the scenarios, the severity of stresses used and the time horizon of the impacts. A benchmarking comparison is made across industry participants (initially only significant insurers) to detect major outliers, especially within peer groups of insurers with a similar business model or risk profile.

71. A member from Asia-Oceania provided risk management requirements that are closely linked to risk coverage within the ORSA. The guidance for capital adequacy assessment and supervisory review outlines a number of additional risks insurers should consider, including asset risk, credit risk, asset/ liability mismatch risk, insurance risk, asset concentration risk, insurance concentration risk and liquidity risk. The risk management framework addresses risks arising from the strategic objectives and business plans, and other risks that, singly or in combination with different risks, may have a material impact on the institution. The emphasis on each risk category is likely to differ according to the size, business mix and complexity of the insurer. The member expects that an insurer would be able to demonstrate and document how it determines the "materiality" of risk categories and to identify the key risk drivers within each category. This documentation will assist not only the day-to-day oversight of the insurer, but also all external reviews of the effectiveness of its risk management framework.

Annex 1: Peer Review Process

72. The Peer Review Process (PRP) can be broken into multiple steps. First, a detailed, web-enabled assessment questionnaire[12] is developed by the Expert Team. Prior to being finalised, the initial questionnaire is circulated to the Standards Assessment Working Group (SAWG) and relevant IAIS working groups for review and comment, if applicable.

73. Once the Expert Team has reviewed any comments received and finalised the questionnaire, it is sent to all IAIS members[13] through an online survey tool. Members then submit responses to the questionnaire through the survey tool. Responses are initially assessed against quantitative rating criteria. The results are then subject to peer review by the Expert Team. Based on the initial assessment and peer review, individual jurisdiction reports for each participating member are drafted by the Expert Team.

74. Draft individual member reports are then sent to members. They are asked to review their responses and the resulting assessment, and to submit comments for inclusion in the report. Corrections to factual misinterpretations are also accepted. The IAIS Expert Team reviews any comments or corrections provided by the members before issuing a final individual report. The final individual member reports are forwarded to the respective authority.

75. It is important to note that members only respond to the questionnaires – they do not self-rate (ie conduct their own self-assessments). The IAIS Expert Team peer reviews the responses and assigns the ratings to ensure the consistency and independence of the process.

76. On the basis of the final assessment reports, an aggregate report is drafted by the IAIS Expert Team. The aggregate report provides key findings and summary results on a regional level. The SAWG, the Implementation and Assessment Committee (IAC) and relevant working groups (if applicable) are invited to provide input to the report. After a review with necessary revisions by the Expert Team, the aggregate report is then submitted to the SAWG for approval before being submitted to the IAC and Executive Committee (ExCo) for formal publication approval. The final aggregate report is available to the public and on the IAIS website.

77. All of the activities of the Expert Team are subject to ongoing oversight by the SAWG, which is responsible for overseeing the assessment of implementation of the IAIS' supervisory material.

[12] PRP Questionnaire on ICP 16: www.iaisweb.org/activities-topics/implementation-assessment/peer-review-process

[13] IAIS members: www.iaisweb.org/page/about-the-iais/iais-members.

Annex 2: Participating IAIS members by category

	Nature of jurisdiction			IAIS region							
IAIS member	FSB	OECD	Other	North America	Latin America	Western Europe	Central, Eastern Europe and Transcaucasia	Asia-Oceania	Middle East and North Africa	Offshore and Caribbean	Sub-Sahara Africa
Albania			x				X				
Argentina	x				x						
Australia – APRA	x	x						x			
Austria		x				x					
Bahrain			x						x		
Belgium – NBB		x				x					
Brazil – SUSEP	x				x						
Bulgaria			x				x				
Cambodia			x					x			
Canada – OSFI	x	x		x							
Canada (Ontario)			x	x							
Cayman Islands, BWI			x							x	
Chile		x			x						
China, Hong Kong	x							x			
China, Macao			x					x			
Chinese Taipei			x					x			
Costa Rica		x			x						
Croatia (Republic of)			x				x				
Czech Republic		x					x				
Egypt			x						x		
France	x	x				x					
Germany	x	x				x					
Gibraltar			x							x	
Guatemala			x		x						
Guernsey			x							x	
Hungary		x					x				
Iceland		x				x					
Isle of Man			x							x	
Italy	x	x				x					
Jamaica			x							x	
Jordan			x						x		
Korea (Republic of)	x	x						x			
Lesotho			x								x
Liechtenstein			x			x					
Luxembourg		x				x					

IAIS member	Nature of jurisdiction			IAIS region							
	FSB	OECD	Other	North America	Latin America	Western Europe	Central, Eastern Europe and Transcaucasia	Asia-Oceania	Middle East and North Africa	Offshore and Caribbean	Sub-Sahara Africa
Malawi			x								x
Malaysia			x					x			
Malta			x			x					
Mauritius (Republic of)			x								x
Mexico	x	x		x							
Montenegro			x				x				
Morocco			x						x		
Namibia			x								x
New Zealand		x						x			
Poland		x					x				
Portugal		x				x					
Republic of North Macedonia			x				x				
Romania			x				x				
Rwanda			x								x
Singapore	x							x			
Slovakia		x					x				
Slovenia		x					x				
South Africa – PA	x										x
Spain	x	x				x					
Sri Lanka			x					x			
Switzerland	x	x				x					
Türkiye	x	x					x				
Turks & Caicos BWI			x							x	
Ukraine			x				x				
United Arab Emirates – DFSA			x						x		
United Kingdom – PRA	x	x				x					
Uruguay			x		x						
USA, Connecticut	x	x		x							
USA, Illinois	x	x		x							
USA, Nebraska	x	x		x							
USA, New York	x	x		x							
Vietnam			x					x			
Participating IAIS members by category	**20**	**28**	**34**	**7**	**6**	**13**	**13**	**11**	**5**	**6**	**6**

Annex 3: Aggregated results of observance level by IAIS region

ICP 16	North America	Latin America	Western Europe	Central, Eastern Europe and Transcaucasia	Asia-Oceania	Middle East and North Africa	Offshore and Caribbean	Sub-Sahara Africa	All regions
Observed	0	0	2	1	1	0	1	0	5
	0%	0%	15%	8%	9%	0%	17%	0%	7%
Largely Observed	7	1	11	9	6	1	4	3	42
	100%	17%	85%	69%	55%	20%	67%	50%	63%
Partly Observed	0	5	0	3	3	4	1	3	19
	0%	83%	0%	23%	27%	80%	17%	50%	28%
Not Observed	0	0	0	0	1	0	0	0	1
	0%	0%	0%	0%	9%	0%	0%	0%	1%
Not Applicable	0	0	0	0	0	0	0	0	0
	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total	7	6	13	13	11	5	6	6	67

Annex 4: Aggregated results of observance level by member **(Restricted to IAIS Members Only)**

https://extranet.iaisweb.org/page/committees/implementation-and-assessment/reference-documents/

Please note that you must be logged in to the IAIS Extranet to access this file.