MAS Notice No.: FHC-N126

29 JUNE 2022

NOTICE TO DESIGNATED FINANCIAL HOLDING COMPANIES
FINANCIAL HOLDING COMPANIES ACT 2013

ENTERPRISE RISK MANAGEMENT ("ERM")

Introduction

1. This Notice is issued pursuant to section 60(1) of the Financial Holding Companies Act 2013 (the "Act") and comprises both mandatory requirements (Part I) and non-mandatory standards (Part II).

2. This Notice applies to all designated financial holding companies that have a subsidiary that is a licensed insurer incorporated, formed or established in Singapore ("DFHC (Licensed Insurer)").

Definition

3. In this Notice –

"Board", in relation to a DFHC (Licensed Insurer), means the board of directors of the DFHC (Licensed Insurer);

"continuity analysis" means an analysis of the FHC group's ability to continue in business, whereby the risk management and financial resources required to do so is over a longer time horizon than typically used to determine regulatory group capital and solvency requirements;

"economic capital" means the capital needed by the FHC group on a consolidated basis to satisfy the risk tolerance and support the business plans of the FHC group, and which is determined from an economic assessment of –

(i) the FHC group's risks on a consolidated basis;
(ii) the relationships of these risks; and
(iii) the risk mitigation that has been put in place;

"going concern" means the financial condition deemed appropriate by the DFHC (Licensed Insurer) such that normal business operations of the entities within the FHC group can be conducted;

"ORSA" or "own risk and solvency assessment" refers to the DFHC (Licensed Insurer)'s assessment of the adequacy of the FHC group's risk management, and current and projected future solvency position with a time horizon that is consistent with that used in its business planning;

“regulated entity” means an entity that is licensed or regulated by a regulatory authority in a jurisdiction in which the FHC group operates;

“regulatory capital” in relation to the FHC group, means the level of capital required by the DFHC (Licensed Insurer) to satisfy the capital adequacy requirements as specified under section 36 of the Act.

4. The expressions used in this Notice, except where expressly defined in this Notice or where the context otherwise requires, have the same respective meanings as in the Act.

