ISLAMIC FINANCIAL SERVICES BOARD

EXPOSURE DRAFT

MACROPRUDENTIAL TOOLS FOR INSTITUTIONS OFFERING ISLAMIC FINANCIAL SERVICES (BANKING SEGMENT)

May 2024

Comments on this Exposure Draft should be sent to the IFSB Secretariat no later than 5 July 2024 by email to public_consultation@ifsb.org

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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 the banking, capital markets and insurance sectors. The standards prepared by the IFSB follow a stringent due process as outlined in its Guidelines and Procedures for the Preparation of Standards/Guidelines, which includes holding several Working Group meetings, issuing exposure drafts and organising public hearings/webinars and reviews by the IFBS's Sharī'ah Board and Technical Committee. The IFSB also conducts research and coordinates initiatives on industry-related issues and 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 participants.

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ABBREVIATIONS

AE	Advanced Economies
AT1	Additional Tier 1 Capital
BCBS	Basel Committee on Banking Supervision
BIS	Bank for International Settlements
CAR	Capital Adequacy Ratio
CCB	Capital Conservation Buffer
CCF	Credit Conversion Factor
CCyB	Countercyclical Capital Buffer
CDO	Collateralised Debt Obligations
CET1	Common Equity Tier 1
CMT	Commodity *Murābahah* Transaction
CRE	Commercial Real-Estate
CRFR	Climate-Related Financial Risk
DCR	Displaced Commercial Risk
DSC	Debt-Service Coverage
D-SIB	Domestic Systemically Important Bank
DSTI	Debt-Service-to-Income
DTI	Debt-to-Income
EBITDA	Earnings Before Interest, Taxes, Depreciation, and Amortization
EMDE	Emerging Market and Developing Economies
EME	Emerging Market Economies
ESRB	European Systemic Risk Board
EWI	Early Warning Indicator
EWS	Early Warning System
FSC	Financial Stability Committee
FDR	Financing to Deposit Ratio
FSB	Financial Stability Board
FTD	Financing to Deposit
FTV	Financing-to-Value
FX	Foreign Exchange
GDP	Gross Domestic Product
GFC	Global Financial Crisis
GHG	Greenhouse Gas
GN-6	Guidance Note on Quantitative Measures for Liquidity Risk Management in Institutions Offering Islamic Financial Services [Excluding Islamic Insurance (Takāful) Institutions and Islamic Collective Investment Schemes]
G-SIB	Global Systemically Important Banks
HLA	Higher Loss Absorbency
HQLA	High-Quality Liquid Assets
IAH	Investment Account Holder
IBW	Islamic Banking Window
ICAAP	Internal Capital Adequacy Assessment Process
IFSB	Islamic Financial Services Board
IFSB-2	Capital Adequacy Standard for Institutions Offering Islamic Financial Services (IIFS)
IFSB-23	Revised Capital Adequacy Standard for Institutions Offering Islamic Financial Services [Banking Segment]
IFSI	Islamic Financial Services Industry

IIFS	Institutions Offering Islamic Financial Services
IMF	International Monetary Fund
IRB	Internal Risk Based
IRR	Investment Risk Reserve
LCR	Liquidity Coverage Ratio
LDR	Loan-to-Deposit Ratio
LGD	Loss Given Default
LTD	Loan-to-Deposit Ratio
LTI	Loan-to-Income Ratio
LTV	Loan-to-Value Ratio
MaPP	Macroprudential Policy
NSFR	Net Stable Funding Ratio
OBS	Off-Balance Sheet
OTC	Over-the-Counter
PD	Probability of Default
PER	Profit Equalization Reserve
PLS	Profit- and Loss-Sharing
PSIA	Profit-Sharing Investment Account
RPSIA	Restricted PSIA
RR	Reserve Requirement
RSA	Regulatory and Supervisory Authorities
RWA	Risk-Weighted Assets
SIFI	Systemically Important Financial Institution
SLOLR	Sharī`ah-Compliant Lender-of-Last-Resort
SnCR	Sharī`ah non-Compliance Risk
SyRB	Systemic Risk Buffer
T2	Tier 2 Capital
TN-2	Technical Note on Stress Testing for Institutions Offering Islamic Financial Services (IIFS)
TN	Technical Note on Macroprudential Tools for IIFS
UIAH	Unrestricted Investment Account Holders
UPSIA	Unrestricted PSIA
WB	The World Bank
WP-17	IFSB Working Paper 17: Effectiveness of Macroprudential Tools for Islamic Banking

CONSULTATION QUESTIONS

The IFSB invites feedback on the full contents of this consultative document from policymakers, regulatory and supervisory authorities, international organisations, financial market participants, institutions offering Islamic financial services (IIFS), academics and other interested parties.

