Notice No.: MAS Notice FHC-N126 (Amendment) 2024

Issue Date: 29 April 2024

NOTICE TO DESIGNATED FINANCIAL HOLDING COMPANIES
FINANCIAL HOLDING COMPANIES ACT 2013

ENTERPRISE RISK MANAGEMENT ("ERM")

Introduction

1 For presentational purposes, the amendments in this document are compared against the version of the MAS Notice FHC-N126 on Enterprise Risk Management ("ERM") dated 29 June 2022.

2 This document shall be interpreted as follows:

(a) Text which is coloured and struck through represents deletion which will not appear in the untracked version of MAS Notice FHC-N126 revised on 29 April 2024, which is published on MAS' website www.mas.gov.sg ("Published Version"); and

(b) Text which is coloured and underlined represents insertion which will appear in the Published Version.

3 The amendments reflected in this document shall take effect on 29 April 2024.

4 This document is to be used for reference only. In the event of discrepancies between the amendments in this document and the Published Version, the Published Version shall prevail.

MAS Notice No.: FHC-N126

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Last revised on 29 April 2024

NOTICE TO DESIGNATED FINANCIAL HOLDING COMPANIES
FINANCIAL HOLDING COMPANIES ACT 2013

ENTERPRISE RISK MANAGEMENT ("ERM")

A. 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~~guidelines ~~(Part II)~~.

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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)").

~~2.~~3. While any deviation from the guidelines set out in this Notice does not of itself amount to an offence under the Act, the Authority may take into account such deviation as one of the factors in considering whether the DFHC (Licensed Insurer) should be subject to additional supervisory requirements as a result of the increased risk in the operations of the DFHC (Licensed Insurer) or the FHC group.

[MAS Notice FHC-N126 (Amendment) 2024]

Guidelines:

Background

A.1 *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 and liquidity planning matters.*

[MAS Notice FHC-N126 (Amendment) 2024]

A.2 *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.*

A.3 Through ERM, a DFHC (Licensed Insurer) can form a prospective view of its FHC group's risk profile and capital and liquidity 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. [MAS Notice FHC-N126 (Amendment) 2024]

B. Definition

~~3.~~4. 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;

"MA portfolio" has the same meaning as "MA portfolio" under paragraph 1.4 of MAS Notice FHC-N133;

[MAS Notice FHC-N126 (Amendment) 2024]

"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 and liquidity position with a time horizon that is consistent with that used in its business planning;

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"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.~~5. 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.

Guidelines:

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

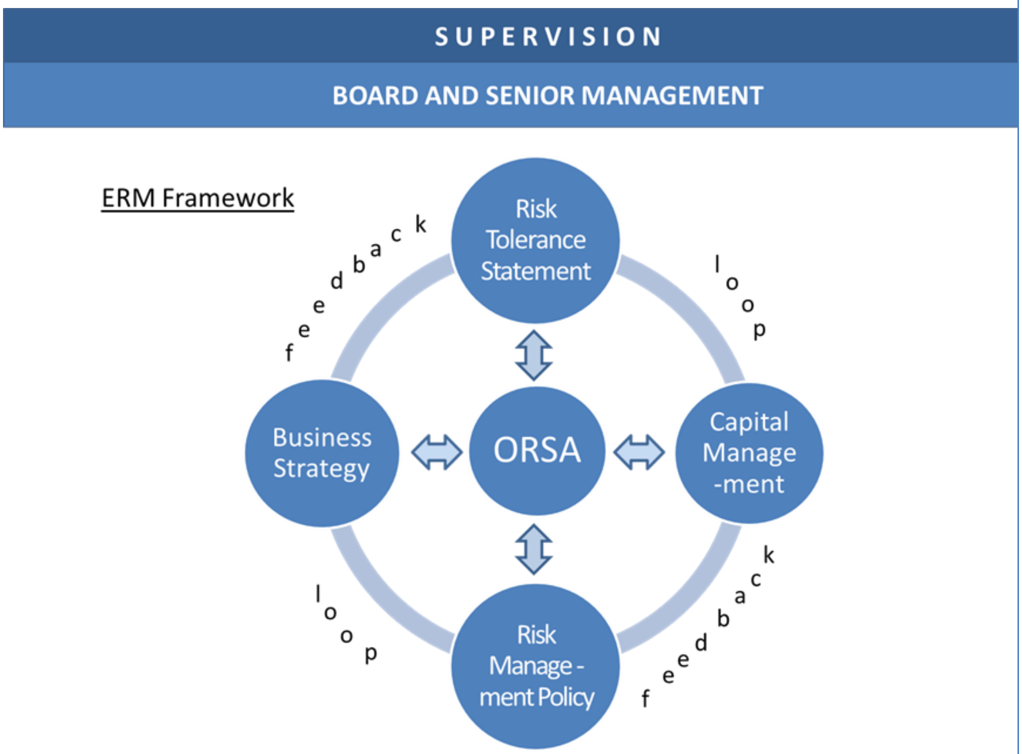

Diagram 1: Key features of ERM framework

C. Risk Identification and Measurement

~~5.~~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, capital and liquidity management of the FHC group.

[MAS Notice FHC-N126 (Amendment) 2024]

~~6.~~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, concentration risk, and any other reasonably foreseeable and relevant material risks[1] to which the FHC group is, or is likely to become, exposed.

[MAS Notice FHC-N126 (Amendment) 2024]

(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;

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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 business ~~funds~~, the assumption of full fungibility may not always be appropriate.

(d) considers the causes of different risks and their impact, and assesses the relationships between risk exposures~~, including~~ by considering the FHC group's macroeconomic exposures and 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; and

[MAS Notice FHC-N126 (Amendment) 2024]

(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.

~~7.~~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.

~~8.~~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.

~~9.~~10. After identifying the risks in accordance with the ERM framework referred to in paragraph 6, the DFHC (Licensed Insurer) must –

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

[MAS Notice FHC-N126 (Amendment) 2024]

[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.

(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.

Guidelines:

C.1 For guidelines on risk identification and measurement, refer to Appendix A.

[MAS Notice FHC-N126 (Amendment) 2024]

D. Risk Management Policy

~~10.~~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.

~~11.~~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;

[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.

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

(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.

~~12.~~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].

E. Risk Tolerance Statement

~~13.~~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.

~~14.~~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.

~~15.~~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).

~~16.~~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.

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

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

F. Risk Responsiveness and Feedback Loop

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

(a) 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~~and includes mechanisms to incorporate new risks and new information where necessary, or at least once every quarter;

(b) ~~ensures that there is in place~~contains 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

(c) ~~ensures that~~enables 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.

[MAS Notice FHC-N126 (Amendment) 2024]

Guidelines:

F.1 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.

F.2 A DFHC (Licensed Insurer) should ensure that the feedback loop as described in paragraph 18(b) 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.

G. Own Risk and Solvency Assessment

~~17.~~19. A DFHC (Licensed Insurer) must –

(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.

~~18.~~20. A DFHC (Licensed Insurer) must ensure that its Board approves the ORSA and oversees its effective implementation by senior management.

~~19.~~21. For the purposes of paragraph 19(a), the DFHC (Licensed Insurer) must –

(a) consider insurance risk, market risk, credit risk, operational risk, liquidity risk, concentration 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;

[MAS Notice FHC-N126 (Amendment) 2024]

(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; and

[MAS Notice FHC-N126 (Amendment) 2024]

(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.

Guidelines:

[10] For example, policy owners.

G.1 A DFHC (Licensed Insurer) may make reference to the sample format and suggested content for the ORSA report outlined in Appendix B when drafting its ORSA report.

G.2 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.

G.3 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.

G.4 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, liquidity needs 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.

[MAS Notice FHC-N126 (Amendment) 2024]

Economic and regulatory capital

~~20.~~22. 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 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 requirements on a consolidated basis.

Guidelines:

G.5 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.

G.6 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.

G.7 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.

G.8 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.

G.9 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.

[MAS Notice FHC-N126 (Amendment) 2024]

Liquidity Risk Management

23. A DFHC (Licensed Insurer) must establish liquidity risk management processes as part of its ORSA which include:

(a) the maintenance of a portfolio of unencumbered liquid assets by the FHC group under normal and stressed conditions; and

(b) a contingency funding plan to meet the FHC group's liquidity needs.

For the purpose of sub-paragraph (a), an unencumbered liquid asset refers to an asset which any entity within the FHC group is able to liquidate, free of any restrictions, and which has not been pledged or collateralised for the purposes of another transaction.

[MAS Notice FHC-N126 (Amendment) 2024]

Guidelines:

G.10 In maintaining a portfolio of unencumbered liquid assets, a DFHC (Licensed Insurer) should ensure that every asset in this portfolio satisfies the following conditions:

(a) the asset is capable of being easily converted into cash in a short period of time;
(b) the DFHC (Licensed Insurer) has assessed the asset to be of low credit risk;
(c) the DFHC (Licensed Insurer) is able to easily obtain transparent and accurate valuations of the asset;
(d) the asset shows low correlation with other risky assets;
(e) the asset is tradable in consistently active markets; and
(f) the asset is a reliable source of liquidity during stress.

Where appropriate, the DFHC (Licensed Insurer) should assess the FHC group's liquidity needs by individual currency.

[MAS Notice FHC-N126 (Amendment) 2024]

G.11 A DFHC (Licensed Insurer) should establish a liquidity bucketing framework to assess the FHC group's ability to meet liquidity needs under different stress horizons. A DFHC (Licensed Insurer) -may consider two classifications under this liquidity bucketing framework – the primary bucket and the secondary bucket.

[MAS Notice FHC-N126 (Amendment) 2024]

G.12 The primary bucket should consist of liquid assets which are of the highest credit quality and market liquidity, and can be liquidated in a short period of time even under stress. Examples of assets that may be included in the primary bucket are:

(a) Cash;
(b) Demand deposits;
(c) Securities issued or guaranteed by:
- *a sovereign (Credit Quality Class B or better) or a central bank (Credit Quality Class B or better);*
- *a statutory board in Singapore;*
- *recognised multilateral agencies; and*

(d) Government money market funds that:
- *invest a substantial amount of their total assets in liquid assets (including cash); and*
- *whose objective is to provide liquidity on demand.*

[MAS Notice FHC-N126 (Amendment) 2024]

G.13 The secondary bucket should consist of liquid assets which are of high credit quality, but which may take a longer period of time to liquidate, and have relatively less liquid markets as compared to the assets in the primary bucket. Example of assets that may be included in the secondary bucket are:

(a) Securities issued or guaranteed by:
- *a sovereign (Credit Quality Class C or Class D) or a central bank (Credit Quality Class C or Class D);*
- *a public sector entity (other than a statutory board in Singapore) (Credit Quality Class D or better); and*
- *a recognised multilateral development bank (Credit Quality Class D or better).*

(b) Covered bonds (Credit Quality Class D or better);
(c) Corporate debt securities[11] including commercial paper (Credit Quality Class D or better, except commercial paper which should be rated Credit Quality Class C1 or better);
(d) Equities that are a constituent of a major index; and
(e) Any other assets which demonstrate the characteristics of liquid assets described in Guideline G.10. A DFHC (Licensed Insurer) should document its assessment of how these characteristics are met if such assets are included in the secondary bucket.

[MAS Notice FHC-N126 (Amendment) 2024]

[11] Excluding complex structured products or subordinated debt securities.

[MAS Notice FHC-N126 (Amendment) 2024]

G.14 If a DFHC (Licensed Insurer) includes corporate debt and equity securities issued by financial institutions[12] in the secondary bucket, the DFHC (Licensed Insurer) should document its assessment of how such assets are able to meet the criteria listed in Guideline G.10, taking into account that such assets have the potential for wrong-way risk[13].

[MAS Notice FHC-N126 (Amendment) 2024]

G.15 A DFHC (Licensed Insurer)'s contingency funding plan for the FHC group should include key elements such as:

(a) the governance process with clear roles and responsibilities assigned to staff involved;
(b) procedures for identifying early warning indicators for potential liquidity stress events;
(c) quantitative metrics used to monitor the liquidity position;
(d) identification of diversified alternative sources of funding (e.g. liquidity facility) with details on when and how each source of funding can be activated;
(e) description of strategies for addressing liquidity shortfalls in stressed conditions; and
(f) considerations on the impact of stressed market conditions on the ability to monetise assets, including details of any operational, legal and regulatory limitations.

[MAS Notice FHC-N126 (Amendment) 2024]

G.16 The Credit Quality Class classification by credit rating referred to in Guidelines G.12 and G.13 is set out in Appendix 4K of MAS Notice 133.

[MAS Notice FHC-N126 (Amendment) 2024]

G.17 The expressions used in Guidelines G.10 to G.15, except where expressly defined in this Notice or where the context otherwise requires, have the same respective meanings as in MAS Notice 133, as applicable.

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[12] This refers to financial institutions regulated by the Authority and financial institutions regulated in other jurisdictions.

[MAS Notice FHC-N126 (Amendment) 2024]

[13] The liquidity of corporate debt and equity securities issued by financial institutions tends to be correlated with developments in the financial markets and the broader economy, and holding these instruments may cause greater stress to an FHC group's liquidity position during times of crisis.

[MAS Notice FHC-N126 (Amendment) 2024]

[MAS Notice FHC-N126 (Amendment) 2024]

Continuity Analysis and Stress Testing

~~21.~~24. 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, includ~~inge~~ projection of its future financial position on a consolidated basis and its ability to meet future regulatory capital requirements, ~~and~~ economic capital requirements and liquidity needs on a consolidated basis.

[MAS Notice FHC-N126 (Amendment) 2024]

~~22.~~25. 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 that –

(i) take into account the most recent, relevant and material risks of the FHC group;

(ii) assess the resilience of the FHC group's balance sheet against macroeconomic stressors; and

(iii) assess the effect of stress events on material counterparty exposures of the FHC group.

[MAS Notice FHC-N126 (Amendment) 2024]

26. 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.

Guidelines:

G.18 In determining whether or not there is "business failure" for the purpose of paragraph 26, a DFHC (Licensed Insurer) should consider:

(a) situations where the FHC group's business would be deemed unviable, such as the loss of market confidence or where any entity in the FHC group is being wound up for any other reason; or

(b) the situation where it fails to meet its supervisory intervention level[14] and one of the regulated -entities within the FHC group fails to meet the lower solvency intervention level[15].

[MAS Notice FHC-N126 (Amendment) 2024]

27. A DFHC (Licensed Insurer) must, as part of the continuity analysis of the FHC group, include a liquidity risk management analysis to assess the FHC group's overall liquidity adequacy under both normal and stressed conditions.

[MAS Notice FHC-N126 (Amendment) 2024]

Guidelines:

G.19 For the purposes of paragraph 27, a DFHC (Licensed Insurer) should include the following key elements in its liquidity risk management analysis:

(a) summary of methodology to determine the FHC group's portfolio of unencumbered liquid assets;
(b) the DFHC (Licensed Insurer)'s liquidity risk appetite statement and liquidity risk limits for the FHC group;
(c) an assessment of the FHC group's current liquidity position in relation to the FHC group's risk appetite and limits;
(d) details of strategies, policies and processes to manage the FHC group's liquidity risk;
(e) considerations of potential vulnerabilities and approaches to enhance the FHC group's liquidity position;
(f) the results of liquidity stress tests; and

[14] Please refer to section 2.2 of MAS Notice FHC-N133 on Valuation and Capital Framework for Designated Financial Holding Companies (Licensed Insurers).

[15] The lower solvency intervention level refers to the prudential solvency trigger level at which the regulator of a regulated entity within the FHC group may impose the strongest supervisory actions on the entity. For example, in the context of an insurer within the FHC group licensed in Singapore, the lower solvency intervention level refers to the fund solvency requirement and capital adequacy requirement specified in regulation 4(2)(b) and 4(3)(b) of the Insurance (Valuation and Capital) Regulations 2004 respectively, and any relevant capital add-on requirement imposed under Section 17(4) of the Insurance Act 1966.

[MAS Notice FHC-N126 (Amendment) 2024]

(g) analysis of key drivers of the change in the FHC group's liquidity position compared to the prior analysis.

[MAS Notice FHC-N126 (Amendment) 2024]

G.20 For other guidelines on continuity analysis and stress testing, refer to Appendix C.

[MAS Notice FHC-N126 (Amendment) 2024]

~~23.~~28. 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 ensure its contingency ~~identify in the~~ plans~~,~~ identify 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 set out the criteria which the DFHC (Licensed Insurer) will use ~~assess whether any action should be taken by the DFHC (Licensed Insurer)~~ to determine whether actions should be taken by the DFHC (Licensed Insurer) in advance as ~~a~~ precautionary measures. ~~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.~~

[MAS Notice FHC-N126 (Amendment) 2024]

~~24.~~29. 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

~~25.~~30. 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

31. 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 30~~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.

[MAS Notice FHC-N126 (Amendment) 2024]

H. Effective Date

32. This Notice shall take effect on 29 June 2022.

*Notes on History of Amendments

1. MAS Notice FHC-N126 (Amendment) 2024 with effect from 29 April 2024.

Appendix A

GUIDELINES ON RISK IDENTIFICATION AND MEASUREMENT

Risk identification

1. Concentration risks can arise from the FHC group having a small number of reinsurers or material counterparties, lack of diversification of products or business lines, large exposures to specific geographical regions or industry sectors, amongst others.

[MAS Notice FHC-N126 (Amendment) 2024]

Causes of risk and the relationships between risks

2. 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. The DFHC (Licensed Insurer) should also assess the interdependencies between guarantees and options embedded in the products sold by entities in the FHC group, the assets backing those products, and the current market and economic considerations which the FHC group is operating in.

[MAS Notice FHC-N126 (Amendment) 2024]

Measuring, analysing and modelling the level of risk

~~1.~~3. 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[16], 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.

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

~~2.~~4. 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.

~~3.~~5. 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.

~~4.~~6. 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 judgment~~s~~ in assessing the size of the risks and enhancing overall risk management of the FHC group.

~~5.~~7. 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.

~~6.~~8. 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.

~~7.~~9. 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.

~~8.~~10. 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.

Updates to the Board and senior management

~~9.~~11. 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.

Appendix B

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	Liquidity Risk Management Analysis	• Summary of methodology to determine portfolio of unencumbered liquid assets for the FHC group • FHC group's liquidity risk appetite statement and liquidity risk limits • Assessment of FHC group's current liquidity position in relation to risk appetite and limits • Details of strategies, policies and processes to manage liquidity risk • Considerations of potential vulnerabilities and approaches to enhance the FHC group's liquidity position • Results of liquidity stress tests • Analysis of key drivers of the change in the FHC group's liquidity position compared to the prior analysis [MAS Notice FHC-N126 (Amendment) 2024]
I~~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

Section		Summary Description
		• 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
J~~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

Appendix C

GUIDELINES ON CONTINUITY ANALYSIS AND STRESS TESTING

General Guidance

1. 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.

~~1.~~2. 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.

~~2.~~3. 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, MA portfolios, 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.

[MAS Notice FHC-N126 (Amendment) 2024]

~~3.~~4. 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.

~~4.~~5. 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.

6. During the analysis and construction of each scenario, a DFHC (Licensed Insurer) should take into account links between the various key assumptions made. The DFHC (Licensed Insurer) should ensure that the stress scenarios and model parameterisations are not limited to historical events, distributions and correlations, but incorporate forward-looking perspectives.

[MAS Notice FHC-N126 (Amendment) 2024]

~~5.~~7. A DFHC (Licensed Insurer) should show in its ORSA report the impact on the FHC group's financial condition and liquidity position 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 and liquidity position under each scenario as a going concern. The DFHC (Licensed Insurer) should ensure that the target financial, liquidity and capital adequacy positions are consistent with its risk tolerance limits.

[MAS Notice FHC-N126 (Amendment) 2024]

~~6.~~8. A DFHC (Licensed Insurer) may propose in the ORSA several alternative courses of management action the FHC group could take to mitigate financial loss or liquidity concern 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 and liquidity impact of each management action taken in the ORSA report.

[MAS Notice FHC-N126 (Amendment) 2024]

~~7.~~9. 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.

~~8.~~10. 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.

11. The measures referred to in paragraph 10 may include, but are not limited to, changing the asset mix, hedging investment risks wherever appropriate, changing the mix of new business, increasing the use of MA (as described in paragraph 3.4 of MAS Notice FHC-N133), withdrawing from certain lines of business or revising reinsurance arrangements.

[MAS Notice FHC-N126 (Amendment) 2024]

Design of Stress Scenarios

~~9.~~12. 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”.

~~10.~~13. 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.

~~11.~~14. 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 and liquidity positions.

[MAS Notice FHC-N126 (Amendment) 2024]

Macroeconomic stress test

15. In designing the macroeconomic stress test, a DFHC (Licensed Insurer) should:

(a) determine the FHC group’s key risk drivers by reviewing the FHC group’s risk profile, for instance, the type of assets that it has significant holdings in, the nature of products that it underwrites and the type of insurance risks that it is more susceptible to;

(b) define a projection horizon that is commensurate with the severity of the scenario so that the full impact, or at least the majority of the impact of the stressors on the FHC group's financial position can be captured in the projection horizon; and

(c) consider whether and when it is appropriate to apply the investment and non-investment stress parameters, depending on the construct of a relevant scenario.

[MAS Notice FHC-N126 (Amendment) 2024]

16. A DFHC (Licensed Insurer) should identify a range of plausible events or changes in market conditions that can affect the FHC group's financial position, by taking into account the FHC group's vulnerabilities. The DFHC (Licensed Insurer) should consider relevant stress factors such as:

(a) investment shocks such as large movements in credit spreads, decline in equity and property prices, and changes in sovereign yield curves by major currencies; and

(b) non-investment shocks such as a drop in new business premiums, an increase in termination rates and the mass lapse of policies.

[MAS Notice FHC-N126 (Amendment) 2024]

17. In the construction of the stress scenario, a DFHC (Licensed Insurer) should consider contagion effects on the assumptions made. Contagion effects refer to the consequential effects on other assumptions relating to the scenario as a result of the interdependence of the assumptions used to construct the scenario.

[MAS Notice FHC-N126 (Amendment) 2024]

Material counterparty stress test

18. In designing the material counterparty stress scenario, a DFHC (Licensed Insurer) should pay attention to the FHC group's financial sector counterparties, as these may be more likely to contribute to the build-up of systemic risk. The DFHC (Licensed Insurer) should consider relevant stress factors such as:

(a) which of the FHC group's material counterparties are more likely to default or experience a deterioration in their credit-worthiness, taking into account the economic conditions at the time of construction of the stress scenario, the industry sector they belong to and the geographic areas they are located in. For example, the DFHC (Licensed Insurer) may assume the default of the FHC group's largest reinsurer, or a fall in the total reinsurance recoverable on paid and unpaid claims relating to the FHC group's main reinsurance counterparties; and

(b) default by material counterparties in the FHC group's investment portfolio. For example, the DFHC (Licensed Insurer) may assume the default by issuers of bonds held by the FHC group. In considering which material counterparties in the FHC group's investment portfolio may default, the DFHC (Licensed Insurer) should also consider the industry sector they belong to and the geographical areas they are located in.

[MAS Notice FHC-N126 (Amendment) 2024]

Liquidity stress test

19. In designing the liquidity stress test, a DFHC (Licensed Insurer) should consider:

(a) a variety of short-term and protracted, market-wide and FHC group-specific, liquidity stress scenarios;

(b) several time horizons (such as 7 days, 30 days, 90 days or one year) that are relevant to the FHC group's business model, liquidity risk appetite and liquidity risk profile; and

(c) any restrictions on selling of assets to generate liquidity such as assets pledged as collaterals or assets in MA portfolios which should not be used to meet the liquidity needs of non-MA portfolios.

[MAS Notice FHC-N126 (Amendment) 2024]

20. A DFHC (Licensed Insurer) should identify a range of severe but plausible scenarios that could adversely affect the FHC group's cash in-flows, cash out-flows and overall liquidity position, including by taking into account the FHC group's vulnerabilities. If the DFHC (Licensed Insurer) assesses that a liquidity stress test based on the immediate horizon (e.g. 7 days or less) is not relevant, the DFHC (Licensed Insurer) should document its assessment accordingly and may choose to adopt longer term horizons for its liquidity stress testing. The DFHC (Licensed Insurer) should ensure that the chosen stressors help the management to identify material liquidity risks to the FHC group.

[MAS Notice FHC-N126 (Amendment) 2024]

21. A DFHC (Licensed Insurer) should assess whether sufficient appropriate liquid assets are available to meet the FHC group's cashflow obligations over the various time horizons used. For example:

(a) A DFHC (Licensed Insurer) should assess whether sufficient assets in the primary bucket are available to meet the FHC group's cashflow obligations within the immediate horizon (i.e. 7 days or less).

(b) The DFHC (Licensed Insurer) should assess whether there are sufficient assets in the primary bucket and assets in the secondary bucket to meet the FHC group's cashflow obligations within short term horizons (i.e. between 7 days and 90 days).

In addition to the use of assets in the primary bucket and assets in the secondary bucket, the DFHC (Licensed Insurer) may consider including a broader spectrum of appropriate assets to assess whether the FHC group has sufficient assets available to meet cashflow obligations within longer term horizons (i.e. more than 90 days and up to a year). Where such assets are used, the DFHC (Licensed Insurer) should document its rationale for the use of these assets to meet the FHC group's cashflow obligations within longer term horizons.

[MAS Notice FHC-N126 (Amendment) 2024]

22. When analysing its liquidity position, a DFHC (Licensed Insurer) should include projections which adequately reflect the FHC group's stressed cash flow position and overall liquidity position, taking into account both investment related shocks and non-investment related shock events. Examples of investment related shocks may include a reduction or cessation of dividends and rental incomes, and an increase in collateral requirements arising from margin calls to mark-to-market the collaterals. Examples of non-investment shocks may include a decrease in reinsurance recoveries or a mass lapse of policies with surrender values, and a short-term liquidity crunch due to large claims arising from severe natural catastrophe losses.

[MAS Notice FHC-N126 (Amendment) 2024]

23. A DFHC (Licensed Insurer) should account for the possibility of lower realisable values of the liquid assets held by entities within the FHC group in the event of stress when determining the FHC group's liquidity position. The DFHC (Licensed Insurer) should ensure that these haircuts include the potential costs and financial losses arising from the sale of the FHC group's liquid assets under the various stressed conditions, as these may be exacerbated when the DFHC (Licensed Insurer) is a forced seller (i.e. such assets should be subject to higher haircuts).

[MAS Notice FHC-N126 (Amendment) 2024]

24. A DFHC (Licensed Insurer) should ensure that the amounts of haircuts applied on the liquid assets held by entities within the FHC group reflect the credit quality of the assets, the severity of the stress scenario and the timing of the liquidation. For example, assets in the secondary bucket are expected to incur higher haircuts compared to assets in the primary bucket for the same stress event, and the amount of haircut applied to an asset should increase in proportion to the severity of the stress

scenario. Due to the potential for wrong-way risk[17], higher haircuts should also be applied to corporate debt and equity securities issued by the financial institutions[18] compared to such instruments issued by non-financial institutions of similar credit and market risks. The DFHC (Licensed Insurer) should also document the rationale and amount of haircut applicable to each asset type.

[MAS Notice FHC-N126 (Amendment) 2024]

25. When deciding on the appropriate management actions to be taken in response to the results of liquidity stress testing, a DFHC (Licensed Insurer) may consider additional management actions such as activation or establishment of credit facilities, deferment or reduction of dividend payments, and capital injections from its shareholders (in addition to those listed in paragraph 11 of this Appendix).

[MAS Notice FHC-N126 (Amendment) 2024]

Reverse stress test

~~12.~~26. In conducting reverse stress testing, a DFHC (Licensed Insurer) should determine the combination of risk factors that would most likely lead to business failure.

27. 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.

[17] The liquidity of corporate debt and equity securities issued by financial institutions tends to be correlated with developments in the financial markets and the broader economy, and holding these instruments may cause greater stress to the FHC group's liquidity position during times of crisis.

[MAS Notice FHC-N126 (Amendment) 2024]

[18] This refers to financial institutions regulated by the Authority and financial institutions regulated in other jurisdictions.

[MAS Notice FHC-N126 (Amendment) 2024]