Part I – Mandatory Requirements

5. Diagram 1 illustrates the key features of an ERM framework and the various interactions amongst the key components.

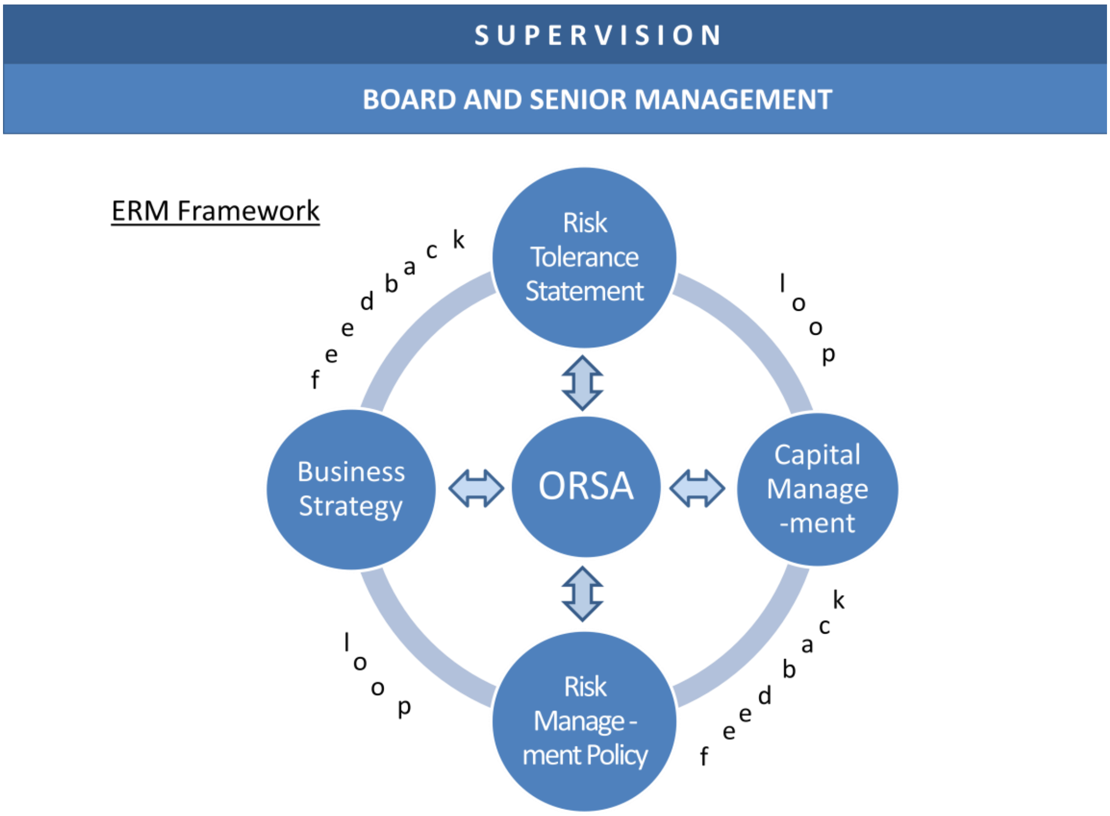

Diagram 1: Key features of ERM framework

Risk Identification and Measurement

6. A DFHC (Licensed Insurer) must establish an ERM framework for the FHC group that –

   (a) provides for the identification and quantification of risks using techniques appropriate to the nature, scale and complexity of the risks the FHC group bears on a consolidated basis; and

   (b) addresses risk, solvency and capital management of the FHC group.

7. For the purposes of paragraph 6, the DFHC (Licensed Insurer) must ensure that the ERM framework –

   (a) identifies and addresses insurance risk, market risk, credit risk, operational risk, liquidity risk and any other reasonably foreseeable and relevant material risks[1] to which the FHC group is, or is likely to become, exposed.

   (b) takes into account "group risk" of the FHC group and, where applicable, of the wider group. In managing the FHC group's risks, the DFHC (Licensed Insurer) must consider the relationships it or any entity within the FHC group has with other members of the FHC group, including aspects of control, influence and interdependence. The DFHC (Licensed Insurer) must also take into account risks arising from all parts of the FHC group, including entities (whether regulated or unregulated) which do not carry on insurance business, and risks arising from holding major stakes as defined in section 31(10) of the Act in any company;

   (c) takes into account the constraints[2] in its assumptions that are implicit in the solvency assessment of the DFHC (Licensed Insurer), as well as that of the regulated entities within the FHC group;

   (d) considers the causes of different risks and their impact, and assess the relationships between risk exposures, including assessing external risk factors which, if they were to crystallise, could pose a significant threat to the business of the entities within the FHC group;

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[1] Examples of such risks are strategic risk, legal risk and risk to the reputation of the FHC group.

[2] An example would be the fungibility of capital. If any of the insurance entities within the FHC group has branches in different jurisdictions, or its subsidiaries is in a jurisdiction where restrictions on fungibility of capital apply or where there is ring-fencing of policies in participating funds, the assumption of full fungibility may not always be appropriate.

(e) requires the DFHC (Licensed Insurer) to support the measurement of the FHC group's risk with documentation[3] that provides detailed descriptions and explanations of the risks covered, the measurement approaches used and the key assumptions made;

(f) is responsive to changes in the FHC group's risk profile, as a result of both internal and external events, as well as to the changing interests and reasonable expectations of policy owners and other stakeholders of the FHC group. The DFHC (Licensed Insurer) must ensure that the framework also includes mechanisms to incorporate new risks and new information for the purposes of paragraph 6 where necessary, or at least once every quarter;

(g) ensures that there is in place a feedback loop, which is a process to monitor and respond in a timely manner to changes in the FHC group's risk profile; and

(h) ensures that the DFHC (Licensed Insurer) is able to obtain appropriate, reliable and good quality information about changes in the risk profile of any entity within the FHC group that could materially affect the FHC group's risk profile.

8. For the purposes of paragraph 7(b), "group risk"[4] means –

(a) the risk that the FHC group may be adversely affected by the occurrence of an event (whether financial or non-financial) in an entity within the group; and

(b) the risk that the financial stability of the FHC group as a whole or any entity within the FHC group may be adversely affected by the occurrence of an event external to the FHC group.

9. For the purposes of paragraph 7(d), the DFHC (Licensed Insurer) must –

(a) recognise the limitations of the methods it uses to manage risks, the potential impact these limitations may have and adapt its risk management accordingly; and

(b) document the considerations and recognition of the limitations and their potential impact on entities within the FHC group.

10. After identifying the risks in accordance with the ERM framework referred to in paragraph 6, the DFHC (Licensed Insurer) must –

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[3] The documentation should be signed or verified by an executive officer of the DFHC (Licensed Insurer).