In addition, the IFSB has highlighted some specific questions, which will assist in further enhancing the Technical Note and its recommendations, as detailed below.

Q1. Does the Exposure Draft reflect all Islamic banking-specific risks that have system-wide significance, and, thus, need to be included in the scope of macroprudential policy?

Q2. Are any Islamic banking-specific risks missing? If so, please describe these risks and explain why they are necessary to be included.

Q3. Do you agree with the recommendations of this exposure draft for the three types of macroprudential measures (broad-based, liquidity and structural tools) as well as governance? If not, please explain.

Q4. Are there any other macroprudential tools with Islamic banking specificities not addressed in the exposure draft? If so, please describe the tools and any specificities of Islamic banks that it addresses.

Q5. Are there any other aspects that the Authorities should consider when setting up a macroprudential policy framework for Islamic Banks that is not covered by this Exposure Draft? If so, please describe.

Q6. Do you foresee any issues or challenges in the practical application of the recommendations in your jurisdiction? If so, please describe.

Q7. Do you foresee any potential challenges in applying the recommendations in dual banking systems? If so, please describe.

SUMMARY OF RECOMMENDATIONS FOR EFFECTIVE MACROPRUDENTIAL POLICY FOR IIFS (BANKING SEGMENT)

Broad-Based Tools

Recommendation 1 (Asset Performance and Inventory Risk): *Authorities may consider the valuation risks from the inventory of underlying asset(s) in Sharīʿah-compliant debt-based contracts when applying broad-based tools.*

Recommendation 2 (Loss Absorption): *Authorities may consider the level of loss absorption by IAHs and its impact on displaced commercial risk.*

Recommendation 3 (Partnership Contracts): *Authorities may consider additional credit risk in partnership contracts when determining the capital charge for these exposures.*

Recommendation 4 (Leverage)*: Authorities may, where necessary, establish appropriate requirements to reduce the build-up of leverage*

Liquidity and Foreign Exchange Tools

Recommendation 5 (Structural Liquidity Buffer*): Authorities may design and implement measures that help boost structural liquidity buffers and enhance liquidity risk management.*

Recommendation 6 (Forward Contracts): *Authorities may consider limiting the use of forward-exchange contracts if liquidity buffers are deemed insufficient.*

Recommendation 7 (Commodity-based Exchange Contracts): *Authorities may consider system-wide restrictions on the repetitive and frequent use of a specific class of commodities for commodity-based exchange contracts.*

Recommendation 8 (Profit Smoothing Mechanisms): *Authorities may require IIFS to have clear and definitive mechanisms for profit distribution and the use of reserves if funding arrangements via partnership contracts are material.*

Recommendation 9 (Net Open Foreign Exchange Positions): *Authorities may consider appropriate restrictions on unhedged net open foreign exchange positions.*

Structural Tools

Recommendation 10 (Concentration): *Authorities may amend structural tools that specifically address potential contagion risks stemming from large and/or concentrated exposures to commodities or other underlying assets.*

Recommendation 11 (Sharīʿah Non-compliance Risk): *Authorities may consider potential systemic implications of structural non-compliance or inconsistent application of Sharīʿah rulings.*

Recommendation 12 (Interconnectedness): *Authorities should consider the potential for increased institutional interconnectedness of IIFS due to limited number of institutions.*

Governance

Recommendation 13 (Sharīʿah governance): *Authorities need appropriate governance mechanisms to ensure Sharīʿah-compliance is considered in formulating macroprudential policy for IIFS.*

Recommendation 14 (Leakage and regulatory arbitrage): *Authorities should consider appropriate mechanisms to ensure that the risk of leakage and regulatory arbitrage is considered in formulating macroprudential policy for IIFS in dual banking systems.*

Section 1: Introduction

1.1 Background

1. The Global Financial Crisis (GFC) highlighted significant vulnerabilities in the financial system and resulted in the development of a more systemic approach to prudential regulation. Most regulatory and supervisory authorities (RSA) entrusted with responsibility for financial stability developed macroprudential policy frameworks and institutional arrangements to address identified vulnerabilities, including in the banking sector.

2. Macroprudential tools have generally been developed for conventional banking, which remains significantly larger than Islamic banking. While Institutions Offering Islamic Financial Services (IIFS) share many characteristics with their conventional peers, they are exposed to additional (often system-wide) risks due to the specific nature of their business models, making macroprudential measures especially relevant to them. IIFS are particularly affected by counterparty and liquidity risks as well as adverse shocks to commodity and real asset prices given the scarcity of short-term liquid assets and deep money markets, the high concentration in other (less liquid) assets (especially real estate), and the comprehensive collateralisation of all borrowing and financing activities, which is mostly done via precious metals or certain agricultural goods.

3. However, the application of macroprudential tools to IIFS and the range of tools available to IIFS to effectively address systemic shocks or vulnerabilities have not been comprehensively addressed.[1] While general principles of macroprudential policy have substantially evolved since the GFC, several elements of the available guidance would need to be aligned with Sharī'ah rules and principles to satisfy the specificities of Islamic banking.

4. Some macroprudential characteristics of IIFS have already featured in IFSB standards. IFSB-17: *Core Principles for Islamic Finance Regulation (Banking Segment)* highlights the importance of a clear macroprudential policy as a prerequisite for effective supervision of IIFS. IFSB-17 notes that several macroprudential issues need to be addressed, in part through supervisory consideration of IIFS business models and practices, including procyclicality, leverage, and excessive financing expansion, among other issues. Some IFSB standards also contain modifications relating to macroprudential issues. For instance, provisions relating to capital buffer, leverage ratio, dynamic provisioning, and sectoral risk

[1] The current body of knowledge and standards for macroprudential policy comprises guidance issued by several international and regional financial institutions, including the Basel Committee on Banking Supervision (BCBS) of the Bank for International Settlements (BIS), the International Monetary Fund (IMF), the World Bank (WB), and the European Systemic Risk Board (ESRB).

weights have been revisited by the IFSB with a view to ensuring the stability of the Islamic financial services industry (IFSI).[2] In addition, the IFSB has produced a guidance note which provides key parameter settings that address the concerns relating to the liquidity coverage ratio (LCR), net stable funding ratio (NSFR), and high-quality liquid assets (HQLA).[3]

1.2 Objectives

5. This technical note on macroprudential tools for IIFS (banking segment) builds on previous IFSB work,[4] which has identified a wide range of available macroprudential tools used by jurisdictions with a dual banking system, including the design and calibration of appropriate tools, as well as the institutional framework and arrangements to provide a proper governance for macroprudential policy. Focus areas are capital requirements, sectoral and structural tools, and a framework for governance, risk identification, and measurement of calibration.

6. The objectives of the TN are:

a. to provide guidance on adjustments to available macroprudential tools to reflect the specificities of Islamic banking contracts ("**adaptation**");

b. to address challenges in identifying system-wide vulnerabilities in and calibrating macroprudential tools for the Islamic banking sector ("**implementation**"); and

c. to make recommendations to enhance the governance of macroprudential policy according to the characteristics of Islamic banking ("**governance**").

1.3 Scope

7. The TN aims to facilitate effective macroprudential policy for Islamic banking, covering both systemically relevant banks (which are deemed D-SIBs) as well as smaller banks that provide Islamic financial services (IIFS) to firms and households in accordance with Sharīʿah rules and principles. This scope includes, but is not limited to, commercial Islamic banks, Islamic banking windows, investment banks, and other fund-mobilising institutions, as determined by the respective RSA, which also defines the general use of the term IIFS in this standard.[5]

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[2] IFSB-23: *Revised Capital Adequacy Standard for Institutions offering Islamic Financial Services [Banking Segment].*
[3] See GN-6: *Guidance Note on Quantitative Measures for Liquidity Risk Management in Institutions offering Islamic Financial Services [Excluding Islamic Insurance (Takāful) Institutions and Islamic Collective Investment Schemes].*
[4] Working Paper 17: *Effectiveness of macroprudential tools for Islamic banking*.
[5] Unless otherwise specified, the terms "IIFS" and "Islamic banks" are used interchangeably.

8. The TN covers all categories of macroprudential tools that can mitigate system-wide vulnerabilities related to excessive credit growth and leverage, liquidity risks (i.e., excessive asset-liabilities mismatches and market liquidity), and structural (systemic) risks, with a focus on specific characteristics of IIFS, including, but not limited to:

a. the application of IIFS specific products such as profit-sharing investment accounts (PSIAs), profit- and loss-sharing (PLS) contracts (also known as partnership contracts), *sukūk*, and other products that affect the design and implementation of available macroprudential measures and tools.

b. the presence of Islamic banking windows (IBWs), which are part of conventional banks (either branches or dedicated units) but provide Sharīʿah-compliant financial services.[6]

1.4 General approach

9. The TN adopts a supplementary approach, building on available macroprudential policy guidelines for conventional banks, but focusing particularly on issues that are specific to IIFS. Where guidelines are equally applicable to both conventional banks and IIFS, reference is made to the applicable guidelines. Where necessary, amendments to existing guidelines are provided to reflect IIFS specificities. Appendix 1 maps macroprudential policy measures for conventional banking to IIFS.

10. The TN follows a conceptual framework that supports the three objectives (adaptation, implementation, and governance) of the evolving aspects of macroprudential policy for IIFS by highlighting the specificities of Islamic banking and providing guidance on the differentiated design and implementation of macroprudential policy tools that flow from them (Figure 1). The overall objective of the TN is to establish a common understanding of effective macroprudential policy for IIFS based on existing approaches and to identify areas for future development.

[6] The guidance provided in this TN follows the proportionality principle in relation to IBW, considering their nature, size, operations, legal form, and complexity. An Islamic window operation is defined as part of a conventional financial institution (which may be a branch or dedicated unit of that institution, but not a separate legal entity) that provides both fund management (investment accounts) and financing and investment that are Sharīʿah-compliant. In principle, these windows must be self-contained in terms of Sharīʿah-compliant financial intermediation, as the funds managed will be invested in Sharīʿah-compliant assets. The profits generated by the IBW can be transferred to the conventional parent in its capacity as the owner of the Islamic window. It is important to note that windows should be completely separate from their conventional parents by ensuring that their operations are not intertwined with those of the parent.

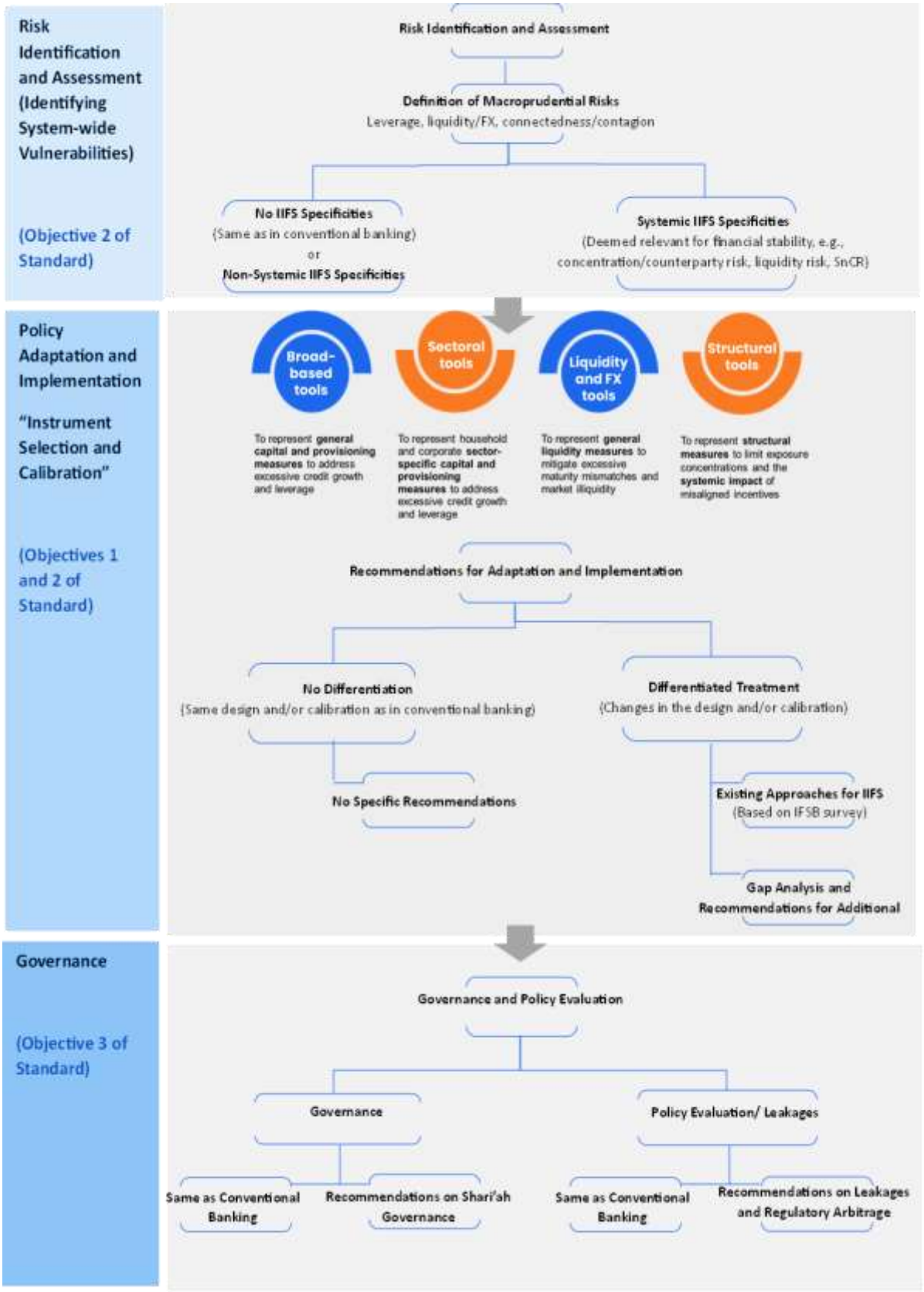

Figure 1: Conceptual Framework on Macroprudential Policies for IIFS

Section 2: Specificities of IIFS

2.1 Characteristics of IIFS

11. Islamic financial instruments encompass a wide range of contractual arrangements, including *murābahah, salam,* and *istisnā* (based on the sale or purchase of an asset with a profit margin to account for a timing mismatch between payment and delivery), *ijārah* (based on selling the usufruct of an asset), *mushārakah* and *muḍārabah* (profit-sharing), *wakalah* (fee-based services), or *sukūk* (securities), as well as investment portfolios and funds. In the case of sale- or purchase-based instruments, the Islamic bank's gross return is the spread between the cost of the asset and the amount that can be recovered from selling or leasing it. Such instruments may therefore involve exposure to market (price) risk with respect to the asset, as well as credit risk with respect to the amount due from the counterparty. In the case of the profit-sharing instruments, *mushārakah* and *muḍārabah*, such financing exposures are usually held for investment purposes and not for trading, and therefore involve mostly counterparty risk resulting in asset impairment if the *muḍārib*/*mushārik* (partner) generates losses.[7] When there is negligence/procrastination[8] by the *mudārib/mushārik* (managing partner), such profit-sharing modes of financing are not free of credit risk.[9]

12. Islamic and conventional banking differ in important ways. While conventional banks' intermediation is largely debt based and allows for risk transfer, Islamic banks' intermediation is asset based and is largely focused on risk sharing. This reflects Islamic banking's foundation on compliance with Sharīʿah law, which generally prohibits (among others) the sale and purchase of debt contracts to receive an interest gain, profit taking without real economic activity and asset transfer, and legal uncertainty surrounding contractual claims. Accordingly, in the countries where they operate, IIFS could potentially play a key role in gearing finance towards a common social goal tied to supporting the real economy and possibly reducing the incentives to financial engineering associated with opaque and complex instruments.

13. Islamic banking contracts can be broadly classified as contracts that comply with Sharī`ah rulings and principles: (a) exchange (sale-based) contracts, with the purchase and

[7] IFSB-23 has defined capital impairment risk as the risk of losing the amount invested in an enterprise or in the ownership of an asset. Such impairments may arise for two kinds of reasons: (a) the investee may be unprofitable, so that the investor IIFS fails to recover its investment; and (b) the *mushārakah* partner or *muḍārib* may fail either: (i) to pay the IIFS' share in the realised profit on a periodic basis, as contractually agreed; or (ii) to settle the IIFS' entitlement to its share of the capital and the profits at the time of redemption. The impairment of capital arising from the enterprise being unprofitable or asset financed does not involve any credit default, whereas the failure of the partner to meet its contractual obligations will be an incidence of credit default.

[8] When the *muḍārib/mushārik* (managing partner) receives payments from the project but fails to pay the capital provider/other partners. See paragraph 546 of IFSB-23.

[9] Refer to Section 4.1.3.9 of IFSB-23 for more details on exposures in partnership contracts.

sale of goods at a predetermined profit margin, e.g., *murābahah* and *istisnā*; (b) service-based contracts, with the provision of fee-based services at a fixed amount/predetermined percentage, e.g., *wakālah bi ajir* (fee-based *wakālah*); (c) partnership contracts, with the rate of return based on actual profit generated from financing real investments, e.g., *muḍārabah* and *mushārakah*; (d) security contracts, with fees determined according to actual direct costs such as *rahn* (pledge) and *dhaman* (guarantee).

2.2 Islamic Banking Windows

14. A conventional bank can offer Islamic financial services through an Islamic window. The window may be a branch or a dedicated unit of a conventional bank. The window is not separately incorporated, but both its assets and liabilities should be required to be segregated from conventional business. This structure requires the bank to establish appropriate firewalls to avoid commingling of Islamic and conventional funds. The treatment of windows differs from one jurisdiction to another, depending on the legal and regulatory framework. Islamic windows are present in most jurisdictions with Islamic finance services. Islamic windows are self-contained and segregated in terms of Sharī'ah-compliant financial intermediation.

2.3 Balance Sheet Elements

15. On the asset side, financing contracts include sales at profit margin with deferred payments (*murābaḥah*), lease-based financing (*ijārah*), manufacturing or construction financing contracts (*istiṣnā'*), and the forward sale of fungible goods for immediate payment (*salam*). IIFS provide financing also through joint partnerships with customers for a specific economic activity based on pre-specified profit- and loss-sharing arrangements. The contracts include the profit sharing but also loss bearing by the capital provider (*muḍārabah*),[10] as well as both profit and loss sharing by both parties to the contract (*mushārakah*). Another form of transaction is fee-based arrangements, which includes the contract of *wakālah*[11] and service fees (*ujr*). On the liability side, the funding structure of the IIFS can be categorised into principal guaranteed deposit contracts (e.g., *qarḍ*-based current accounts) and restricted and unrestricted non-principal guaranteed deposits (investment accounts).

16. IIFS are more sensitive to monetary policy dynamics, compared to conventional banks, due to the large and positive duration gap between financing activities and funding sources. This is mainly due to the composition of the IIFS balance sheet, where assets consist mostly of fixed-rate exposures (including long-term exchange-based contracts) while the

[10] In the *muḍārabah* agreement the losses are to be borne solely by the IIFS unless the losses are due to the *muḍārib's* misconduct, negligence, or breach of contractual terms.

[11] In case of *wakālah*, the *wakeel* will bear the loss if it results from the *wakeel's* negligence, misconduct, or breach of conditions of contract.

funding structure predominantly consists of variable rate and short-term funding via deposits and investment accounts.

2.4 IIFS: Specific Risks

17. IIFS share many characteristics with their conventional peers, but the strong asset linkage and "process-driven perspective" on profit generation entails additional risks, and, thus, requires a differentiated capital assessment.[12] As with conventional banks, the most common risks affecting solvency conditions are credit risk (if a counterparty fails to perform its payment obligations), and market risk (if market prices, for example, interest rates, foreign exchange, and stock prices, are volatile). However, the characteristics of these risk factors have different implications for IIFS across financial instruments, contractual agreements, and bank business models:

- *Credit risk* of asset performance in all exchange-based contracts (*murābaḥah* and *ijārah*) in the financing portfolio;
- *Market risk* of asset price fluctuations affecting the valuation of forward exchange-based contracts (*salam* and *istiṣnā'*); and
- *Counterparty, project, and/or market risks* from equity-based instruments (*muḍārabah* and *mushārakah*).

18. Due to the uniqueness of their balance sheets, IIFS face additional risks compared to conventional banking. Among the unique risks are operational risk due to Sharī'ah non-compliance risk (SnCR), inventory risk, displaced commercial risk (DCR), equity investment risk, return risk, and elevated asset and liquidity risks due to concentrated asset exposures and limitations to Sharī'ah-compliant market funding and liquidity management opportunities. The most relevant risks are:

- *Indirect interest rate risk* due to competition for deposits in dual banking systems. Conventional banks typically offer interest-bearing deposit products, which can be perceived as more attractive to depositors seeking fixed returns. This competitive pressure can make it challenging for IIFS to attract sufficient cost-efficient deposit funding.

[12] For instance, for many Islamic finance contracts, the high dependence on collateral also raises the search cost of financial intermediation and the monitoring cost of counterparties.

- *DCR*, which implies a transfer of some shareholder value to unsecured depositors via reserves to help smooth investment profits, in case of lower-than-expected returns (see section 2.6);
- *Liquidity risk* due to a less-developed financial market infrastructure, the shortage in Sharī'ah-compliant liquidity risk management tools, and, in most jurisdictions, the absence of Sharī'ah-compliant deposit insurance schemes;
- *Inventory risk* from significant commodity exposures and uncovered/parallel special sales contracts (parallel *salam*). The risks relate to the current and future volatility of market values of specific assets (for example, the commodity price of *salam* asset and the market value of *murābahah* assets purchased to be delivered over a specific period).
- *Operational risk* from Sharī'ah non-compliance if the IIFS' activities (operations, products, and investments) are not in line with the required Sharī'ah rules and principles (and could lead to reputational damage);
- *Documentation risk*, as transactions in Islamic banking usually require complex documentation and sequencing in contract execution. IIFS must comply with both general banking and specific Sharī'ah-related regulations. Changes in laws, regulations, or interpretations of Sharī'ah board's resolutions/*fatāwā* can impact the operations of IIFS and introduce compliance and legal risks.

19. In addition, many IIFS have limited access to central bank liquidity and lack sufficient long-term funding, which makes them structurally vulnerable to funding shocks. In most cases, liquid (but expensive) short-term assets and illiquid (but profitable) long-term assets are funded by short-term deposits, investment accounts, and, to a lesser extent, long-term exchange-based/profit- and loss-sharing contracts. The risk from a "long-short mismatch" is worsened by the underdeveloped interbank money market in Sharī'ah-compliant instruments.

2.5 PSIA Characteristics

20. IIFS offer various types of accounts for raising funds,[13] including current accounts, profit-sharing investment accounts (PSIA), which are categorised as: (i) unrestricted profit-sharing investment accounts (UPSIA); and (ii) restricted profit-sharing investment accounts (RPSIA).

[13] *wadī'ah*-based or commodity *murābaḥah* accounts are in use in some jurisdictions.

21. For UPSIA, IIFS have full discretion in making investment decisions as long as they are Sharīʿah-compliant. Unrestricted investment account holders' (UIAH) funds are often "commingled" in an asset pool where shareholders' and current account holders' funds (which are guaranteed by the IIFS) are also invested. UPSIA are expected to share in the overall risks of the jointly funded investments in proportion to their shares in the investment pool.

22. For RPSIA, the IIFS' use of funds is either subject to pre-specified investment restrictions or is agreed upon with the restricted investment account holders (RIAH) at the time of contracting. The RIAH share in the returns and bear the risks of an identified and agreed upon class of assets or a specified and agreed upon type of asset portfolio. Typically, IIFS do not commingle the shareholders' funds or other funds at their disposal with those of RIAH funds.

23. For both unrestricted and restricted PSIAs, the IIFS assume the role of *muḍārib* in placing such funds in income-producing assets or economic activities, and as such is entitled to a share (the *muḍārib* share) in the profits (but not losses[14]) earned on funds it manages on behalf of the IAHs, according to a pre-agreed ratio specified in the *muḍārabah* contract. An important implication of the profit-sharing and loss-bearing nature of *muḍārabah* contract is that UPSIA, while normally appearing on the IIFS' balance sheet, are not treated as liabilities of the IIFS. Accordingly, in the case of liquidation, UIAH have no claim over the assets of the IIFS instead, they have a claim to the assets financed by their funds (together with their share of any undistributed profits, net of any losses), including their proportionate share of assets financed by commingled funds.

24. IIFS maintain a profit equalisation reserve (PER) and investment risk reserve (IRR)[15] to mitigate liquidity risk from UPSIA.[16] The absence of such risk management practices may raise concerns among UPSIA holders about the level of protection for their investments. This can trigger withdrawal risks, as UPSIA holders may become concerned about the safety of their funds and seek to withdraw their investments from the bank. If a significant number of UPSIA holders withdraw their funds, it can create liquidity challenges for the bank and impact its ability to fulfil its obligations. The use of a PER as a mitigating measure, however, may give rise to displaced commercial risk (DCR), which is captured by applying a discount factor ("alpha") to the risk-weighted assets (RWAs) associated with UPSIAs.

[14] In a *muḍārabah* agreement the losses are to be borne solely by the IIFS unless the losses are due to the *muḍārib's* misconduct, negligence, or breach of contractual terms.
[15] IIFS use the IRR as a loss absorbing mechanism.
[16] Refer to IFSB GN-3: *on the Practice of Smoothing the Profits Payout to Investment Account Holders*

2.6 Displaced Commercial Risk (DCR)

25. In practice, IIFS may be compelled to smooth profit payouts to UIAH, and, thus, incur DCR, for two reasons:

a. **Commercial pressure**: to compensate for (i) either rate of return (profit rate) risk when the IAH funds are invested in physical assets, such as *murābahah* with a relatively long maturity and at a rate of return which no longer meets the current market rate of return (market benchmark) or (ii) market (price) risk or credit risk associated with poor performance of the assets under the management.

b. **Supervisory guidance**: supervisors may require IIFS to install a profit payout mechanism for UIAH that provides some loss protection to mitigate potential systemic risk from sudden UPSIA withdrawals.

26. IIFS usually use the following mechanisms to smooth profits to IAHs. The IIFS builds reserves – in the form of PER – from either (1) total profits before their allocation between shareholders and UIAH, which can (partially) be attributed to UIAH or (2) investment profits attributable to the UIAH in the form of IRR (after deducting the IIFS's muḍārib share of profits). The IRR can be used only to cover losses on the investments of UIAH funds. In case the IIFS has not built PER or IRR, it can forgo all (or part) of its muḍārib share of profits from investing UIAH funds, donate to the UIAH all (or part) of the profit on investments financed by shareholders' funds to boost the profit payout to the UIAH and/or cover the losses in case the losses has exceed IRR, subject that this practice is on a voluntary basis without any prior commitments to the IIFS. In general, the PER serves to smooth the payouts of IAH and shareholders, thus mitigating DCR to a greater or lesser extent, while the IRR allows payouts to IAH only if the actual return on their investments is negative (a loss).

27. An IIFS in its capacity as *muḍārib* only bears losses due to negligence and/or misconduct. Thus, losses of IAH that exceed their assumed loss-bearing capacity are covered by IRR. However, PER may compensate for IAHs' losses in excess of IRR,[17] including the bank's share of the PER as a voluntary donation without prior commitment. Therefore, DCR also refers to situations when an IIFS's shareholders cover losses that would normally be absorbed by PSIA as specified in the *muḍārabah* contract.

[17] See IFSB GN-4: *The Determination of Alpha in the Capital Adequacy Ratio for Institutions (Other Than Insurance Institutions) Offering Only Islamic Financial Services*

28. The PER serves to smooth the payouts of IAH and shareholders, thus mitigating DCR to a greater or lesser extent, while the IRR allows payouts to be made to IAH even when the actual return on their investments is negative (a loss).

2.7 Definition of Capital Adequacy

29. The Revised Capital Adequacy Standard for IIFS (IFSB-23) proposes two methods of calculating capital adequacy ratios (CARs) of IIFS:

a. