



ISLAMIC FINANCIAL SERVICES BOARD

IFSB-14

**STANDARD ON RISK MANAGEMENT
FOR *TAKĀFUL* (ISLAMIC INSURANCE)
UNDERTAKINGS**

December 2013

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The IFSB is an international standard-setting organisation which was officially inaugurated on 3 November 2002 and started operations on 10 March 2003. The organisation promotes and enhances the soundness and stability of the Islamic financial services industry by issuing global prudential standards and guiding principles for the industry, broadly defined to include banking, capital markets and insurance sectors. The standards prepared by the IFSB follow a lengthy due process as outlined in its Guidelines and Procedures for the Preparation of Standards/Guidelines, which involves, among others, the issuance of exposure drafts, holding of workshops and, where necessary, public hearings. The IFSB also conducts research and coordinates initiatives on industry-related issues, as well as organises roundtables, seminars and conferences for regulators and industry stakeholders. Towards this end, the IFSB works closely with relevant international, regional and national organisations, research/educational institutions and market players.

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ACRONYMS

ALM	Asset–Liability Management
BOD	Board of Directors
CEO	Chief Executive Officer
IAIS	International Association of Insurance Supervisors
ICP	Insurance Core Principles
IFSB	Islamic Financial Services Board
IT	Information Technology
ORSA	Own Risk and Solvency Assessment
PIF	Participants' Investment Fund
PRE	Participants' Reasonable Expectation
PRF	Participants' Risk Fund
SB	<i>Sharī'ah</i> Board
SHF	Shareholders' Fund
TO	<i>Takāful</i> Operator
TU	<i>Takāful</i> Undertaking

Bismillahirrahmanirrahim.

Allahumma salli wasallim `ala Sayyidina Muhammad wa`ala `alihi wasahbihi

A. INTRODUCTION

Background

1. The Islamic Financial Services Board (IFSB), in an effort to guide the *Takāful* (Islamic Insurance) industry towards a stable and sound financial environment, published its first two standards on *Takāful* in December 2009 and December 2010. The first standard, IFSB-8: *Guiding Principles on Governance for Takāful (Islamic Insurance) Undertakings*, provides the industry with guiding principles on the appropriate governance framework for a *Takāful* undertaking (TU). The second standard, IFSB-11: *Standard on Solvency Requirements for Takāful (Islamic Insurance) Undertakings*, provides a framework for solvency supervision of a *Takāful* operation. Other related documents published by the IFSB – that is, IFSB-10: *Guiding Principles on Sharī'ah Governance Systems for Institutions Offering Islamic Financial Services* and IFSB-9: *Guiding Principles on Conduct of Business for Institutions Offering Islamic Financial Services* – also provide guidance in the areas of *Sharī'ah* governance systems and conduct of business of an Islamic financial institution.
2. In a 2006 Issues Paper¹ published by the IFSB and the International Association of Insurance Supervisors (IAIS), the major issues facing the *Takāful* industry were identified and grouped into four main themes: (a) corporate governance; (b) financial and prudential regulation; (c) transparency, reporting and market conduct; and (d) the supervisory review process. The themes highlighted areas within the *Takāful* industry which require further research and guidance from the regulatory perspective. IFSB-8 and IFSB-11 served to address the first and second of these four themes. This third Standard is a continuation of the effort to establish minimum standards in the area of financial and prudential regulation (item b, above), where risk management is essential,² though with relevance also to other areas.
3. This Standard is intended to establish minimum standards in the area of risk management, for the direction and guidance of *Takāful* Operators (TOs) as well as insurance/*Takāful* supervisors. The Standard discusses how management of risks inherent in the TU should be implemented.

General Principle

4. Following the approach taken by the IFSB's Articles of Agreement, this document sets out minimum standards to be applied to the *Takāful* industry, in parallel with perspectives set out by the IAIS, in order to bring the *Takāful* industry to the desired level of effective supervision and regulation, at par with the conventional insurance industry, subject always to the requirements of *Sharī'ah* principles. So far as features of risk management that are in common with conventional insurance are concerned, users of this Standard should have regard to the standards issued by the IAIS. Where relevant, this document makes reference to those standards. The central focus of this Standard is on the specific characteristics of a TU.
5. This Standard has been designed to articulate principles that may be applied to a variety of circumstances, and does not prescribe specific quantitative standards. This is for practical reasons; differences in the environments in which different TUs

¹ *Issues in Regulation and Supervision of Takāful (Islamic Insurance)*, published by the IFSB and the International Association of Insurance Supervisors, August 2006.

² IFSB-11 requires a TU to maintain a sound risk management framework to support the adequacy of its solvency resources, and regards assessment of risk management arrangements as an essential part of the supervisory review process relating to solvency. [Key Feature 6, page 20 of IFSB-11]

operate, as well as differences in their operational frameworks, mean that a detailed prescription that might be calibrated to suit one entity would not necessarily be suitable for others.

6. IFSB-8, IFSB-9, IFSB-10 and IFSB-11 should also be referred to in understanding and applying the contents of this Standard.

Main Objectives

7. The principles and recommendations set forth in this document are intended to achieve the following main objectives:
 - (i) to help understand the risks to which a TU is exposed;
 - (ii) to provide minimum standards for the development of a risk management framework for ease of management of the TU and supervision by its governing bodies and supervisory authorities; and
 - (iii) to help create a safe and prudent environment for the growth, sustainability and development of the *Takāful* industry.

Scope of Application

8. This Standard is applicable to all TUs operating under Family *Takāful*, General *Takāful* or Composite *Takāful* licences.³ The Standard is also intended to be suitable for application to *Retakāful* undertakings, to *Takāful* “windows” of other financial institutions, and to other types of institutions providing insurance functions or models according to Islamic principles, in each case with such modifications as may be necessary to reflect differences in their operational frameworks compared to the TUs referred to at the commencement of this paragraph.
9. This Standard focuses on the risk management principles of individual *Takāful* undertakings. In the case of groups of companies, the principles set forth in this document may also be applied, with suitable modifications, in developing and supervising a group-wide risk management framework in respect of a group’s *Takāful* operations. Similar considerations may apply where a TU has branch operations in different jurisdictions. Due regard should be given to risk management considerations that are specific to a particular branch or subsidiary operation.

Specificities of *Takāful* Undertakings Relevant to Risk Management

10. A TU aims to uphold the principles of *Sharī’ah* in providing for pooling of risk of the participants. The application of *Sharī’ah* principles is therefore fundamental to the operation of the undertaking, and the undertaking should have a *Sharī’ah* board to assist it in ensuring that these principles are upheld, as elaborated further in paragraphs 73–77 and 83.
11. TUs share some similarities with conventional insurance in that both involve pooling the risk exposures of a group of participants to specified, uncertain future events, with the objective of providing assistance to those who are exposed to the occurrence of those events. In particular, TUs resemble in this respect conventional mutual or cooperative insurance undertakings in which the policyholders are collectively the owners of the funds and therefore provide insurance to one another, bearing the insurance risk collectively albeit through the medium of a legal entity. In the case of a TU, on the other hand, the mechanism is a pooled risk fund commonly known as the

³ Other names are used in some jurisdictions for the business referred to in this paper as *Takāful*.

Participants' Risk Fund (PRF). TUs differ more fundamentally from conventional proprietary insurers where the ownership of the entity bearing the insurance risk is separate from the policyholders to which it provides insurance. In certain product features (commonly in Family *Takāful*), TUs also share some similarities with conventional insurance by providing a savings feature whereby a part of the contribution is pooled into each participant's Participants' Investment Fund (PIF).

12. TUs that are constructed as hybrid entities with an operator also differ from conventional mutuals in various respects; this may affect the incidence⁴ of the risks to the undertaking, because of the application of *Sharī'ah* principles. The differences in the status of the different stakeholders⁵ in conventional insurance and *Takāful* affect the incidence of risks among the different types of stakeholder and have consequences for the way those risks need to be managed. Means of mitigating risks to participants' interests may not necessarily be effective in mitigating the impact of the same risks on the interests of shareholders, or vice versa, and the interests may conflict.
13. The risk management framework established by the TO for the TU needs to take into account the relationships between the stakeholders based on the application of *Sharī'ah* principles. The segregation of funds in a TU between one or more PRFs, as well as the Shareholders' Fund (SHF) and any PIF, reflects the separate status of each fund's beneficiaries⁶ in the operational activities of the TU. This Standard addresses questions of risk management at the level of the separate funds, considering the risks to which each type of stakeholder is exposed and including risks between different types of stakeholders.⁷
14. While the participants in a PRF of a TU bear collectively the underwriting risks of that PRF, and those in a PIF bear the investment risks of that PIF, the TO has the fiduciary responsibility of managing different segments of the undertaking in the interests of these stakeholders. Although the TO is not contractually liable under *Sharī'ah* for losses or deficits suffered by a PIF or PRF, except any losses or deficits due to the TO's own negligence and misconduct, this fiduciary responsibility requires the TO to exercise diligence and commitment to serving the interests of the participants in those funds. For example, the TO manages the risk profile of the PRF on behalf of the participants, with the aim of keeping the fund solvent at all times. The TO has also to consider the exposure of shareholders (through their ownership interest in the SHF) to any resultant risks, insofar as the operating model involves the use of a *Qard'* or similar facility as a means of providing capital back-up or liquidity support to the PRF.

⁴ The term "incidence of risks" in this context refers to the location of risks within the TU's corporate structure – that is, the segregated fund that would suffer the impact of the risk were it to crystallise.

⁵ The term "stakeholders" refers to those with an interest in the effective operation of the TU, including (but not limited to) the participants contributing to the PRF and/or PIF and the shareholders owning the SHF. Other stakeholders include management, employees, suppliers, the community (particularly the Muslim *Ummah*), and the supervisors and governments, based on the role of TUs in national and local economic and financial systems.

⁶ The term "beneficiary" refers here to the ownership interests of shareholders and participants under *Sharī'ah* principles, each in its context. The PRF and PIF are managed for the benefit of the participants, who are the owners of those funds under *Sharī'ah* where a *Wakālah* or *Muḍārabah* model is adopted. (The nature of ownership is different under the *Waqf* model, but the participants are still stakeholders under that model.)

⁷ Additional risks to particular stakeholders may be imposed by national law, which must also be taken into consideration in setting the risk management framework.

B. RISKS

International Standards on Risk Management in Insurance

15. Existing literature issued by the IAIS provides guidance for conventional insurers and supervisory authorities on risk management. The revised *Insurance Core Principles, Standards, Guidance and Assessment Methodology* of the IAIS emphasises the roles and functions of risk management at a number of levels, including at the level of the enterprise and systemically.⁸ Where the supervisory authority of a jurisdiction in which a TU operates is a member of the IAIS, the national regulatory framework is expected to reflect the ICPs, subject always, in the case of a framework embodying *Shari'ah* principles, to compliance with those principles.
16. The ICPs set out requirements for supervisors. In the particular context of risk management, the core principles oblige supervisors to establish the following requirements:
 - (i) a requirement for an insurer to have, as part of its overall corporate governance framework, effective systems of risk management and internal controls, including effective functions for risk management, compliance, actuarial matters and internal audit; and
 - (ii) enterprise risk management requirements for solvency purposes that require insurers to address all relevant and material risks.
17. The supplementary requirements of the IAIS materials in respect of risk management requirements for insurance undertakings establish a framework for that activity, including requirements for control, risk management, compliance, actuarial and internal audit functions, operating within an enterprise risk framework that relates the insurer's risk management activities to the nature, scale and complexity of its operations, supported by policies and processes for identifying, assessing, monitoring, managing and reporting on risks. Concepts such as risk appetite and the Own Risk and Solvency Assessment (ORSA) are also dealt with. The standards set out in this paper follow a similar approach, although with modifications to reflect the context of *Takāful*.

Risks Specific to *Takāful* Undertakings

18. Most of the risks to which a TU is exposed are similar (except for their incidence) to those of a conventional insurer, and the ICPs referred to in footnote 8 above provide materials for the guidance of insurers and their supervisors relating to the management of those risks, including at a minimum underwriting risk (including provisioning risk), market risk, credit risk, operational risk and liquidity risk, as well as, potentially, legal risk, risk to the reputation of the insurer, and internal or intragroup

⁸ In this document, descriptions of IAIS requirements are based on the revised *Insurance Core Principles, Standards, Guidance and Assessment Methodology* of the IAIS as adopted in October 2011. In that compilation, two Insurance Core Principles (ICPs) focus particularly on the roles and functions of risk management, namely ICP 8: *Risk Management and Internal Controls* and ICP 16: *Enterprise Risk Management for Solvency Purposes*. A further ICP, ICP 26: *Cross-Border Cooperation and Coordination on Crisis Management*, is relevant to systemic risk. In addition, the revised ICPs refer to the importance of risk management in the context of other aspects of the activities of insurance undertakings. Among these, the following may be considered particularly relevant: ICP 4: *Licensing*; ICP 7: *Corporate Governance*; ICP 9: *Supervisory Review and Reporting*; ICP 13: *Reinsurance and Other Forms of Risk Transfer*; ICP 15: *Investment*; ICP 17: *Capital Adequacy*; ICP 19: *Conduct of Business*; ICP 20: *Public Disclosure*; ICP 21: *Countering Fraud in Insurance*; ICP 22: *Anti-Money Laundering and Combating the Financing of Terrorism*; ICP 23: *Group-Wide Supervision*; and ICP 25: *Supervisory Cooperation and Coordination*.

risks. Certain risks, on the other hand, are specific to TUs. These include *Sharī'ah* non-compliance risk, risks arising from the segregation of funds, and risks relating to the use of *Retakāful*.