[4] "Group risk" may arise, for example, through contagion, leveraging, double or multiple gearing, concentrations, large exposures, complexity, participations, loans, guarantees, risk transfers, liquidity, outsourcing arrangements or off-balance sheet exposures.

(a) monitor material risks and possible key leading indicators at least once every quarter; and

(b) ensure that its Board and senior management are kept updated of the risks that the FHC group is exposed to at least once a year.

Risk Management Policy

11. A DFHC (Licensed Insurer) must have a risk management policy[5] for the FHC group which outlines how the risks identified in accordance with the ERM framework referred to in paragraph 6 are managed in the FHC group's business strategy and in the day-to-day operations of each entity within the FHC group.

12. For the purposes of paragraph 11, the DFHC (Licensed Insurer) must ensure that the risk management policy covers, at the minimum, the following areas:

(a) the FHC group's policy for managing its underwriting risk, investment risks and any other risk which the FHC group is exposed to;

(b) the FHC group's policy towards risk retention and risk management strategies[6];

(c) the relationships between the FHC group's risk tolerance limits, regulatory capital requirements, economic capital and the processes and methods for monitoring risk;

(d) how the FHC group's risk management is related to its corporate objectives and strategy taking into account its current circumstances;

(e) in respect of the FHC group's policies relating to insurance risks[7], risk retention and risk transfer through reinsurance. When developing such policies, the DFHC (Licensed Insurer) must take into account the effectiveness of any risk transfer under scenarios of financial distress;

(f) the relationships between pricing, product development and investment management for the FHC group[8];

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[5] To avoid doubt, the FHC group may choose to fulfil the requirements for a "risk management policy" using a collection of individual policies.

[6] Examples of such risk retention and risk management strategies are the use of derivatives, diversification and asset-liability management.

[7] When developing these policies, the effectiveness of risk transfer tools should be assessed against the group's risk profile and capital position. If other forms of insurance risk transfer are used (e.g. insurance linked securities), there should be a corresponding risk management policy as well.

[8] For example, the interest rate assumptions used in pricing should take the relevant operating entity's investment strategy into account.

(g) a category of risk comprising all of the additional group risks the FHC group faces; and

(h) a time horizon which is consistent with the nature of the FHC group's risks, as well as its business planning horizon.

13. A DFHC (Licensed Insurer) must ensure that the risk management policy referred to in paragraph 11 is appropriately and effectively implemented by every entity within the FHC group[9].

Risk Tolerance Statement

14. A DFHC (Licensed Insurer) must establish and maintain a risk tolerance statement for the FHC group which defines its overall quantitative and qualitative risk tolerance limits, and which takes into account all relevant and material categories of risks to the FHC group and the relationships between the risks.

15. A DFHC (Licensed Insurer) must incorporate the FHC group's risk tolerance limits in the setting of the business strategy for the FHC group and each entity within the FHC group.

16. A DFHC (Licensed Insurer) must ensure that every entity within the FHC group –

(a) complies with the risk tolerance limits set by the DFHC (Licensed Insurer) under paragraph 14; and

(b) sets out in its written policies and procedures that are communicated to the entity's senior management, the defined risk tolerance limits for its daily operations, so that its senior management understands the level of risk that the entity is prepared to be exposed, and the limits of risk to which senior management is able to expose the entity, taking into account sub-paragraph (a).

17. A DFHC (Licensed Insurer) must ensure that an effective system is in place to identify and monitor any breaches or potential breaches of the risk tolerance limits of the FHC group.

Own Risk and Solvency Assessment

18. A DFHC (Licensed Insurer) must –

[9] All entities that are material to the FHC group should establish appropriate risk management policies.

(a) perform the ORSA at least annually; and

(b) document any assumption relied on or calculation used, in the assessment, and any action plan arising from the results of the assessment.

19. A DFHC (Licensed Insurer) must ensure that its Board approves the ORSA and oversees its effective implementation by senior management.

20. For the purposes of paragraph 18(a), the DFHC (Licensed Insurer) must –

(a) consider insurance risk, market risk, credit risk, operational risk, liquidity risk, group risks (as defined in paragraph 8) and any other reasonably foreseeable and relevant material risks to which the FHC group is, or is likely to become, exposed;

(b) identify the relationships between the risks identified, and assess whether the level and quality of the FHC group's financial resources are able to support the risks considered in sub-paragraph (a);

(c) consider all material risks that may have an impact on its ability to meet its obligations to stakeholders of entities within the FHC group[10], taking into consideration the impact of future changes in economic conditions and other external factors;

(d) distinguish between the FHC group's current regulatory capital and economic capital needs and its projected future financial position on a consolidated basis, having regard to the FHC group's longer-term business strategy and new business plans;

(e) assess the appropriateness of the FHC group's financial resources on a consolidated basis in supporting the FHC group's business strategy and enabling the FHC group to continue its operations;

(f) analyse the FHC group's ability to continue in business, and the risk management and financial resources required to do so on a consolidated basis, under a range of plausible adverse scenarios, over a time horizon needed for effective business planning.

Economic and regulatory capital

21. A DFHC (Licensed Insurer) must –

(a) determine, as part of its ORSA, the overall financial resources the group needs, on a consolidated basis, given the FHC group's risk tolerance and business

[10] For example, policy owners.

plans, and to demonstrate that regulatory requirements are met for the FHC group;

(b) base its risk management actions on consideration of the FHC group's economic capital and regulatory capital on a consolidated basis, including its ORSA; and

(c) assess the quality and adequacy of the FHC group's financial resources on a consolidated basis to meet the FHC group's regulatory capital and economic capital[11] requirements on a consolidated basis.

Continuity Analysis and Stress Testing

22. A DFHC (Licensed Insurer) must, at least annually or, if market conditions warrant, more frequently, conduct forward-looking continuity analysis that addresses a combination of quantitative and qualitative elements in the medium and longer-term business strategy of the FHC group and in that analysis, including projection of its future financial position on a consolidated basis and its ability to meet future regulatory capital and economic capital requirements on a consolidated basis.

23. In carrying out its continuity analysis, a DFHC (Licensed Insurer) must, at least annually or, if market conditions warrant, more frequently, conduct stress testing for the FHC group. The DFHC (Licensed Insurer) must ensure that such stress testing involves the projection of the financial, economic capital and capital adequacy positions of the FHC group under various scenarios, including –

(a) its base scenario, based on its best estimates of risk factors; and

(b) stress scenarios, taking into account the most recent, relevant and material risks of the FHC group.

24. A DFHC (Licensed Insurer) must apply reverse stress testing to identify scenarios that would be the likely cause of business failure for the FHC group and the actions necessary to manage this risk.

25. For the purposes of paragraph 24, "business failure" means –

(a) the FHC group's solvency position falling below any regulatory capital requirement; or

(b) the DFHC (Licensed Insurer) being wound up for any other reason.

[11] A DFHC (Licensed Insurer) may justify adopting its regulatory capital, whether in entirety as, or to form the basis of, the FHC group's economic capital, based on the FHC group's nature, scale and complexity.

26. Based on the result of continuity analysis, a DFHC (Licensed Insurer) must develop and maintain contingency plans and procedures to restore the FHC group's status as a going concern. A DFHC (Licensed Insurer) must identify in the plans, the actions that the DFHC (Licensed Insurer) is to take immediately to restore or improve the FHC group's capital adequacy requirements or cash flow position on a consolidated basis after some future stress scenario, and assess whether any action should be taken by the DFHC (Licensed Insurer) in advance as a precautionary measure. Subject to the nature, scale and complexity of the risks borne by the FHC group, the DFHC (Licensed Insurer) must document whether it is necessary to have a contingency plan for use in a gone concern situation for the FHC group.

27. A DFHC (Licensed Insurer) must, as part of the continuity analysis of the FHC group, analyse the ongoing support from its shareholders including the availability of financial support in adverse circumstances.

ORSA Reports

28. A DFHC (Licensed Insurer) must lodge its ORSA report annually with the Authority within 2 weeks from the date the ORSA report is approved by the Board, with the first report being due on or before 31 December of the year in which it is designated under section 4 of the Act, or such other date as specified by the Authority.

Submission of Board's deliberations on the DFHC (Licensed Insurer)'s ORSA reports

29. A DFHC (Licensed Insurer) must submit to the Authority, no later than 1 month from the date of lodgement of its ORSA report with the Authority under paragraph 28, an extract of the minutes of the Board's meeting detailing the deliberations made by the Board on its ORSA report and Board's approval of its ORSA report.

Part II – Non-Mandatory Standards

Compliance with non-mandatory standards

30. The standards set out in Part II of this Notice are not mandatory in that failure by a DFHC (Licensed Insurer) to comply with any of the standards does not of itself render the DFHC (Licensed Insurer) to be in breach of this Notice. However, the Authority expects every DFHC (Licensed Insurer) to observe the standards set out in Part II of this Notice and may take into account the DFHC (Licensed Insurer)'s failure to comply with any of these standards in considering whether to issue any directions to the DFHC (Licensed Insurer).

Background

31. The ERM requirements and guidelines in this Notice set out how every DFHC (Licensed Insurer) is to identify and manage interdependencies between key risks across the FHC

group, and how these are translated into management actions related to strategic and capital planning matters.

32. ERM is the process of identifying, assessing, measuring, monitoring, controlling and mitigating risks in respect of the FHC group and every entity within the FHC group. It involves the self-assessment of all reasonably foreseeable and relevant material risks that the FHC group faces, and their inter-relationships, providing a link between ongoing operational management of risk and longer-term business goals and strategies.

33. Through ERM, a DFHC (Licensed Insurer) can form a prospective view of its FHC group's risk profile and capital needs, thus enabling its group's business strategy, risk management and capital allocation to be co-ordinated in order to achieve maximum financial efficiency and adequate protection of policy owners of the entities within the FHC group.

Risk Identification and Measurement

Causes of risk and the relationships between risks

34. In assessing the relationships between risk exposures, a DFHC (Licensed Insurer) should consider the correlations between risk events which could cause extreme losses to the FHC group. Risks that show no strong dependence under normal economic conditions, such as catastrophe risks and market risks, could be more correlated in a stress scenario. For example, certain major trigger events, such as catastrophes, downgrades from rating agencies or other events that have an adverse impact on the FHC group's reputation can result in a high level of claims, collateral calls or policy terminations, and hence lead to serious liquidity issues. The DFHC (Licensed Insurer) should, in its policies and procedures, outline its options for responding to such trigger events.

Measuring, analysing and modelling the level of risk

35. The level of risk is a combination of the impact that the risk will have on an FHC group and the probability of that risk materialising. A DFHC (Licensed Insurer) should regularly assess the level of risk that it bears using appropriate forward-looking quantitative techniques such as risk modelling[12], stress testing, including reverse stress testing, and scenario analysis. The DFHC (Licensed Insurer) should adopt the appropriate range of adverse circumstances and events, including those that pose a significant threat to the financial condition of the FHC group, and management actions should be identified together with the appropriate timing of these actions. The DFHC (Licensed Insurer) should use risk measurement techniques in developing long-term business and contingency plans, where it is appropriate to the nature, scale and complexity of the FHC group to do so.

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12 "Modelling" in this context does not necessarily mean complex stochastic modelling. It can also include less sophisticated methods.

36. Different approaches on assessment of the level of risk may be appropriate depending on the nature, scale and complexity of a risk and the availability of reliable data on the behaviour of that risk. For example, a low frequency but high impact risk where there is limited data, such as catastrophe risk, may require a different approach from a high frequency, low impact risk for which there is substantial amounts of data available. For example, stochastic risk modelling may be appropriate to measure some non-life catastrophe risks, whereas relatively simple calculations may be appropriate in other circumstances.

37. A DFHC (Licensed Insurer) should base the measurement of its risks on a consistent economic assessment of the FHC group's consolidated balance sheet as appropriate to ensure that appropriate risk management actions are taken.

38. Where a risk is not readily quantifiable, a DFHC (Licensed Insurer) should make a qualitative assessment that is appropriate to that risk and sufficiently detailed to be useful for risk management. The DFHC (Licensed Insurer) should analyse the controls needed to manage such risks to ensure that its risk assessments are reliable and consider events that may result in high operational costs or operational failure. Such analysis is expected to inform the DFHC (Licensed Insurer)'s judgments in assessing the size of the risks and enhancing overall risk management of the FHC group.

39. A DFHC (Licensed Insurer) should ensure that when carrying out its continuity analysis, it assesses its risk on a consistent basis, so that any variations in results can be readily explained. The DFHC (Licensed Insurer) should use such analysis to prioritise its risk management.

40. Where models are used, a DFHC (Licensed Insurer) should be mindful that, regardless of how sophisticated the models are, they cannot exactly replicate the real world. The use of models itself generates risk (modelling and parameter risks) which, if not explicitly quantified, should at least be acknowledged and understood by the DFHC (Licensed Insurer), including the Board and senior management.

41. A DFHC (Licensed Insurer) may use stress testing and scenario analysis to complement the use of models for risks that are difficult to model, or where the use of a model may not be appropriate from a cost-benefit perspective.

42. A DFHC (Licensed Insurer) may use scenario analysis to facilitate communication on risk matters at various levels of the organisation. Such communication would enable the ERM framework to be better appreciated within the organisation and better integrate the framework with its business operations and culture.

<u>Updates to the Board and senior management</u>

43. When necessary, such as during financial distress, a DFHC (Licensed Insurer) should update its Board and senior management of its risk profile on a more frequent basis.

Risk Responsiveness and Feedback Loop

44. A DFHC (Licensed Insurer) may include as new risks identified from its business, for example new acquisitions, new investment positions, or new business lines. A DFHC (Licensed Insurer) may need to make changes to the ERM framework when there is new information from external sources, as a result of evolution of the environment affecting the nature and size of underlying risks, supervisory and legislative requirements, rating agency concerns (if applicable), political changes, major catastrophes or market turbulence.

45. A DFHC (Licensed Insurer) should ensure that the feedback loop as described in paragraph 7(g) is effective, such that the Board and senior management can make risk management decisions using information that they can rely on, and that such decisions are implemented and their effects monitored and reported to the Board and senior management in a timely and sufficiently frequent manner. The DFHC (Licensed Insurer) should also ensure that the monitoring processes of its feedback loop take into account reliable information and assess the risks using objective and defined criteria.

ORSA

46. A DFHC (Licensed Insurer) may make reference to the sample format and suggested content for the ORSA report outlined in Appendix A when drafting its ORSA report.

47. The ORSA undertaken by a DFHC (Licensed Insurer) should be appropriate to the nature, scale and complexity of the FHC group's risks. Where it is appropriate to the nature, scale and complexity to do so, to ensure that the ORSA process is effective, the DFHC (Licensed Insurer) should subject the ORSA process to independent review by a suitably experienced individual who reports directly to, or is a member of the Board.

48. Regular undertaking of ORSA by a DFHC (Licensed Insurer) should provide relevant and timely information for its management and decision making processes. The DFHC (Licensed Insurer) should regularly reassess the causes of risk and the extent to which particular risks are material to the FHC group. Material changes in the risk profile of the FHC group should prompt the DFHC (Licensed Insurer) to undertake a new ORSA. Risk assessment should be done in conjunction with consideration of the effectiveness of applicable controls to mitigate the risks to the FHC group.

49. A DFHC (Licensed Insurer) should consider scenarios in which its FHC group splits or changes its structure in other ways. When a DFHC (Licensed Insurer) assesses the FHC group's current capital adequacy requirements and continuity analysis, the DFHC (Licensed Insurer) should also include in its ORSA relevant possible changes in the FHC group structure in adverse circumstances and the implications this could have for group risks, the existence of the FHC group and the support or demands from the FHC group to or on its members.

Economic and Regulatory Capital

50. Although the amounts of economic capital and regulatory capital requirements and the methods used to determine them may differ, a DFHC (Licensed Insurer) should be aware of, and be able to analyse and explain, these differences. Such analysis helps to embed regulatory requirements into a DFHC (Licensed Insurer)'s ORSA and risk and capital management, so as to ensure that obligations to policy owners continue to be met as they fall due.

51. If an FHC group suffers losses that are absorbed by their financial resources, the DFHC (Licensed Insurer) may need to raise new capital to meet ongoing regulatory capital requirements and to maintain its business strategies. A DFHC (Licensed Insurer) cannot assume that capital will be readily available at the time it is needed. Therefore, a DFHC (Licensed Insurer) should, when assessing its quality of capital, also consider the issue of re-capitalisation in its ORSA, especially the ability of capital to absorb losses on a going-concern basis and the extent to which the capital instruments or structures that the DFHC (Licensed Insurer) uses may facilitate or hinder future re-capitalisation. For example, if a DFHC (Licensed Insurer) enters into a funding arrangement where future profits are cashed immediately, the reduced future earnings potential of the FHC group may make it more difficult to raise capital resources in the future.

52. A DFHC (Licensed Insurer) may use internal models to better assess the financial resources and calculation of regulatory capital requirements due to the range of risks and the FHC group's scale and complexity.

53. Due to the nature, scale and complexity of an FHC group's business and risks, a DFHC (Licensed Insurer) may decide not to perform economic capital calculations in its ORSA. Where economic capital calculations are not performed, the DFHC (Licensed Insurer) should document clearly the reasons for not doing so in its ORSA report.

Continuity Analysis and Stress Testing

54. When conducting the continuity analysis, a DFHC (Licensed Insurer) should take into consideration new business plans and product design and pricing, including embedded guarantees and options, and the appropriate assumptions, given the way in which products are sold. The FHC group'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, a DFHC (Licensed Insurer) should also consider changes in external factors such as possible future events including changes in the political or economic situation.

55. In performing its stress testing, a DFHC (Licensed Insurer) should construct the base scenario in a manner that is consistent with the FHC group's business plan. The base scenario should take into account the FHC group's management and business philosophy and strategies such as marketing plans, sales objectives, investment

policies, pricing philosophy, underwriting philosophy, reinsurance practices and its policy on allocation to participating policy owners and shareholders.

56. A DFHC (Licensed Insurer) should also construct stress scenarios which clearly illustrate the extent to which one, or several, of the FHC group's relevant and material risks, if realised, can affect the FHC group's financial and capital positions.

57. For the construction of projections under a DFHC (Licensed Insurer)'s continuity analysis and stress test scenarios, the DFHC (Licensed Insurer) should ensure that the projections are comprehensive in scope and cover all key products and lines of business and all assets of the FHC group that are material to the solvency of the FHC group. Where relevant, the DFHC (Licensed Insurer) should apply stress scenarios to entities that are material to the FHC group to determine their ability to continue in business, and the corresponding impact on the FHC group, under stress.

58. A DFHC (Licensed Insurer) should conduct adequate checks on the appropriateness of any data or projections that form the bases for the ORSA report. If a DFHC (Licensed Insurer) relies on any other person for any aspect of the data or projections, the DFHC (Licensed Insurer) should be satisfied that the person relied on is qualified for such purposes. The DFHC (Licensed Insurer) should disclose in the ORSA report the nature and extent of the reliance on such person and his particulars.

59. In constructing the stress test scenarios, a DFHC (Licensed Insurer) should analyse the FHC group's key risk exposure in the face of catastrophic events such as natural calamities, a severe economic recession or a major crash in the equity, property or bond market. The DFHC (Licensed Insurer) should also take into consideration the prevailing environment, including the economic, medical, demographic, social and political situation at the relevant time.

60. As part of its continuity analysis, a DFHC (Licensed Insurer) should analyse the FHC group's ability to withstand continuous adverse developments over the period of projection. Such adverse developments should include persistent inflation, recession, falling stock markets and claims experience. In deriving the assumptions relating to the scenarios, the DFHC (Licensed Insurer) should consider the differing nature of various assumptions as compared to others –

    (a) some assumptions, such as mortality or renewal expenses in real terms, may reasonably be relied on as fairly stable or having a stable trend. However, attention should be paid to both the risk of sudden change (e.g. a new infectious disease) and the possibility of a change in the trend;

    (b) other assumptions, for example policy persistency, may need to be considered in the context of both historical experience and changes anticipated in the light of different operating methods now used by the FHC group; and

    (c) yet other assumptions may be highly uncertain and totally outside the control of the DFHC (Licensed Insurer). This is particularly true of investment conditions, the volatility of which may have significant implications for the financial condition of the FHC group.

61. A DFHC (Licensed Insurer) should specify the reasons for the choice and construction of the scenarios presented in the ORSA report. The DFHC (Licensed Insurer) should also include a brief description of the scenario in the ORSA report, for example, "financial crisis with adverse claims experience" and "decrease in new business and large terminations due to drop in confidence in the FHC group".

62. In conducting reverse stress testing, a DFHC (Licensed Insurer) should determine the combination of risk factors that would most likely lead to business failure.

63. A DFHC (Licensed Insurer) may use reverse stress testing, which identifies scenarios that are most likely to cause the FHC group to fail, to enhance risk management. While some risk of failure is always present, such an approach may help to ensure adequate focus on the management actions that are appropriate to avoid undue risk of business failure. The focus of such reverse stress testing is on appropriate risk management actions rather than the assessment of financial adequacy and so may be largely qualitative in nature, although broad assessment of any financial impacts arising from the risk of business failure may help in deciding the appropriate action to take.

64. During the analysis and construction of each scenario, a DFHC (Licensed Insurer) should take into account links between the various key assumptions made.

65. A DFHC (Licensed Insurer) should show in its ORSA report the impact on the FHC group's financial condition if no management action is taken. In the ORSA report, the DFHC (Licensed Insurer) should also demonstrate how, with appropriate and timely management action, the FHC group can maintain or regain a satisfactory financial condition under each scenario as a going concern. The DFHC (Licensed Insurer) should ensure that the target financial and capital adequacy positions are consistent with its risk tolerance limits.

66. A DFHC (Licensed Insurer) may propose in the ORSA several alternative courses of management action the FHC group could take to mitigate financial loss in any given scenario. The DFHC (Licensed Insurer) should clearly describe in the ORSA report the rationale for each course of action, and the potential implications. The DFHC (Licensed Insurer) should illustrate the financial impact of each management action taken in the ORSA report.

67. A DFHC (Licensed Insurer) should ensure that the capital and cash flow projections (before and after stress scenarios) and the management actions included in their forecasts, are approved by senior management.

68. A DFHC (Licensed Insurer) should also identify the key areas of concern noted from the stress test results and recommend risk management measures and the timeframe for implementing these measures. The DFHC (Licensed Insurer) should conduct an assessment on the adequacy of the mitigating measures, and where applicable, conduct further analysis to quantify the likely impact of such measures and set out the results of the analysis in the ORSA report.

69. The measures referred to in paragraph 68 may include, but are not limited to, changing the asset mix, hedging investment risks wherever appropriate, changing the mix of new business, withdrawing from certain lines of business or revising reinsurance arrangements.

Effective Date

70. This Notice takes effect on 1 July 2022.

Appendix A

Illustrative ORSA report template for an FHC group

Section		Summary Description
A	Executive Summary	• Purpose of the report • Planning horizon captured in the report • Brief description of each entity within the FHC group considered in the report. The description of such an entity should include – (i) its nature of business; (ii) the country where it is registered; (iii) the country where it operates in; and (iv) whether it is a regulated entity • Description of entities that are excluded from the report and the reason for their exclusion • Summary of the results of ORSA • Includes the key risks that threaten the financial strength of the FHC group and the key mitigating actions identified • Includes impact of contagion risk within the FHC group
B	ORSA Process	• Summary of the ORSA process • Includes summary of the key risk management policies and comments on the effectiveness of these policies in managing the FHC group's risk profile • Includes summary of key changes to the ORSA process and underlying assumptions • Includes details of principal assumptions and interdependencies between the various key assumptions and amongst members of the FHC group
C	Strategy and Risk Tolerance	• Summary of current business strategy and risk tolerance • Impact of the business strategy on the risk profile • Demonstrates link between strategy, risk and capital
D	Risk Exposures	• Risk tolerance statements and assessment of the current risk profile against defined tolerance • Assessment of risks which may not be quantified within the economic capital and regulatory capital review such as group, reputational and emerging risks • Assessment of contagion risk and entities within the FHC group that may be affected • Assessment of the effectiveness of controls in place to mitigate against key risks • Summary of breaches on defined risk tolerance since last reporting and any impact to risk strategy and capital
E	Business Projection and Stress Testing	• Brief description of stress scenario • Includes the rationale for the choice and construction of the scenarios and the description of the assumptions

Section		Summary Description
		• Potential risk, capital and solvency profile under various stressed conditions • Qualifications of results (if any)
F	Capital Requirement	• Summary of methodology to determine required capital (regulatory and economic) • Assessment of regulatory and economic capital requirements based on the actual and potential risks faced • Analysis of key drivers of the change in the financial, economic and capital adequacy positions
G	Solvency Assessment	• Assessment of available financial resources of the FHC group to meet the capital requirements of the FHC group, both now and based on future projections • Summary of capital management plans • Assessment of capital planning and adequacy • Includes the capital contingency plans where future financial resources of the FHC group may be insufficient to meet capital requirements of the FHC group, and the timeframe for implementing these measures • Include assessment of contingent capital or access to additional financial resources post-event • Assessment of the effectiveness of financial resources which are fungible or likely to be fungible
H	Assurances	• Comparison of actual experience (including the Capital Adequacy Requirement) vis-à-vis projection from the prior year • Comment on the suitability of current projection assumptions in light of past actual experience • Comment on the management actions taken in the previous period in response to the recommendations stated in the previous ORSA Report • Summary outcome of independent review of ORSA (if any) • Limitations and reliance
I	Appendices and References	• Includes detailed projection of the stress testing • Types of risks assessed and their definitions • Organisation chart showing relationships between entities within the FHC group