Risk of Sharī'ah Non-Compliance

19. *Sharī'ah* non-compliance risk is unique to TUs as compared to their conventional counterparts. Breach of *Sharī'ah* principles may render contracts invalid under *Sharī'ah*, deprive a participant of *Takāful* protection, cause loss to the entity, damage its reputation, and expose it to regulatory action, and may have repercussions in terms of the incidence and management of other risks.
20. Differences in perception of *Sharī'ah* compliance may arise from varying interpretations of *Fiqh al-Mu'āmalāt* by *Sharī'ah* scholars. What may be deemed permissible by one scholar or in one jurisdiction may be considered otherwise by a different scholar or in another jurisdiction. Complications may arise when a parent organisation has several TU subsidiaries in various jurisdictions or a TU operates cross-border, particularly if some jurisdictions provide for rulings and enforcement by a national *Sharī'ah* board or similar body while in other jurisdictions the responsibility remains that of individual TUs' *Sharī'ah* boards.⁹
21. *Sharī'ah* non-compliance risk is relevant to the product development process of a TU. A TU seeks competitive advantage over conventional insurers as well as its *Takāful* counterparts. In seeking to meet the demand for innovative products, a TU could inadvertently introduce *Sharī'ah* non-compliance in its products.
22. *Sharī'ah* non-compliance risk is also relevant to the investment function of a *Takāful* undertaking. The limited availability of *Sharī'ah*-compliant investment instruments may make a *Takāful* undertaking susceptible to choosing an investment product whose *Sharī'ah* compliance is questionable, when seeking to achieve adequate investment yield for a PIF or PRF.

Risks Arising from Segregation of Funds

23. Another specificity of a TU which requires specific attention is the separation of funds attributable to participants (PRFs and PIFs) from each other and from those attributable to shareholders (the SHF). This structure differs from that of a conventional proprietary insurer in which shareholders' funds are invariably available to support insurance activities.¹⁰ The segregation of these funds in a *Takāful* undertaking brings with it a set of agency risks that differ from those in a conventional insurer and require separate consideration in the undertaking's risk management framework. In view of this agency relationship, fairness and transparency are essential features of *Takāful*. IFSB-8: *Guiding Principles on Governance for Takāful (Islamic Insurance) Undertakings* highlights the need for the TO to have in place an appropriate governance structure that represents the rights and interests of *Takāful* participants.
24. To the extent that the TU is unable to mitigate risks by diversification between funds attributable to different stakeholders, this loss of diversification contributes to higher economic capital requirements and, potentially, additional competitive pressures on a TU.

⁹ It is also possible that national law in some jurisdictions compels non-compliance – for example, by requiring the holding of *Riba*-bearing government debt or the inclusion of non-compliant provisions in contracts that are otherwise compliant. Such features of national law raise an associated risk of misleading participants if they are not properly disclosed.

¹⁰ Some jurisdictions for conventional insurance operate a ring-fencing requirement for insurance funds (most commonly for life insurance business); however, the segregation only operates one way and shareholders' funds must be made available to support deficiencies in the ring-fenced funds. This is different in principle from *Takāful*.

25. The risks that arise from segregation may include those associated with the provision of ancillary financial support by the SHF to the PRF to meet its solvency and/or liquidity needs, commonly by way of *Qarḍ*¹¹ as discussed in IFSB-11. The risk implications of a *Qarḍ* mechanism depend on the extent to which *Qarḍ* may be, or is required to be, made available in a jurisdiction and its treatment in solvency calculations and public reporting. The risks to the SHF include the risk that *Qarḍ* will be required, as well as the risk that it will not be repaid, resulting in capital loss to the SHF. These risks are also a feature of conventional insurance when organised on a fund basis.
26. Segregation of funds also introduces a risk of incorrect attribution of transactions to a fund, resulting in expenses being borne or income being received by the wrong fund, further resulting in unfairness between the different types of stakeholders. As a consequence, transparency is an important principle to help in protecting the interests of the different stakeholders, so that participants are aware before entering into the contract which revenues and expenses are credited or charged to the PRF or PIF, and which are the responsibility of the SHF as part of the activities for which it is remunerated under the *Takāful* contract.
27. There is also within the SHF a risk that fees or other income receivable from PRFs and PIFs are inadequate to meet the expenses to which the TO is committed under the contracts that it has written. This risk is also present in certain types of conventional insurance, where the expense risk is borne by the insurer rather than by the policyholder.

Risks Relating to the Use of Retakāful

28. Risks relating to the use of reinsurance and alternative risk transfer mechanisms are discussed in IAIS ICP 13: *Reinsurance and Other Forms of Risk Transfer* – for example, basis risk¹² and the risk of excessive concentrations of exposure to individual or connected counterparties. The IAIS material requires supervisors to establish standards for the use of reinsurance and other forms of risk transfer, such that insurers are required to control and report their programmes for these activities, taking account of matters such as documentation certainty and liquidity management.
29. In addition to these considerations applicable to conventional insurers, the specific nature of the *Takāful* industry raises further considerations. The development of the *Takāful* industry has been accompanied by differing views as to the validity under *Shari'ah* of the use of conventional reinsurance by *Takāful* and *Retakāful*¹³ undertakings. In addition, differences have emerged in the manner in which individual *Retakāful* contracts are effected and the attribution as between funds, in both the ceding and reinsuring undertaking, of revenues and expenses ancillary to the actual risk-sharing transaction (e.g. commissions). TOs need to ensure that the attribution of such revenues and expenses is transparent to participants, and also (in view of the complexity of this aspect of business) that the fairness of the attribution is considered objectively.

¹¹ IFSB-11 states at paragraph 16(i) that it does not seek to identify *Qarḍ* as the sole permissible means of providing additional capital to PRFs, and that the regulatory framework in a jurisdiction may provide for other means, to which the principles set out in that paper (and, in particular, Key Feature 4) should be applied by supervisors. IFSB-11 describes not only *Qarḍ*, but also the concept of a *Qarḍ* "facility" that, from the perspective of the PRF, could be regarded as capital (akin to the concept of ancillary own funds in the European Solvency II framework).

¹² "Basis risk" refers to the risk that differences in contractual conditions between the original *Takāful* contracts and the *Retakāful* contract entered into (e.g. additional exclusions in the *Retakāful* contract) mean that the TU still has exposures that exceed its capacity to retain.

¹³ The concept of "*darurah*", or necessity in the absence of a compliant alternative, is used by some TUs to justify the use of conventional reinsurance rather than *Retakāful*. Different authorities may hold different opinions as to whether the conditions for *Darurah* are satisfied.

30. In addition to the need for a TO to consider the credit risk exposure to *Retakāful* providers, if the principle adopted under the *Retakāful* contracts is one of risk sharing with other cedant TUs, rather than risk transfer, the TO needs to consider the quality of risk selection and pricing¹⁴ exhibited by the *Retakāful* provider, since inadequate control over these matters could expose the TU to losses arising from the operations of other TUs in the same risk pool. A TO also needs to consider, having in mind the interests of participants in its PRF, the financial status of any risk pool into which it proposes to share risks. The selection of *Retakāful* providers should therefore be subject to due diligence and appropriate governance, with monitoring of exposures to individual providers and risk pools.
31. If, however, a *Retakāful* contract does not share the ceding TU's risk with that of other TUs, the TO needs to consider whether the contract is effective in mitigating its risks.

Significant Risks of Particular Relevance to *Takāful*

32. The specificities of *Takāful* call for an understanding of which risks affect a fund. This Standard provides an overview of risks from the perspective of the separate funds, highlighting the risks that may be exclusive to that individual fund. Major risks that potentially threaten the survival of a TU and which have been identified as relevant to most TUs are described in the following section. At a minimum, TOs should observe and monitor these risks as they affect the different funds.
33. The following paragraphs refer to and adapt the requirements of IFSB-1: *Guiding Principles of Risk Management for Institutions (Other than Insurance Institutions) Offering Only Islamic Financial Services*.

34. OPERATIONAL RISK

Definition

Operational risk is the risk of loss resulting from inadequate or failed internal processes, people and systems, or from external events. For TUs, this also includes risk of loss resulting from *Sharī'ah* non-compliance and failure in a TO's fiduciary responsibilities.

- (i) Operational risk incidents may result in financial loss to the entity, inability to pursue opportunities, reputational damage, operational inefficiency, and, potentially, inability to continue in business.
- (ii) As the manager of the PRF and PIF, the TO has a fiduciary role in respect of the operations, including ensuring *Sharī'ah* compliance at all times.
- (iii) The fiduciary responsibility of the TO exposes it, among other things, to underwriting management risk, which is the possibility of loss due to mismanagement of the PRF. This risk is inherent in the activities of the TO under its contractual relationship with its participants whereby the TO manages the underwriting funds on behalf of the participants. Underwriting management risk as outlined here is a risk of the TO – that is, the SHF, not the PRF. This risk is different from the normal underwriting risk borne by a PRF as a result of properly conducted underwriting management activities.
- (iv) TOs should aim to identify all potential causes for operational failure of the TU, including failure in internal processes, possible negligent, incompetent or

¹⁴ Pricing in this context means setting the level of *Takāful* contribution.

fraudulent activities of its internal human resources, and other failures of its systems.

- (v) Human capital is a significant asset of a TO. A team of qualified, competent, reliable, responsible and capable staff helps ensure the effective operation of a TU. Accordingly, attention should be paid to recruitment and training to ensure the fitness and propriety of staff.
- (vi) Information technology (IT) systems should be constantly reviewed to assess their continuing effectiveness and resilience (e.g. to changes in the business or economic environment, and evolving technologies for delivery of business), and adequacy for providing management risk information. Business continuity plans should be regularly tested.
- (vii) A TO is dependent upon the integrity of data, including for the purposes of pricing, experience analysis and provisioning, as well as the correct attribution of transactions to participants and funds. Operational failure leading to loss of data integrity is therefore a significant risk for a TU.
- (viii) The outsourcing of any significant activity of a TU requires appropriate definition, approval, monitoring and control to ensure that outsourcing does not introduce additional risk of operational failure. If an activity is outsourced, the TO needs to ensure that the terms on which it is outsourced have due regard to the compliance and control requirements of the TU. Outsourcing providers may be unfamiliar with those requirements, particularly those relating to *Sharī'ah*.
- (ix) A TU is exposed to the risk that its internal procedures are inadequate for the prevention, detection and reporting of financial crime, including fraud against the TU. Incidents of this nature may not only cause financial loss to the TU but also damage its reputation. A TO should consider whether legal minimum requirements are adequate to control its financial and reputation risk from these sources.

***Sharī'ah* Non-Compliance**

- (x) *Sharī'ah* non-compliance risk is an operational risk which requires processes and controls to prevent non-compliance and to detect and correct any instances that do occur. This risk is pervasive in the operations of a TU. For example, the products of TUs should be *Sharī'ah* compliant, and the overall product cycle of a TU therefore requires consideration of *Sharī'ah* compliance, including the possibility that a contract accepted incorporates, or changes during its currency to incorporate, elements that are individually non-compliant. TOs should establish policies and processes for addressing such instances. Similarly, processes for the selection and administration of investments should embed controls to prevent or detect the inadvertent selection of assets that are not *Sharī'ah*-compliant or to identify for divestment assets that have ceased to be so.¹⁵
- (xi) Expense misattribution risk is the risk of inappropriate allocation of expenses into segregated funds. Compliance with *Sharī'ah* principles requires that these funds are not commingled. Consequently, expenses relating to the PRFs which, under the terms of the contract, are not the responsibility of the shareholders should not be borne by the SHF. Likewise, expenses not relating to the PRFs should not be attributed to the PRFs (and similarly for PIFs).

¹⁵ IFSB-6: *Guiding Principles on Governance for Islamic Collective Investment Schemes* includes relevant discussion on this area of *Sharī'ah* compliance in investment activities.

- (xii) The position is complicated because the TO receives remuneration from the PIFs and PRFs for managing them. Some expenses will relate to this activity, while others may be clearly attributable to a PRF or PIF. Practice and local law may vary as to which expenses are considered to be covered by the fee received by the TO, and which are on-charged to the PRF and PIF. For the avoidance of dispute or impropriety, it is important that the allocation of expenses as between funds complies with applicable law, is approved as appropriate by those responsible for governance (including *Sharī'ah*), and is clearly set out in the contracts and marketing materials with suitable prominence having regard to local disclosure requirements for conduct of insurance business.

35. UNDERWRITING RISK

Definition

Underwriting risk is the risk of loss due to underwriting activities relating to the Participants' Risk Fund. Sources of this risk include assumptions used in pricing or assessment that are subsequently shown to be incorrect by experience of, for example, claims.

- (i) Underwriting standards need to be set, approved and monitored to ensure that only contracts for which the PRF has risk appetite are accepted. Due to the need to meet *Sharī'ah* principles, the underwriting process of a *Takāful* business needs to ensure that the determination and treatment of contributions from the participants fulfil all applicable *Sharī'ah* requirements.
- (ii) The TO should establish and document, with the assistance of the TU's actuary, an appropriate mechanism to determine the type of assumptions to be used. The result of this exercise should be considered, prior to approval of any products, to help ensure that any new type of risk is only accepted into the PRF after consideration of the adequacy of its pricing, and that products in issue are regularly assessed from a similar perspective.

Claims Experience

- (iii) The TO needs to identify elements that contribute to changes in the expected and actual claims experience of the policies covered by a PRF, including mortality and morbidity in the case of Family *Takāful*. Some types of *Takāful* business are exposed to factors that have the capacity to develop rapidly – for example, political risks in the case of export credit *Takāful* business. Underwriting management and the undertaking's actuary need to keep themselves aware of trends in claims and claim settlement costs and of events that may affect these, so that underwriting standards, policy wordings and pricing can be modified on a timely basis.

Expense Assumptions

- (iv) Expense assumptions used in the pricing activities should closely reflect the actual expenses that will be attributed to the PRF. An over-optimistic assumption regarding the level of expenses might result in a deficit. A similar risk applies to the assumptions made by the TO in setting the level of remuneration from the PRF and PIF. Over-optimism as to the projected expenses of the SHF could result in loss to that fund. Analysis of expected expenses to be attributed to the fund(s) concerned should therefore be

conducted in appropriate detail prior to the issue of any product to the market, and revisited periodically.

Lapsation and Persistency

- (v) The ability of a PRF to maintain its solvency in the long term depends not only on the underwriting process, pricing assumptions, and actual expense and claims experience. It depends also on the TO's ability to maintain the participation of sufficient participants in the funds. If participants decline to renew or continue contracts, the viability of the PRF becomes difficult to sustain. The lapsation and persistency rates of the PRFs managed by a TO should be monitored to identify where underwriting risk is accentuated by a loss of the loyalty of participants and reduction in the risk pool. Consequently, a TO may have less appetite for volatility in underwriting performance than a conventional insurer.
- (vi) The mutual nature of a PRF means that any deficiency, or obligation to repay *Qard*, can only be repaid out of future surpluses attributable to participants, including some who may become participants when the PRF is already in deficiency. A PRF that is carrying a deficiency or that has a *Qard* to repay may be at risk of adverse selection, whereby participants deliberately choose not to renew their contracts because of concerns about the financial position of the PRF, making it more difficult for the TO to attract good participants to generate future surplus. Participants may also be deterred by perceptions of poor underwriting risk management. A TO should consider what actions are available to it to address this risk of adverse selection. Potential actions might include planning to recover the deficiency over a period of time to minimise intergenerational inequity, coupled with appropriate repricing of contributions, utilisation of any contingency reserve and reviewing the underwriting selection. *Retakāful* may also represent an opportunity for support during the period in which the deficiency is to be recovered.

Concentration

- (vii) Concentration risk for a PRF arises from positive correlations between the risks underwritten by a TO on behalf of the PRF. Such correlations may exist between categories of risks, or may result from geographical concentrations. A careful study of claims histories should indicate the existence of such correlations. A TO should be able to strike a balance between different types of risks and different geographical areas so that no one concentration threatens the organisation. TOs need to determine and monitor the exposure of PRFs to concentrations of risk and to consider strategies for reducing peaks by avoidance (e.g. declining additional business offered) or by diversification into other risks that are not correlated. Alternatively, recourse to *Retakāful* may be required in order to limit concentrations of losses that might affect a PRF.

Provisioning

- (viii) Provisioning risk relates to the risk of underestimating the amounts set aside as technical provisions¹⁶ to meet claims that have been made and are in the process of settlement, that are yet to be made in respect of covered events (whether or not they have been reported or agreed) during the current or

¹⁶ Making technical provisions is sometimes referred to as "reserving". This term can cause confusion. In accounting terms, technical provisions are liabilities of a PRF and are created to meet expected losses (claims); while reserves are part of equity, retained as capital of the PRF to avoid a PRF falling into a deficiency due to accumulation of deficits. Provisions are also made within the SHF to cover expenses to which it is committed as a result of recognition of remuneration from the PRF or PIF, and similar considerations apply to these.

previous periods, or that have not yet occurred but are expected to occur under contracts that are in force at the date in question.

- (ix) A TO should establish policies and procedures for the determination and approval of technical provisions, so as to ensure that provisions are appropriately estimated and deficits¹⁷ are correctly identified and recognised as they occur. Techniques commonly applied for assessing provision adequacy in General *Takāful* and short-term Family *Takāful* business include projection of claims by underwriting year and by loss year. TOs should ensure the integrity of data used for such projections.
- (x) The methods used by the TO in determining the technical provisions should be such as to represent the expected future outflows of resources based on prudent and reasonable assumptions, with due regard to the potential for adverse development.¹⁸ Provisioning methods and assumptions should be reassessed regularly to ensure that they remain appropriate.
- (xi) While under-provisioning may represent the most obvious threat related to provisioning, TOs should also be aware that failure to perform provisioning appropriately in the PRF may create inequity between different generations of participants.
- (xii) TOs should be aware of the risk of creating expectations in the minds of participants as to the minimum levels of return (on investment-type Family *Takāful* products) or distributions of underwriting surplus (on protection-type products). Where a TO has, by representations or actions – for example, in illustrations of policy benefits, created such participants' reasonable expectations (PRE), local regulatory or commercial considerations may oblige the TU to meet such expectations, notwithstanding that no actual guarantee has been provided. Where this is the case, a TO should take PRE into consideration in determining the capital position of its funds, both at present and prospectively. PRE should also be considered in setting the process of product design and the level of contributions, and the advice of the TO's actuary should be obtained. The creation of PRE should also be considered in the context of *Sharī'ah* compliance.

Retakāful

- (xiii) *Retakāful* is used by the TOs to help manage underwriting risk by pooling risks of participants from different TUs. The ability of a TO to underwrite risky business involving "high-impact, low-frequency" loss events may depend substantially on its ability to cede part of such business to a *Retakāful* operator. Effective use of *Retakāful* requires appropriate pricing, efficient information transfer between the TO and *Retakāful* operator, and an efficient claims payment mechanism.
- (xiv) Where a TO accepts business on a co-*Takāful* basis, the TO should ensure that it manages the underwriting and other risks of the business in a similar way to where it writes as the sole underwriter, even if it is not the leader of the co-*Takāful* arrangement.

¹⁷ Deficits are expected to occur from time to time, due to the inherent volatility of events insured against. A TO should ensure that the TU maintains capital resources in order to absorb reasonably foreseeable deficits as they occur. IFSB-11 provides guiding principles on solvency in *Takāful* operations.

¹⁸ Some regulatory authorities may provide guidance as to what method is to be used on what type of products. Prescribed methods may not be appropriate for the circumstances of a particular TU. Therefore, in considering their capital position and business plans, TUs should not rely solely on statutory methods for determining provisions, but should manage the risk of under-provisioning by applying methods that the company considers realistic in its circumstances.

- (xv) Where a TO writes *Retakāful* business, the TO should be aware that the quality and reliability of information in respect of that business may be less than for business that it writes on a direct basis and should ensure that appropriate estimates of liabilities and exposures are made having regard to the potential for greater volatility in such business.

36. MARKET RISK

Definition

Market risk is the risk of losses arising from movements in market prices – that is, fluctuations in values in tradable, marketable or leasable assets (including *Sukuk*) and a deviation of the actual rate of return from the expected rate of return.

- (i) TOs should have in place an appropriate framework for management of market risk, as returns that fall short of expectations may contribute to a deficit in a PRF, or to inadequate performance of a PIF or the SHF.
- (ii) A TO should establish policies governing the investment strategy that it intends to adopt, based on its ability to absorb fluctuations. Prior to making any investment decisions, the TO is expected to assess the market risks of each investment instrument in which the TO plans to invest. The risk exposures need to be taken into consideration in its risk quantification process to ensure that the impact of any fluctuations in the investment activities or of any economic changes in the market on the several funds of the undertaking is identified and quantified, along with any correlations with other assets and liabilities of the TU.
- (iii) Certain liabilities, particularly technical provisions, are sensitive to market factors – for example, where liabilities are subject to measurement by reference to market rates which may fluctuate, or are affected by ratings downgrades. A TO may seek to hold different assets, or assets and liabilities, that act to dampen fluctuations overall by acting as a hedge. A TO should in any case ensure that assets held to meet liabilities and to support capital resources are appropriate for those liabilities or to provide capital stability.
- (iv) Where there is segregation of funds in a TU, a TO should ensure that asset-liability management does not create inappropriate cross-subsidy between those funds.

37. CREDIT RISK

Definition

Credit risk is the risk that a counterparty fails to meet its obligations in accordance with agreed terms. Credit risk in a TU may arise from operational, financing and investment activities of the funds. A similar risk may arise from *Retakāful* activities of the funds.

- (i) Credit risk in a *Takāful* undertaking is the risk of default of assets held as investments of a PRF, PIF or SHF, and other amounts due to the TU.
- (ii) A related risk of non-payment arises in respect of amounts recoverable under *Retakāful* arrangements. Due to the principle of *Tabarru'* on which such arrangements are based, the risk that a *Retakāful* undertaking has insufficient funds to pay recoveries is qualitatively different from credit risk. However, this risk requires management in a similar manner to credit risk.

- (iii) Where cover is extended to participants in advance of the receipt of their contributions, this results in a credit risk exposure to such participants. Most Family *Takāful* is not generally written on credit terms, but General *Takāful* might be, if the terms are compliant with *Sharī'ah*. In some jurisdictions the risk cannot arise, as local law does not permit insurance cover on a credit basis, even for General business.
- (iv) It is the responsibility of the TO to ensure that, prior to agreeing to invest in any kind of investment instruments or any other kind of activities involving a credit risk, proper measures are put in place to ensure that the risks to the several funds are identified and quantified, monitored and, where appropriate, mitigated.
- (v) In the SHF, financial assistance given or committed towards the PRF via *Qarḍ* also represents a credit risk. The risk of non-recovery of a *Qarḍ* affects the adequacy of the fund's capital. *Qarḍ* is most likely to be required at the commencement or at times of growth of a business, due to new business strain, or after major losses have depleted the PRF.

38. LIQUIDITY RISK

Definition

Liquidity risk is the risk of loss to a *Takāful* undertaking arising from its inability either to meet its obligations or to fund increases in assets as they fall due without incurring unacceptable costs or losses.

- (i) Liquidity risk may arise in any of the funds of a TU. Liquidity issues may arise in a fund due to inability to dispose of assets of the fund in an orderly manner and in time to meet the claims or withdrawals of the participants in a PRF or PIF, or similarly to dispose of assets in the SHF to meet obligations of that fund. Liquidity risk is increased where the liabilities are of a volatile nature, or the TU holds a high level of illiquid assets. Inability of a TO to honour its obligations in a timely manner due to liquidity issues can lead to a loss of confidence with the potential for reputational damage, uncontrolled withdrawal of participants, litigation or disciplinary action, any of which could threaten the survival of the institution.
- (ii) In the PRF or PIF, liquidity issues may also arise due to, for example, the timing of payment of the *Wakālah* fee, or the policy of the TO relating to surplus distribution. Policies on these matters should be developed having regard to the liquidity needs of the fund.
- (iii) Potential management actions in the event of crystallisation of liquidity risk in the PRF include the possibility of drawing down a *Qarḍ* facility (or any other means of liquidity assistance) from the SHF, subject if necessary to the approval of the supervisory authority in the jurisdiction.
- (iv) Liquidity risk may also arise in the SHF, especially in an expanding business – for example, if commitments to illiquid assets such as buildings and computers run ahead of the receipt of contributions, and therefore ahead of the TO's fees for managing the underwriting activity. If the SHF cannot meet its debts as they fall due, this may endanger the continuity of management of the underwriting activity, and the fulfilment of any commitment to provide *Qarḍ* to the PRF if needed. The PRF or PIF may be in a position to provide liquidity support to the SHF under such circumstances; however, such provision would raise serious

questions as to the risk of detriment to the interests of participants. No such support should be provided from any PRF or PIF to the SHF.

- (v) Appropriate liquidity management policies should be put in place and subjected to regular assessment as to their continuing appropriateness and adequacy to meet foreseeable liquidity requirements. For example, where liquidity management policies include dependence on ability to raise money through banks or capital markets, the TO should include contingency plans for scenarios where market conditions are such that these sources are unavailable in practical terms.

39. LEGAL AND COMPLIANCE RISK

Definition

Legal and compliance risk is risk relating to the legal and regulatory implications arising from the TU's operational activities and dealings with its stakeholders, including both the possibility of adverse outcome of legal disputes or contractual difficulties and the consequences of failure to comply with requirements to which the TU is subject.

- (i) The TO, in carrying out its roles as manager of the PRF and PIF, needs to ensure that it performs its duties in an ethical manner, according to the undertaking's contractual arrangements and subject to local legal and regulatory requirements. At the same time as having fiduciary responsibilities and duties towards the participants, the TO has a responsibility towards the shareholders to seek to earn an adequate return on their capital. The governance framework of the TU should deal clearly with how these conflicting interests are to be resolved.
 - (ii) TOs should ensure that conflicting interests are reconciled in such a manner as to avoid any appearance of impropriety, because of the risk of reputational damage, supervisory intervention or litigation. These issues are addressed in more detail in IFSB-8: *Guiding Principles on Governance for Takāful (Islamic Insurance) Undertakings*.
 - (iii) Legal risk also includes the risk of non-compliance with laws and regulations, and other risks relating to legal relations with counterparties – for example, the risk of being found to be in breach of contractual obligations, or of being unable to enforce a contract, which may result in loss to the TU. Non-compliance with laws and regulations could expose the TU or the TO to disciplinary action. The TO should establish and maintain a compliance function for the TU with powers to verify and report to the governing body on compliance with laws and regulations.
 - (iv) TOs should also be alert to the risk of use of the TU for financial crime. The TO should establish procedures for the prevention, detection and reporting of suspected money-laundering, fraud or other financial crime, including breach of international sanctions. While local laws will generally set minimum requirements in this regard, a TO should consider whether those minimum requirements are adequate to control the financial and reputational risk to the TU from any incident of financial crime involving the TU.
40. The list of risks above is not exhaustive. The industry is currently going through an evolving period and more than one business model exists. The economic environment of *Takāful* is also subject to evolution, and risk management necessarily involves regular reassessment of the universe of risks, the appetite to take on those risks and the mechanisms for mitigation.

C. ENTERPRISE RISK MANAGEMENT

The General Framework

41. Like any organisation, a TU is exposed to risks that may affect its ability to achieve its objectives or even its continuing existence.
42. A TO, in its capacity as manager of the participants' funds, should accordingly establish and review regularly a framework for managing the different risks of the undertaking. This framework, which is commonly described as an "enterprise risk management framework", should be comprehensive in nature, dealing with all risks of the funds making up the TU, and should formalise through a set of policies, consistently applied, the TO's approach to determining the appetite for risk, its process for managing risks and its governance related to risk.
43. A TO should then reflect these policies in operational processes across the TU through design and implementation of controls, effective risk reporting, and systematic assessment of control compliance and adherence to policy.
44. The supervisory authority should consider whether a TU has an adequate risk management framework, with appropriate scope and embedded within an appropriate governance structure.
45. This Standard describes a basic structure for an effective risk management framework for a TU. It acknowledges the diversity of *Takāful* models worldwide. It cannot prescribe a single framework to be used. Modifications and adaptations may be made by respective TOs, subject where necessary to the approval of the local supervisory authority, to suit the circumstances of the individual TU.

Risk Policies and Strategies

46. A TO should clearly document its risk policies and strategies within a risk management framework that is appropriate to the nature and scale of its activities, including the specificities of the TU's operating model and its *Sharī'ah* obligations. Policies and strategies should be developed in a manner consistent with the risk management framework, to provide clear guidance to the personnel within the organisation as to the approach to be adopted towards business risks. These policies should be reviewed on a regular basis by the TO.
47. A TO's risk management policies and strategies should include a description of its policies towards risk retention, risk management strategies including *Retakāful*, and the use of *Sharī'ah*-compliant hedging techniques, diversification/specialisation and asset-liability management. A TO's risk management policy should also describe how its risk management activity is linked with its management of capital (both external regulatory capital requirements and internal assessment of its economic capital needs).
48. The determination of risk appetite is a key aspect of a TO's risk policies and strategies. This concerns the risks that the TO is willing to place on the funds (PRF, PIF and SHF) that it manages. Risk appetite at the level of each fund is the amount of risk that a TO is willing to assume in order to achieve the objectives of the stakeholders of that fund. A TO needs to consider separately the appetites of the TU's different stakeholders. Those stakeholders, their objectives and their appetites differ by fund. For example, the objectives of the PRF include upholding the principle of mutual assistance among the participants via the PRF, and meeting participants' expectations that claims will be met in full. The objectives of the SHF, on the other hand, include the earning of reasonable returns through fees for managing the TU's underwriting and investment activities. Hence the amount of risk that the TO is willing to take on in respect of the SHF (e.g. expense risks, fiduciary risks and risks

associated with the investments in the SHF) will have a different basis from the amount of risk that it is willing to assume on behalf of the participants in the PRF or PIF.

49. The TO should document its risk appetite clearly as part of the risk management framework. It should be a statement of direction, specifying the level of risk exposures that the organisation is willing to take on, before and after mitigants, where the resources of the TO should be focusing their attention in terms of minimising these risks, and the strategies that are in place should these risk exposures materialise. TOs should set their own quantitative limits for each significant quantifiable risk. Some risks may be identified as unacceptable at any level. The risk appetite statement should be clear, precise and easily understood by the reader of the document, and it should be communicated to all personnel within the organisation. The TO should regard the statement as a guiding principle for operation of the undertaking, not simply as a matter of regulatory compliance, and should be able to demonstrate to its supervisor that the risk management framework is responsive to the risk appetite statement.
50. An effective risk appetite statement should consider the existing risk profile, capacity and willingness to assume each risk in respect of each segregated part of the TU, as well as the organisation's attitude towards risks. The risk appetite statement should be subject to appropriate levels of review and be approved by the board. There should be a mechanism by which the risk appetite is monitored regularly to reflect changes in the risk exposures of the TU and whenever the TO becomes aware of emerging new risks or changes to existing risks.

Risk Identification

51. Risk identification is the process whereby the TO considers and records all foreseeable events whose occurrence could have an impact on the financial condition or otherwise sustainability of a TU. Once a risk has been identified, it is entered onto the risk register.
52. By its nature, risk identification is a qualitative process requiring the TO to consider what can go wrong in or with respect to its business operations, and risks may be identified from a number of sources. The coordination of risk identification is normally the responsibility of a dedicated risk function. The process is likely to involve consulting those responsible for managing the various business functions, obtaining their input as to the risks that relate to those functions based on their current and previous experience. The process should have a careful and professional approach, attempting to consider all foreseeable circumstances and their implications, indirect as well as direct. Those responsible for governance functions such as compliance (including any dedicated *Sharī'ah* compliance unit), legal, actuarial, internal audit and complaints handling may become aware of and notify emerging risks. External bodies such as trade associations, brokers and industry supervisors may also be sources of information on new risks.
53. The TO should have processes in place to ensure that it considers the possibility of new risks emerging in the environment in which it does business, even though its business may not have changed. The identification of new sources of uncertainty may result in a need for changes to the undertaking's processes and controls, and, potentially, reappraisal of the risk appetite statement.
54. The risk management framework should include a risk register. This risk register serves as a master list of the risks identified by the TO for each of the funds of the TU, quantification where relevant, and the extent to which the risks have been managed and mitigated. This risk register should also include the correlations between the risks that have been identified so that decisions on risk management are

not taken in isolation. The risk register should be reviewed periodically and updated promptly for changes of which the TO becomes aware.

55. The risk register should at a minimum contain the following information:

- (i) The date the risk is identified
- (ii) Type, description and source of risks
- (iii) Risk owner¹⁹
- (iv) Likelihood of occurrence
- (v) The severity of occurrence
 - o Quantitative impact
 - o Qualitative impact
- (vi) Mitigation steps
- (vii) Status of the risks
- (viii) Correlated risks
- (ix) Level of concentration

Risk Assessment, Response and Control

56. Following the risk identification process, each identified risk will be assessed. The TO should have a process for estimating, for each risk, the probability that it will occur, the likely consequences if it does so, when it could occur, and the possible means of avoiding, mitigating or transferring it. This process may commence at the same time as risk identification, as those who identify a risk frequently contribute to its assessment.
57. Assessment includes the process of risk categorisation, by which risks are grouped into categories that are relevant to the TU and to its constituent funds. Risks could, for example, be classified by their type (credit risk, underwriting risk, etc.), by the fund or funds in which they have incidence, and by whether they are quantifiable or not.
58. The measurement of risks, as to their probability, impact and timing, and the selection of potential mitigating actions, should be performed by persons who are appropriately skilled and according to a process that is consistent with the risk appetite of the TU and using parameters that are consistent as between risks. Advice should be obtained where relevant, including from external advisers where the necessary skills are not present within the TO. The measurement and selection should be recorded and subject to review before approval. Risks that may be introduced by proposed mitigants (e.g. *Sharī'ah* non-compliance risk, or credit risk) should also be included for assessment.
59. The TO should determine its response to each identified risk, commensurate with its risk appetite – that is, whether to accept the risk without mitigation, to avoid the risk, or to accept it but mitigate it by means of limitation, sharing, hedging or some other mechanism that is *Sharī'ah* compliant. Where the determined response is mitigation, the response should also set out the extent to which it must be mitigated (e.g. the amount of underwriting exposure to be retained for any one risk or any one event, or the maximum permitted counterparty credit exposure). TOs should consult their *Sharī'ah* board where a proposed response may involve questions of *Sharī'ah* compliance (e.g. transfer or offset of risks between segregated funds). The TO's decisions on responses to risks should be reflected in a set of risk policies,

¹⁹ It is important in principle that all identified risks are assigned to an identified owner, and that all owners are aware of the risks assigned to them. "Risk owner" in this context means the person responsible to the board of directors (BOD) for managing the function, unit or department in the organisation where the risk resides. An example of a risk owner from this perspective might be the Head of Underwriting, who "owns" the risk of all the underwriting activities. Some higher-level risks might be owned by the Chief Executive Officer (CEO).

documented and approved by the BOD. The risk policies provide the framework within which the business should be conducted and the controls should be designed. Risk policies should be recorded and implemented in a manner that facilitates their ready understanding and application in the operations of the TU. For example, a high-level policy on underwriting might be supplemented by detailed underwriting standards in the form of a manual.

Control Framework

60. A TO should establish and maintain a control framework that reflects the risk policies adopted. The purpose of an internal control framework is to provide assurance at all levels of management that business processes are being adhered to, and ultimately to enable the board to determine that the undertaking is following the approved strategy and risk appetite, agreed policies and processes, and applicable laws and regulations.
61. Controls should cover the TU's key activities. Controls should be designed and implemented having regard to the expected incidence of the risk in question so as to provide reasonable assurance that breach of the approved policy in respect of that risk will be either prevented from occurring or detected in a sufficiently timely manner to permit its remediation without material impact on the TU.
62. Controls may be manual or automated. In a properly controlled IT environment, automated controls can be an efficient method of performing controls. However, the TO should be aware of the risk of unwarranted reliance on automated controls or manual controls that are dependent on IT.

Risk Monitoring

63. A TO should monitor the status of the risks that it has identified, through adequate management information systems. Relevant and measurable performance indicators should be identified for each risk, and should be monitored regularly. Performance indicators may be qualitative or quantitative. The information prepared for risk monitoring purposes should include information on all significant breaches of policy. Those responsible for monitoring the status of risks should receive risk information independently of operational management.
64. Where breaches of policy, or other evidence of risk occurrence, are identified, a TO should examine the circumstances in order to determine whether such instances are symptomatic of weaknesses in its policies or procedures, and consider the need for revision of those policies or procedures. Management should have regard to past risk incident reports when making decisions on the current risks that the TU faces.

Risk Reporting

65. A TO should maintain a comprehensive reporting process for all the risks of the organisation. The reporting process should cover all internal and external risk reporting requirements, including how relevant and reliable risk information is captured at the appropriate level of detail for each level of user, including operational management, the risk management committee or equivalent body, the BOD, the *Sharī'ah* board, and any required public or regulatory reporting. In designing the risk reporting process, the TO should consider the information needs of each recipient.

Asset–Liability Management (ALM)

66. Asset–liability management (ALM) is an essential part of the risk management framework, whereby the TU’s stability is evaluated based on the appropriateness of the matching of its assets and liabilities.²⁰ Every TO should develop and apply ALM policies to ensure that the profile of its *Shari’ah*-compliant assets is commensurate with its liabilities and liquidity needs, such that liabilities and solvency requirements are met without undue expectation of reliance on future capital support between funds or externally. The details of ALM policies will differ between different TOs, as they should reflect the size and complexity of the undertaking. However, the policy should specify clearly the nature and extent of ALM activities and their interaction with product development, with the process for determination of contract contribution levels, and with investment management activities.
67. A number of factors may affect the ALM policies of a TO. In view of evolution both in the wider economic environment and in the *Takāful* industry, these factors may change over time. Some of these factors are as follows:

(i) *Separate Consideration of Constituent Parts of the TU*

Paragraphs 23–27 of this Standard refer to the segregation of the different funds (SHF and one or more PIFs and PRFs) that constitute a TU. This segregation has implications for the availability of different ALM strategies for a TO, since a TU may present fewer opportunities for benefits of scale, hedging and diversification of risk between the constituent parts, compared with a conventional insurer. A TO may be able to apply such strategies within a fund; however, it should consider any fiduciary obligations that it has to different groups of participants within the same fund.

(ii) *Risks Affecting ALM*

The TO should monitor the main risks that could cause mismatches between the assets and liabilities of the constituent parts of the TU. These risks include rate of return risk and liquidity risk, as well as solvency risks. Rate of return risk relates to potential divergence between the actual and expected level of return from the investment of the assets of the TU in its separate funds (PRFs, PIFs and SHF). This may affect the amount of assets needed now to match the undertaking’s liabilities during the forecast period. Liquidity risk also requires ALM, since if the assets held by the TU are not liquid enough to meet its liabilities when they fall due, loss could occur due to a need to liquidate assets in an unplanned manner. Risks to solvency arise from differential impacts of particular scenarios on the economic value of assets and liabilities, such that the adequacy of the undertaking’s capital may be threatened.

The ALM policies of the TO should address these risks by ensuring that the types of assets held by each PRF, PIF or SHF have appropriate risk, return and maturity characteristics, taking into consideration the characteristics of the relevant liabilities including the technical provisions and the correlation of risks between different assets and liabilities, as well as the undertaking’s liquidity requirements, and reviewing the situation periodically so that the matching can be revised if necessary and any adverse impacts are recognised on a timely basis.

It may be noted that perfect matching of assets and liabilities and of the cash flows arising from them is rarely possible in practice, and ALM does not seek to achieve perfect matching. The intention is rather to identify mismatches so

²⁰ IAIS ICP 16 provides guidance on the characteristics of ALM policies and procedures, at ICP 16.5.

that they may be effectively managed by the use of risk mitigation techniques or by holding additional capital.

Embedded options in contracts, such as settlement options, policy loan options, over-depositing options, surrender or renewal privileges, could result in additional costs to the TU and have implications for ALM. The TO must understand the nature of any options embedded in the *Takāful* contracts and their possible effect on ALM, in order to manage the assets and liabilities of the TU so as to mitigate the associated risks.

(iii) *Growth and Business Direction*

When determining or reviewing its ALM policies, the TO should consider actual and prospective changes in the level and nature of the TU's business. For example, a change in emphasis from protection products to offering investment-linked type of products would require realignment of investment strategies. While under investment-linked contracts the participant bears the investment risk, so matching is in principle simpler, if the TO is found to have created participant expectations as to particular returns, any liability in respect of that would also need to be modelled and the impact on the asset profile considered.

(iv) *External Factors*

While ensuring the ALM policies are consistent with the TO's business plans, the TO also needs to monitor external factors such as the regulatory requirements of the *Takāful* industry. The supervisory authority may restrict the assets that may be held, either absolutely or relatively, which may affect the amount of assets that must be held in a particular fund, or even the types of insurance cover that the TU may offer in that fund. The TO should also take into consideration any restrictions on regulatory eligibility of the TU's capital resources when determining its asset mix.

The TO also needs to consider the possible existence of other trigger events – for example, a rating downgrade from a rating agency – which could affect the liquidity needs of the TU and therefore need to be taken into consideration in the ALM policy, as well as in the broader stress-testing activity of the TU (paragraph 93).

Risk Governance²¹

68. "Governance" refers to the processes and structures adopted by an organisation to ensure that its policies are executed. Elements of the governance structure include the architecture of the internal control framework, and the roles of key persons and bodies. Traditionally in an insurance enterprise, in addition to the BOD (or equivalent governing body, depending on national law), four functions are described as control functions, being the risk management function, the actuarial function, the compliance (or legal and compliance) function, and the internal audit function. These functions may have different designations in different organisations or different jurisdictions. Some BODs establish board sub-committees to oversee particular functions. In the context of a TU, the *Sharī'ah* board also has a governance function. This Standard does not (though local regulation may) mandate particular titles or structures for functions or officers; however, a TO should ensure in each case that the functions referred to are carried out by appropriately skilled persons, with appropriate levels of authority, resources and objectivity to enable them to carry out those functions without restriction or conflict of interest.

²¹ IFSB-8 and IFSB-10 highlight some of the issues pertaining to the governance of a TU, as well as general issues facing Islamic financial institutions.

Internal Control Framework

69. A commonly used governance model for the internal control framework is that of “three lines of defence”. A basic three lines of defence model encompasses the following features:

(i) *First Line of Defence*

The first line of defence represents the controls embedded in the daily operations of an organisation. These controls are performed by those responsible for those operations. By this means, risk management is built into the culture of the operation. Those responsible for the operations are in turn responsible to the BOD for the compliance performance of the areas of which they are in charge.

(ii) *Second Line of Defence*

The second line of defence consists of a risk and compliance function, independent of the first line of defence. Its responsibility is to monitor the effectiveness of the risk management mechanism by considering whether the design of controls is adequate, whether incidents detected by the first line represent systemic issues, and whether emerging risks require amendment to the control framework.

The second line of defence also has the function of advising operational management on risk and compliance issues, and ensuring that incidents of non-compliance are appropriately handled (e.g. where non-compliance requires reporting to the BOD or *Shari’ah* board, or the supervisory authority).

(iii) *Third Line of Defence*

This third line of defence provides an assurance mechanism whereby the operation of controls is audited on an independent basis. This function is usually undertaken by an internal auditor. The effectiveness of this third line of defence depends on its independence from operational management, its authority, its resourcing, and its ability to report to those ultimately responsible for governance of the operation.

70. In this model, each line of defence has identified responsibilities and functions, and appropriate segregation of duties is of the essence of the model. Segregation of duties does not preclude communication of information and knowledge between the lines of defence, or appropriate coordination of activities, to assist each line to carry out its function within an overall effective control framework.

Role of Board of Directors (BOD)

71. The BOD has ultimate responsibility for ensuring that the risks to which the TU is exposed are identified, assessed and appropriately responded to.

72. The BOD shall, at a minimum, have the following terms of reference in respect of the risk management of the TU:

- (i) to enquire and to investigate, both internally and externally, to keep itself informed of the risks to which the organisation is subject, and of changes to those risks;

- (ii) to ensure the establishment, maintenance and continual review of a framework for the identification, assessment and response to risks, including a control framework for verifying the execution of that response;
- (iii) to approve the design of that framework, and to monitor its execution by means of appropriate risk reporting;
- (iv) to approve the organisation's appetite for all significant identified risks, and its risk policies and strategies;
- (v) to ensure that day-to-day risk management is conducted under the authority of the board to a committee and/or officer,²² having appropriate skills, authority and resources to carry out that function, and whose ability to perform that function is not impaired by conflicting duties;
- (vi) to receive and approve the work plan of that function and to receive and approve regular reports of that function;
- (vii) to provide leadership to the organisation by example,²³ demonstrating its appreciation of the importance of risk management and compliance;
- (viii) to ensure that the remuneration policy of the organisation is consistent with its risk appetite, and does not provide incentives for excessive risk-taking;
- (ix) to make available a channel for reporting of matters pertaining to risk and governance; and
- (x) to establish and execute a self-assessment mechanism for the board members to monitor individual and collective performance of these terms of reference.

Role of Shari'ah Board

73. Guiding principles for the operation of a *Shari'ah* governance system are set out in IFSB-10: *Guiding Principles on Shari'ah Governance Systems for Institutions Offering Islamic Financial Services*. This Standard acknowledges that the responsibilities of a TU's *Shari'ah* board may vary between TUs and between jurisdictions. Accordingly, the role that it is assigned in the risk management framework may also vary. The *Shari'ah* board should carry out a role in risk management that is at least commensurate with the scope of the duties that it is assigned, by the undertaking's constitution or by regulation, for supervising and opining on the undertaking's *Shari'ah* compliance.
74. A TU's *Shari'ah* board has a duty to advise the governing body and management of the TU on matters relating to *Shari'ah*. The BOD should therefore ensure that the *Shari'ah* board is consulted on all matters, including but not limited to transactions of the undertaking, where significant inherent risk of *Shari'ah* non-compliance is identified, or where uncertainty exists as to whether there is significant risk of *Shari'ah* non-compliance.
75. Where a *Shari'ah* board is required or requested to express an opinion (whether publicly or internally, and whether on a periodic basis or ad hoc) on the *Shari'ah* compliance issues of a particular or general activities of the TU, it should consider, so far as concerns the matter on which it is required or requested to opine, the following:
- (i) the nature and extent of risks of non-compliance; and

²² A board committee, sometimes known as a "risk management committee", might be established for this purpose, and/or an officer, sometimes known as a "Chief Risk Officer", appointed. The titles assigned are less important than the fitness of those assigned to perform this function in terms of skills, authority, resources and independence. The function should not be conducted by persons with conflicting operational duties. For example, it would not normally be appropriate for a CEO or Chief Actuary to take the role of Chief Risk Officer.

²³ This is sometimes referred to as providing "tone from the top". As risk management is an aspect of the ethical framework of an organisation, the board has a responsibility to lead by example. Accordingly, the board should not rely solely on reports from those to whom it delegates responsibility for risk management, but should actively seek information on risk issues. It should also, by communications to management and by its actions, seek to maintain a high profile for risk management within the organisation.

- (ii) the policies and procedures that the TU has in place to manage those risks.

The *Sharī'ah* board should evaluate the results of the TO's supervision of the application of those policies and procedures, whether or not the governance system of the undertaking assigns it the responsibility for carrying out that supervision.²⁴

- 76. The *Sharī'ah* board should make such enquiries of management as it considers necessary for the purpose of satisfying itself that it has sufficient information on risk management matters relevant to *Sharī'ah* to enable it to carry out the duties assigned to it by the undertaking's constitution or by regulation, and to respond to requests made to it.
- 77. It is the responsibility of the BOD to ensure that the *Sharī'ah* board is provided with sufficient relevant information to enable it to undertake the activities referred to in paragraph 73, and that management responds promptly to enquiries from the *Sharī'ah* board. The information provided should normally include, in at least summary form, so many of the following as are relevant to the matter under consideration:
 - (i) the risks of *Sharī'ah* non-compliance identified in the risk register maintained by the TO for the TU;
 - (ii) the undertaking's assessment of those risks as to probability and incidence;
 - (iii) the policies and procedures adopted by the undertaking to control those risks;
 - (iv) the results of those policies and procedures;
 - (v) any reports on matters relating to *Sharī'ah* compliance prepared by the undertaking or by an external party; and
 - (vi) information on any identified incidents of *Sharī'ah* non-compliance.

Role of Management

- 78. The management of the TO has the responsibility of running the business under the authority of the BOD, and carries out on a day-to-day basis the four governance functions, being risk management, actuarial, legal and compliance, and internal audit. Management personnel who are not involved in the performance of one of the four governance functions should still be required to report promptly to appropriate levels of authority any matters of which they become aware to indicate the presence of risk exposures that are not adequately dealt with in the risk management framework. Incentive structures should encourage the development of a culture of risk awareness and risk management.
- 79. The roles of the four governance functions²⁵ in the risk governance structure are summarised in the following paragraphs.

²⁴ Where the *Sharī'ah* board is assigned that responsibility, IFSB-10 provides guiding principles for the board. The *Sharī'ah* board should ensure that sufficient, appropriately qualified resources are made available to assist it in the performance of its function in this respect, and should make a report to the BOD if it considers that the resources or the information available to it are inadequate in any respect for the proper performance of its responsibilities.

²⁵ IAIS ICP 8 provides guidance on the roles of the four governance functions at ICP 8.2–8.6.

Role of Risk Management Function

80. This function should be led by a senior member of management, often identified as Chief Risk Officer, who may report either to the BOD or to a committee of the board designated as a Risk Management Committee. The terms of reference should at a minimum contain the following:
- (i) to ensure that risks of the TU that are borne by participants are identified and assessed, independently from those borne by the shareholders;
 - (ii) to prepare and propose for adoption by the BOD a risk appetite statement, following internal consultation;
 - (iii) to organise the process of identification and assessment of the risks of the TU, maintain the register of these risks, review the analyses and proposed responses for each risk, and prepare and propose for adoption by the BOD risk policies in respect of significant risks;
 - (iv) to ensure all the risk owners are aware of their functions and responsibility to monitor and control the risks within their purview;
 - (v) to develop the risk management framework of the TU based on the risk appetite and risk policies approved by the BOD;
 - (vi) to receive, review and take appropriate action on regular reports relating to risk matters;
 - (vii) to review and report periodically to the BOD (as well as the *Sharī'ah* board, for matters concerning *Sharī'ah* non-compliance issues) on the operation of the risk management framework, including observance of the approved risk appetite, performance of risk control mechanisms, identified policy breaches, or other issues related to risk;
 - (viii) to regularly review for appropriateness the assessments and control frameworks for risks that have been identified, and consider whether new risks are emerging that require identification and assessment;
 - (ix) to conduct awareness and education programmes on risk management for all levels of the TO's personnel; and
 - (x) to oversee the handling of all risk incidents.

Role of Actuarial Function

81. This function is frequently led by an officer known as the Chief Actuary or Appointed Actuary.²⁶ In some organisations, part of the actuarial function is outsourced to an external actuarial consultant. The terms of reference of this function, from the perspective of risk governance, should contain at a minimum the following:
- (i) to seek to ensure, by making use of professional skills and experience, that all risks pertaining to the activities in which the actuarial function of the TO is involved are identified and are appropriately assessed; this process includes mitigation for not only actuarial risks but also other financial risks;

²⁶ National regulation sometimes imposes additional requirements in respect of independent actuarial review, relating to specific matters such as certification of technical provisions. This Standard refers to the risk management role of the actuarial function within the TU's own governance framework, rather than to any such external requirement.

- (ii) to contribute to the development of risk policies, guidelines and controls in respect of product development, underwriting, provisioning and product distribution;
- (iii) to give advice on the prudent pricing and design of *Takāful* products (both Family and General *Takāful*) having regard to the nature of the risks underwritten, any relevant regulatory requirements and the advice of the *Sharī'ah* board; and
- (iv) to take due care to ensure that the information and procedures used for the performance of any actuarial investigation (whether for internal or external purposes) into the financial condition of the TU are relevant and reliable; that assumptions are appropriate; and that, where findings from such investigation indicate the presence of risk exposures that are not adequately dealt with in the risk management framework, these are communicated promptly to appropriate levels of authority.²⁷

It is possible that the actuarial function will in some organisations be required to carry out activities that fall within the scope of the risk function. Where this occurs, the risk function should retain responsibility for those activities, and appropriate segregation between activities relating to the first and second lines of defence should also be observed within the actuarial function.

Role of Compliance Function

82. This function is frequently headed by an officer designated as Chief Compliance Officer or similar. The function is sometimes also combined with the legal function. The compliance function has a particular focus on compliance with external requirements (principally, regulation), but as the maintenance of internal controls is invariably also a regulatory requirement, the function also extends to supervision of compliance with internal control mechanisms. This function should have at a minimum the following terms of reference relevant to risk governance:

- (i) to seek to ensure, by making use of knowledge and experience, that all regulatory risks pertaining to the activities of the TU are identified and are appropriately assessed;
- (ii) to contribute to the development of risk policies, guidelines and controls in respect of compliance with regulation of TUs;
- (iii) to maintain an up-to-date record of compliance obligations of TUs, alert other departments and the BOD to changes in those obligations, and provide advice and education to other departments on compliance matters;
- (iv) to design, for approval of the BOD and, where relevant, the *Sharī'ah* board, a work programme for its activities, to execute that programme, and to report the results to the BOD and, where relevant, the *Sharī'ah* board, together with findings and recommendations;
- (v) to promote a culture of compliance with regulatory and other obligations throughout the TU;
- (vi) to provide a channel for confidential communication of compliance concerns of any member of the TO's personnel; and

²⁷ Because risk management potentially pertains to the survival of the entity, risk reporting should not be to operational management but to the risk function or directly to the BOD.

- (vii) to take due care to ensure that any information arising in the conduct of its activities that may indicate the presence of risk exposures that are not adequately dealt with in the risk management framework is communicated promptly to appropriate levels of authority.

Roles of Internal Audit (and Sharī'ah Audit) Functions

83. The TO, in designing its internal audit function, may choose to include *Sharī'ah* audit activities within this function, or to establish an independent *Sharī'ah* audit unit, or to outsource either or both of these functions. IFSB-10: *Guiding Principles on Sharī'ah Governance Systems for Institutions Offering Islamic Financial Services*²⁸ provides guiding principles for the conduct of *Sharī'ah* supervision within an Islamic financial institution.

This function is frequently led by an officer designated as Chief Internal Auditor or similar. The function is, like the risk management function, an integral part of the risk management framework, with a specific duty to perform independent verification of the operation of controls as well as any other investigation for which independence and auditing skills are required. Consequently, the internal audit function typically reports directly to the BOD or, where there is an Audit Committee, to that committee. The internal audit function is not normally responsible for risk assessment or monitoring, as these roles conflict with the independence and objectivity required in the audit function. The internal audit function should have at a minimum the following terms of reference relevant to risk governance:

- (i) to design, for approval of the BOD, a work programme²⁹ for testing the operation of internal controls within the organisation, to execute that programme, and to report the results to the BOD, together with findings and recommendations for remediation and risk mitigation;
- (ii) to design, for approval of the *Sharī'ah* board, a work programme for testing the operation of internal controls relating to *Sharī'ah* compliance within the organisation, to execute that programme, and to report the results to the BOD and the *Sharī'ah* board, together with findings and recommendations for remediation and risk mitigation;
- (iii) to provide advice and feedback to departments audited, following audit; and
- (iv) to take due care to ensure that any information arising in the conduct of its activities that may indicate the presence of risk exposures that are not adequately dealt with in the risk management framework is communicated promptly to appropriate levels of authority.

²⁸ IFSB-10: *Guiding Principles on Sharī'ah Governance Systems for Institutions Offering Islamic Financial Services* states that a *Sharī'ah* governance system should have an effective independent oversight over, among other matters, "an internal *Sharī'ah* compliance review/audit for verifying that *Sharī'ah* compliance has been satisfied, during which any incident of non-compliance will be recorded and reported, and as far as possible, addressed and rectified". The Standard further specifies that an "annual *Sharī'ah* compliance review/audit has been appropriately carried out and its findings have been duly noted by the *Sharī'ah* Board".

²⁹ Internal audit work will normally be carried out according to a rolling work programme, with a view to covering all areas of an organisation over a given period but with concentration on those areas identified as higher risk. Local regulation may prescribe minimum levels of internal audit activity; however, the TO should ensure in any case that the frequency and extent of internal audit work is at least appropriate to the risk profile of the TU, regardless of any regulatory requirement.

Own Risk and Solvency Assessment (ORSA)³⁰

84. IFSB-11: *Standard on Solvency Requirements for Takāful (Islamic Insurance) Undertakings* highlighted the need for every TU to have its Own Risk and Solvency Assessment (ORSA) mechanism in place.³¹ In some jurisdictions, a TO will be required by regulation to have an ORSA process and to report the results periodically to the supervisor; however, a TO should assess its own risk and solvency profile whether or not it is required to do so.
85. The ORSA is a key aspect of the risk management system of a TU. It is a mechanism by which a TO continually assesses, based on its planned level of business and risk management framework, its financial strength on a forward-looking basis. The result of the ORSA is periodically reported to the BOD to assist in strategic decision-making and to assess the resilience of the TU to foreseeable events. The ORSA involves challenging the TU's current financial system and risk management framework via quantitative measurements of identified risk exposures in stressed conditions. The output of the ORSA assists the TO in the early identification of weaknesses that may be threats to business continuity, providing more time to develop and implement solutions.
86. A TO, in performing an ORSA, should take into consideration the separation of funds between the PRF/PIF and SHF. This is to provide an independent review of the risks affecting each particular fund and to ensure that, where stresses affect one fund, the impact on the stakeholders of that fund is separately identified and is not masked by countervailing impacts to stakeholders of another fund. The ORSA covers all funds because, although any losses in the PIF or PRF should not be borne by the TO, it is the responsibility of the TO acting on behalf of the participants to ensure that these funds are managed prudently. The ORSA for a TU also needs to take into consideration the potential impact transactions between funds, and in particular of *Qard* (if applicable) or any other kind of financial assistance that the SHF will provide to the PRF. In performing its forward-looking assessment, the TO needs to model how *Qard* or other support would be made available, and how repaid, and the impact on the stakeholders throughout the process, bearing in mind that while *Qard* is in issue one fund is exposed to another. Where under any scenario the projected ability of the PRF to meet its obligations is contingent on recognition of *Qard* or other support, the TO will need to assess whether and when, under that scenario, the support would be provided.
87. A TU's ORSA is recommended to be conducted on a continuous basis, under the oversight of the risk management function and with regular reporting to the BOD.
88. The parameters and assumptions used in the projection of the financial position of the TU should be established on a realistic basis, consistent with that used by the TO for planning the business of the TU over the time horizon involved. The process for determining the parameters and assumptions should be justifiable and able to be reported to the respective stakeholders, including the supervisory authority, if required.
89. The TO should determine the overall financial resources needed by the TU as part of the ORSA process. The process should enable the TO to assess the quality and adequacy of the capital resources in each fund to meet the regulatory capital requirement of that fund, as well as its economic capital needs, and also any need for *Qard* or other support from the SHF to the PRF.

³⁰ IAIS ICP 16 provides commentary at sections 16.11–16.15 on the ORSA (own risk and solvency assessment) in the context of conventional insurance.

³¹ IFSB-11: In the context of its overall enterprise risk management framework, a TO should perform its ORSA and have a risk and capital management process in place to monitor and manage the level of its financial resources relative to its economic capital and the regulatory capital requirements set by the solvency regime [paragraph 69].

90. Although ORSA is an internal initiative by a TO to self-assess the risk profile and financial condition of the TU that it manages, the outcome of the ORSA may or may not be similar to relevant requirements of the supervisory authority, if the jurisdiction in question has adopted a risk-based and forward-looking approach to solvency (whether by approved internal models or by an imposed standard model). The TO should be able to identify and distinguish between the different outcomes of the regulatory requirements of the supervisory authority and the economic capital requirements of the TU.
91. How one TO conducts its ORSA may differ from another TO. The ORSA mechanism should be structured in such a way that it reflects each TU's risk exposures, the size of its PRF, PIF and SHF, its complexity, and the risk appetite and risk policies that have been approved by its BOD. The ORSA provides an opportunity to look at the TU from different perspectives at any point in time to detect changes in the operational activities that may give rise to new risks. What is central is the appropriateness of the ORSA to the risks to which the TU is exposed. Consequently, the ORSA should be continually updated to take account of changes in the risk profile, and the performance of the ORSA may assist in identifying a need to alter risk management policies to take account of implications that had not previously been considered.
92. In order to perform the forward-looking analyses of the ORSA, a TO needs to consider the way in which changes in one aspect of the undertaking affect, either directly or by way of management action, other aspects. In this context, the TO needs to consider correlations and concentrations of risk exposures. It also needs to reflect the TO's asset–liability management policies such that a modelled change in one metric is not considered in isolation but together with changes that would arise elsewhere in the model.
93. In performing the ORSA, the risks associated with the assets should be evaluated separately from those associated with liabilities, consistent with the evaluation method as specified in the risk management framework.

Stress Testing

- (i) As part of the ORSA process, a TO should conduct stress testing for all parts of the TU. Stress testing is normally conducted to determine the resilience of the TU to specific potential threats, based on events which are unlikely, but foreseeable. Such events might include, but will not be limited to, major events giving rise to claims, operational risk incidents, and external matters such as economic stresses or ratings downgrades.
- (ii) The stress tests conducted by each individual TO should be designed to reflect the TU's circumstances and risk profile, and should cover all significant risk drivers so that the overall impact of a given stress is quantified. The outcome of the stress testing should be able to inform the BOD and, where relevant, the *Shari'ah* board of the vulnerability of the TU and its constituent funds to the risks that it faces, and assist in review of the organisation's risk policies.
- (iii) A refinement of stress testing that is performed by some organisations is that of reverse stress testing, whereby rather than stressing particular risks, the purpose is to identify the risks that would cause one or more components of the TU to fail if they crystallised, so as to provide an opportunity to calibrate the resilience of the different funds of the TU and, if necessary, to make adjustments to its risk management policies and business strategies.
- (iv) The stress testing methodologies that the TO chooses must be appropriate to the nature of the TU's activities. There are two types of methodologies – sensitivity analysis and scenario analysis, which are divided into historical and

hypothetical tests. These tests should be chosen and conducted by persons with appropriate skills and experience. Stress testing may require the involvement of a range of skills, including actuarial, legal, economic and financial. The selection of the methods and specific tests, and their conduct, should be subject to review and approval, with the overall responsibility for approval resting with the BOD.

- (v) Stress tests are conducted with reference to a time horizon, which should be selected to be appropriate to the circumstances of the TO and consistent with the time horizons of its business strategies. Time horizons of one year are commonly used for stress testing, though longer periods may also be relevant. A TO should consider the need to conduct testing with more than one time horizon to reflect cyclical influences on the business.
- (vi) Although not all jurisdictions require stress testing, TOs should perform stress testing as part of a prudent risk management mechanism.

Reporting on the ORSA

- 94. The ORSA is a process, rather than a document. However, the result of the ORSA should be summarised in a report for the BOD, and local regulation may require the submission of a formal report to the supervisor. Whether the same document will be suitable for both purposes depends upon the requirements of the supervisor. The supervisor may require less detail than is needed for the ORSA to fully inform the BOD.
- 95. In the ORSA report, senior management expresses, with its reasons, its view on the appropriateness of the level of financial and other resources held, having regard to the risk profile of the entity and its business plans. Senior management confirms that appropriate governance and risk management mechanisms exist to monitor and report changes in risks in the entity's capital needs.
- 96. The ORSA report is subject to appropriate levels of review and approval.
- 97. The form and content of an ORSA report should be suitable for the circumstances of the TU. The Appendix provides an illustrative example.

Transparency and Public Disclosure

- 98. TOs should disclose, in their regular public reporting or on request, information to enable participants, investors, creditors and other stakeholders to understand the nature of the risk management framework. In particular, TOs should disclose, for each fund and for each category of risk:
 - (i) a description of the nature of the risk;
 - (ii) information on the TU's exposure to that risk, including on concentration, mitigation measures and sensitivity; and
 - (iii) management's opinion on the effective operation of the risk management framework.
- 99. Information disclosed should be derived from systems and processes that are properly controlled and regularly assessed by the TO for effective operation. The information disclosed should be published after approval by or on behalf of the BOD.

D. KEY ELEMENTS IN THE SUPERVISORY REVIEW PROCESS OF RISK MANAGEMENT FOR TAKĀFUL UNDERTAKINGS³²

100. As part of its activity in supervising TUs, the supervisory authority will normally review the risk management framework established by the TO. Where necessary, the supervisory authority may direct the TO to strengthen its risk management framework.
101. It is not normally the responsibility of the supervisory authority to give positive approval to a TU's risk management framework. It is the responsibility of the BOD to ensure that an effective risk management system is established and operated, and to review its continuing effectiveness; however, the supervisor should consider whether there is evidence that this responsibility is not being adequately discharged.
102. A supervisory authority may pay particular attention to the following matters, among others.
- (i) *Existence and Operation of a Framework.* Every TO should have in place a risk management framework, established under the authority of the BOD, that provides clear upward and downward communication of risk issues and policies. The framework should be clearly documented and reflective of the processes that are actually carried out in the business. The TO should be able to demonstrate that the framework is used in the day-to-day management of the business, and is not merely in existence to satisfy a regulatory requirement.
 - (ii) *Qualitative Aspects of Risk Governance.* The supervisory authority should consider whether the risk management governance functions identified at paragraph 68 of this Standard are carried out by persons who are appropriately skilled for their function, possess adequate authority and adequate resources for the conduct of their function without restriction, and are sufficiently free of conflicting duties to preserve objectivity in carrying out their functions.
 - (iii) *Effectiveness of Risk Management Processes.* The existence of a framework does not guarantee its effectiveness. The supervisory authority should consider the design of the framework, and such evidence as is available to demonstrate that the risk management processes are effective in operation. Methods available to the supervisor to assist in its assessment include on-site inspection, review of supervisory reporting, and, if the supervisor considers it necessary, provision of an independent report on the effectiveness of the risk management framework.
 - (iv) *Fund Separation Issues.* The supervisory authority should consider whether the risk management framework adequately reflects the separation of funds between the PRF, PIF and the SHF. In performing its review, the supervisor should consider how the risks in each separate fund are identified, assessed and addressed based on each fund's distinct nature and function.
 - (v) *Relevance of Tests to the TO.* In considering the results of a TO's stress tests, the supervisor should consider whether the parameters used are relevant to the nature of the TO's business, and whether there are relevant stresses that have not been tested.
 - (vi) *Clarity of Sharī'ah-Compliance Responsibilities.* As Sharī'ah non-compliance is a specific risk of *Takāful*, even in jurisdictions where the supervisory authority has no responsibility for Sharī'ah supervision, the supervisor should

³² IAIS ICP 16 at section 16.16 provides guidance on the role of the supervisory authority in risk management of insurance operations.

consider whether the risk management framework appears to address the risk of *Sharī'ah* non-compliance. A supervisor might, for example, look for evidence of involvement of the *Sharī'ah* board in the assessment of these risks, and of a process for testing controls over *Sharī'ah* compliance.

- (vii) *Issues on Retakāful*. Some different views exist as to the proper use of *Retakāful* by TUs. In performing its review, the supervisory authority should consider whether the policy of the TO with respect to the use and treatment of *Retakāful* reflects the advice of the TU's *Sharī'ah* board. The supervisor may also consider whether any risks arising from the nature of the TO's policy on use and treatment of *Retakāful* have been adequately addressed in the risk management framework.
 - (viii) *Supervisory Reporting*. The supervisory authority should consider the implementation of formal requirements for TOs to report to the supervisory authority in respect of risk management. Such reporting requirements should include a periodic ORSA report, as well as reports to the supervisory authority on the happening of specified risk events. The frequency and scope of such reporting requirements may be responsive to the nature, scale and complexity of an individual TU's business. The supervisor should consider whether reports should require independent external assessment.
103. If the supervisor concludes that the risk management framework is deficient, the supervisory authority should have the power to require the TO to present to the supervisory authority a plan³³ for remediation of such deficiencies, and to report to it on the implementation of that plan. Failure to present a plan that the supervisory authority considers adequate to address the matters identified by it, or failure to implement such a plan to the satisfaction of the supervisory authority, should be a reason for disciplinary action.

³³ Such a plan is commonly referred to as a "risk mitigation and implementation programme", or similar name.

E. SYSTEMIC RISK CONSIDERATIONS IN TAKĀFUL

104. “Systemic risk” in this document refers to the transmission of shocks within the entire *Takāful* sector or the insurance industry in general, or at the macro level between the *Takāful* sector and the Islamic banking or capital market sectors, or other financial institutions, or any other kind of circumstances whose occurrence has an impact on the entire financial system. The supervisor should be alert to the risk of concentration of exposures to an entity or to a sector that is not apparent at the level of a single entity.
105. This document addresses only briefly the issue of systemic risk, describing some elements of TU operation which could be vulnerable to systemic contagion, and which should be paid attention to by the supervisory authorities.
106. Supervisory attention to systemic risk is not a substitute for the need for individual TOs to manage their own concentrations of risk as set out in this paper.
107. The use of *Retakāful* could create a systemic risk due to the nature of this activity. A *Retakāful* operator could be a dominant provider of *Retakāful* to a sector, hence pooling the risks of all participants. Supervisors should consider whether any *Retakāful* operator is systemically important for the markets that they supervise, such that the failure of that *Retakāful* operator would result in instability of TUs which cede their participants’ risks to that operator.
108. The greater the concentration of the *Retakāful* sector, the more likely it is that one operator will be systemically important. Supervisory authorities should monitor the emergence of systemically important *Retakāful* operators and consider the need for guidance to the market, or additional capital or other requirements on *Retakāful* operators that are identified as systemically significant. Cooperation between national supervisors may be necessary.
109. In a similar way, risks characteristic of other parts of the financial sector could affect the *Takāful* system due to concentration of investments or deposits, in view of the need for TUs to invest in *Sharī’ah*-compliant investment instruments. Supervisors should be alert to the risk of systemic exposure of this nature.
110. Other potential systemically important risk exposures include reliance of a sector on other forms of service – for example, telephone or IT systems, or outsource providers. Although at the entity level a TO may manage the risk by arranging a back-up provider, systemic exposure may be present if many TOs rely on the same back-up providers.
111. Circumstances may also arise where a single TU or group of connected TUs is identified as systemically important in a sector or an economy, due, for example, to lack of substitutability in the event of failure. Supervisors may have regard to the recommendations of relevant international bodies such as the Financial Stability Board in determining their response to such TUs.
112. Major events, such as natural or man-made catastrophes, may trigger systemic failure if systemic risk is present. The supervisory authority may consider modelling events on an industry-wide basis in order to determine whether supervisory intervention is needed to address systemic risk that may not be capable of mitigation by individual TUs’ risk management frameworks.

DEFINITIONS

The following definitions explain the terms used in this document. It is not an exhaustive list.

Asset–liability management	The ongoing process of formulating, implementing, monitoring and revising strategies related to assets and liabilities to achieve the financial objectives, given the risk tolerances and other constraints.
Corporate governance	<p>A defined set of relationships between a company’s management, its board of directors, shareholders and other stakeholders that provides the structure through which:</p> <ul style="list-style-type: none"> (i) the objectives of the company are set; and (ii) the means of attaining those objectives and monitoring performance are determined. <p>In the context of <i>Takāful</i> Operators, good corporate governance should encompass:</p> <ul style="list-style-type: none"> (i) a set of organisational arrangements whereby the actions of the management of <i>Takāful</i> undertakings (TUs) are aligned, as far as possible, with the interests of its stakeholders; (ii) provision of proper incentives for the organs of governance such as the board of directors, the <i>Sharī’ah</i> board and management to pursue objectives that are in the interests of the stakeholders and facilitate effective monitoring, thereby encouraging TUs to use resources more efficiently; and (iii) compliance with <i>Sharī’ah</i> rules and principles.
Credit risk	The risk that a counterparty fails to meet its obligations in accordance with agreed terms. Credit risk in a <i>Takāful</i> undertaking may arise from operational, financing and investment activities of the funds. A similar risk may arise from <i>Retakāful</i> activities of the funds.
Deficiency	Refers to the situation where the liabilities of the fund exceed its assets, so that the fund has a debit balance.
Deficit	Refers to the situation where claims and other expenses exceed contributions for a financial period.
Internal model	A risk measurement system developed by a <i>Takāful</i> Operator to analyse its overall risk position, to quantify risks, and to determine the economic capital required to meet those risks.
Legal and compliance risk	Risk relating to the legal and regulatory implications arising from the <i>Takāful</i> undertaking's (TU's) operational activities and dealings with its stakeholders, including both the possibility of an adverse outcome of legal disputes or contractual difficulties and the consequences of failure to comply with requirements to which the TU is subject.
Liabilities	<p>The financial obligations of both the Shareholders' Fund (SHF) and the Participants' Risk Funds/Participants' Investment Funds (PRFs/PIFs). Detailed descriptions are set out below:</p> <ul style="list-style-type: none"> (i) Liabilities of the SHF are all financial obligations of those funds, and do not include technical provisions which are liabilities of the PRFs/PIFs. (ii) Liabilities for PRFs/PIFs include financial obligations owed by the funds, particularly amounts payable to participants in respect of valid expected benefits. In addition, PRFs' liabilities include technical provisions in respect of potential liabilities from business already written.

Liquidity risk	The risk of loss to a <i>Takāful</i> undertaking arising from its inability either to meet its obligations or to fund increases in assets as they fall due without incurring unacceptable costs or losses.
Market risk	The risk of losses arising from movements in market prices – that is, fluctuations in values in tradable, marketable or leasable assets (including <i>Sukūk</i>) and a deviation of the actual rate of return from the expected rate of return.
<i>Muḍārabah</i>	A contract between the capital provider and a skilled operator whereby the capital provider would contribute capital to an enterprise or activity that is to be managed by the operator as the <i>Muḍārib</i> (or labour provider). Profits generated by the enterprise or activity are shared in accordance with the terms of the <i>Muḍārabah</i> agreement, while losses are to be borne solely by the capital provider unless they are due to the <i>Muḍārib</i> 's misconduct, negligence or breach of contracted terms.
Operational risk	The risk of loss resulting from inadequate or failed internal processes, people and systems, or from external events. For <i>Takāful</i> undertakings, this also includes risk of loss resulting from <i>Sharī'ah</i> non-compliance and failure in a <i>Takāful</i> Operator's fiduciary responsibilities.
Own Risk and Solvency Assessment (ORSA)	A <i>Takāful</i> undertaking's (TU's) assessment of the adequacy of its risk management and current, and likely future, solvency position. Such an assessment should: encompass all reasonably foreseeable and relevant material risks; identify the relationship between risk management and the level and quality of financial resources needed and available; determine the overall financial resources needed and available; and determine the overall financial resources the TU needs to manage its business given its own risk tolerance, business plans and supervisory requirements.
Participants' Investment Fund (PIF)	A fund to which a portion of contributions paid by <i>Takāful</i> participants is allocated for the purpose of investment and/or savings.
Participants' Risk Fund (PRF)	A fund to which a portion of contributions paid by <i>Takāful</i> participants is allocated for the purpose of meeting claims by <i>Takāful</i> participants on the basis of mutual assistance or protection.
Provisions	The amounts set aside on the balance sheet to meet liabilities arising out of <i>Takāful</i> contracts, including claims provision (whether reported or not), provision for unearned contribution, provision for unexpired risks, <i>Takāful</i> provision, and other liabilities related to <i>Takāful</i> contracts (e.g. contributions, deposits and savings accumulated over the term of <i>Takāful</i> contracts).
<i>Qarḍ</i>	A loan without remuneration intended to allow the borrower to use the funds for a period with the understanding that it would be repaid at the end of the period.
Reserves	Amounts set aside to meet unforeseeable liabilities or statutory requirements, and forming part either of shareholders' capital or accumulated surplus of Participants' Risk Funds.
Risk appetite	Risk appetite at the level of each fund is the amount of risk that a <i>Takāful</i> undertaking is willing to assume in order to achieve the objectives of the stakeholders of that fund.
Risk management	The process whereby the <i>Takāful</i> undertaking's management takes action to assess and control the impact of past and potential future events that could be detrimental to the undertaking. These events can impact both the asset and liability sides of the undertaking's balance sheet, as well as its cash flow.
Shareholders' Fund	The part of the assets and liabilities of a <i>Takāful</i> undertaking that is not attributable to participants in the form of a Participants' Risk Fund or Participants' Investment Fund.

Solvency requirements	The financial requirements that are set as part of the solvency regime and relate to the determination of amounts of solvency resources that a <i>Takāful</i> undertaking must have in addition to the assets covering its technical provisions and other liabilities.
Stakeholders	Those with a vested interest in the well-being of <i>Takāful</i> undertakings (TUs), including: <ul style="list-style-type: none"> (i) employees; (ii) <i>Takāful</i> participants; (iii) suppliers; (iv) the community (particularly the Muslim <i>Ummah</i>); and (v) supervisors and governments, based on the unique role of TUs in national and local economies and financial systems.
<i>Takāful</i>	The term <i>Takāful</i> is derived from an Arabic word which means solidarity, whereby a group of participants agree among themselves to support one another jointly for the losses arising from specified risks. In a <i>Takāful</i> arrangement, the participants contribute a sum of money as <i>Tabarru'</i> commitment into a common fund, which will be used for mutual assistance of the members against specified loss or damage.
<i>Takāful</i> Operator	Any establishment or entity that manages a <i>Takāful</i> business.
<i>Takāful</i> participant	A party that participates in the <i>Takāful</i> product with the <i>Takāful</i> undertaking and has the right to benefit under a <i>Takāful</i> contract (similar to “policyholder” in conventional insurance).
<i>Takāful</i> undertaking	A hybrid structure comprising a <i>Takāful</i> Operator and one or more underwriting funds (Participants' Risk Funds) that are attributable to the <i>Takāful</i> participants.
Technical provisions	The value set aside to cover expected obligations arising on <i>Takāful</i> contracts. For solvency purposes, technical provisions comprise two components: the current central best estimate of the costs of meeting the <i>Takāful</i> underwriting obligations, discounted to the net present value (current estimate); and a margin for risk over the current estimate.
Time horizon	The period of time over which the adequacy of solvency resources is measured. For solvency purposes, this is often set to approximate the length of time that a <i>Takāful</i> undertaking (TU) of a supervisory authority would reasonably need in order to take effective action after the revelation of an adverse event in a TU's internal or regulatory reporting. The time horizon is part of the target criteria in the calibration of regulatory solvency requirements.
Underwriting	The process of evaluating new applications, carried out by a <i>Takāful</i> Operator (TO) on behalf of the <i>Takāful</i> participants based on an established set of guidelines to determine the risk associated with an applicant. The TO could accept the application, or assign the appropriate rating class, or decline the application for a <i>Takāful</i> contract.
Underwriting risk	The risk of loss due to underwriting activities relating to the Participants' Risk Fund. Sources of this risk include assumptions used in pricing or assessment that are subsequently shown to be incorrect by experience of, for example, claims.
Underwriting surplus or deficit	The Participants' Risk Fund's financial outturn from the risk elements of its business, being the balance after deducting expenses and claims (including any movement in provisions for outstanding claims) from the contributions income and adding the investment returns (income and gains on investment assets).
<i>Wakālah</i>	An agency contract where the <i>Takāful</i> participants (as principal) appoint the <i>Takāful</i> Operator (as agent) to carry out the underwriting and investment activities of the <i>Takāful</i> fund on their behalf.

APPENDIX: SAMPLE ORSA REPORT

THE ORSA REPORT

The ORSA report records management's self-assessment of its risks and solvency, in accordance with its general responsibility (whether or not set out in the regulations) for considering its risk and capital position within the context of its business plans on a forward-looking basis.

There is no single accepted format for an ORSA report, or for the performance of an ORSA, given that the process is specific to an entity and should, as mentioned in the Standard, reflect that entity's circumstances. Also, an entity may wish, or its supervisor may require it, to follow a different format. (For example, the standing ORSA information referred to in the following paragraph could be omitted other than in summary, or relegated to appendices.) As the purpose of an ORSA report is to provide information to its users, the needs of those users should determine the form and content of the report.

The following illustrative template sets out a possible format for an ORSA report, containing a summary description of the entity and its risk management framework (sometimes referred to as "standing ORSA information", which would normally be expected to remain broadly similar between successive ORSAs in the absence of significant reassessment or strategic change), followed by the results of the ORSA and the proposed actions arising from that.

Illustrative template

1 STANDING INFORMATION

1.1 Description of the *Takāful* undertaking (TU)

1.1.1 Legal and organisational structure

- Nature of the TU
- Structure of funds and business model adopted
- Structure of management and ownership, including the role of the *Sharī'ah* board
- Strategic management process

1.1.2 Business activities

- Nature and location of business
- Business plan

1.1.3 Market environment

- The environment(s) in which the TU operates in respect of the *Takāful* (and, if relevant, broader insurance) market, including the prevalent *Sharī'ah* interpretations in that market
- Nature and availability of *Retakāful* capacity in that market

1.2 Risk management framework

1.2.1 Universe of risks

- Risks to which the TU is subject, categorised in a manner appropriate to the entity and dealing with each fund

1.2.2 Risk governance structure

- Responsibility for oversight of risk identification, assessment, response, reporting
- Operational framework (e.g. three lines of defence)

1.2.3 Risk management strategy and appetite

- Risk management strategy
- Risk appetite statements, with tolerances for each component fund – that is, Participants' Risk Fund (PRF), Participants' Investment Fund (PIF) and Shareholders' Fund (SHF)

1.2.4 Risk management process

- Process for identifying, assessing and determining response to risk
- Risk reporting process
- Process for ORSA

1.2.5 Risk policies

- Risk policies for all significant categories of risk, including risks cutting across processes such as *Shari'ah* non-compliance risk, asset–liability management, anti-financial crime management, outsourcing and *Retakāful*
- Policy for ORSA performance

1.3 Capital management

1.3.1 Capital management philosophy

- Strategy for solvency of individual funds
- How management sets target capital levels for each fund
- Scope and definition of any capital models used
- Explanation on how risk appetite is reflected in capital management policy, addressing management of regulatory capital and of economic capital

1.3.2 Policy on capital management

- Policy on retention/distribution of surplus
- Policy on use of *Qarḍ* or other forms of support
- Policy on use of *Retakāful*

1.4 The "use test"

1.4.1 Business processes

- How the risk policies are embedded in key business processes, including product development, underwriting and customer relationships, and support processes such as finance and administration
- Processes for capturing and assessing risk concentrations
- Feedback loops to capture and analyse issues arising, for possible impact on strategy, policies or processes

1.4.2 *Shari'ah* compliance

- How operational processes embed controls to secure compliance with *Shari'ah* based on the decisions and recommendations of the relevant *Shari'ah* board

1.4.3 Key performance indicators

- The key metrics used by management to assess the business, including demonstration of how these reflect the risk management framework and capture performance of the risk policies

1.4.4 Incentives

- Incentive structures for management, with particular reference to the conflicts of interest that are inherent in a *Takāful* operation (fiduciary duty of *Takāful* Operator (TO) to other stakeholders in PIF and PRF), demonstrating interface of these with the risk policies
- Incentive structures for business operators and intermediaries, demonstrating interface of these structures with the risk policies

2 SUMMARY STATEMENT FOLLOWING THE ORSA

2.1 Executive summary

- An overview of the high-level strategy formulated for the TU in the context of its risk profile, expressing management's conclusions as a result of the ORSA in respect of the risk profile, identifying recommendations for management action and matters for the attention of the *Sharī'ah* board

2.2 Management opinions

- Management's assertions as to compliance with key objectives of the risk framework – for example:
 - Risk profile, including drivers for change, is properly understood and is considered appropriate for the nature of the business and in line with its risk appetite.
 - All regulatory requirements are complied with, and actions taken for any non-compliance.
 - All funds comply with target levels of capital at the date of the ORSA, and actions taken for any non-compliance.
 - All operations comply with rulings of the relevant *Sharī'ah* board, and actions are taken for any non-compliance.
 - Capital set out in the business plan for the forecast period is adequate based on stressed scenarios.
 - *Qard* or other support taken into consideration in determining the capital adequacy of any fund is available for transfer to that fund and is not double-counted in any scenario.

3 PREVIOUS ORSAS

3.1 Review of matters arising from previous ORSAs

- Follow-up on matters highlighted in previous ORSA reports, including risk reports provided to senior management between ORSAs

4.1 Governance over the ORSA process

4.1.1 Parameters

- Ownership of and responsibility for the ORSA (to demonstrate the independence, authority and resources of those responsible for performing the ORSA)
- Scope of ORSA
- Pre-defined minimum triggers for ORSA escalation, if any

4.1.2 Challenge and debate

- Evidence of challenge to assumptions
- Evidence of discussion of key features and modification where appropriate

4.1.3 Review and approval

- Process undertaken to ensure procedures and findings are valid (e.g. independent validation of process and findings)

4.2 Description of ORSA process

- Procedures undertaken and by whom, resources used, timing and outputs

4.3 Findings of ORSA

4.3.1 Testing the use of the framework

- Evidence of integration of risk framework into business decision-making
- Drivers for improving the internal model and risk management processes

4.3.2 Risks

- Key risks and issues identified, including concentrations of risks and qualitative risks (e.g. reputational risk), quantifying exposure and probability where necessary
- Changes identified in risks, either new risks or changes to existing risks
- Breaches of policy or appetite identified, and actions taken
- Implications of new or changed risks or breaches for the operations and for the risk management framework
- Testing of risk mitigation

4.3.3 Stress testing and scenarios

- Business scenarios, including stress scenarios, used for testing
- Description of methods used to estimate impact of scenarios
- Impact of stress scenarios on planned capital and liquidity in each fund, covering a projected period (e.g. three or five years)
- Projected use of *Qard* or other support in stressed scenarios, including source and expected repayment pattern

4.3.4 Capital

- Summary of capital allocation for each risk category, in each component fund
- Determination of regulatory and economic capital requirements in each component fund at the present time and at each reference point in the forecast period
- Conclusion on adequacy of capital in each component fund at the present time and at each reference point in the forecast period

4.3.5 Findings on *Shari`ah* compliance

- Findings for the attention of the *Shari`ah* board

4.3.6 Management actions proposed

- Necessary management actions identified as a consequence of the ORSA (e.g. revision of risk policies to address perceived change, challenge to strategy identified as exposed to business risks beyond appetite)
- Contingent management actions identified for stressed scenarios
- Contingency plans in the event of breach of regulatory solvency requirements in any fund
- Business options identified to optimise capital (e.g. rebalancing business book that is overweight in capital-intensive products)
- Recommendations for improvement to risk management or other processes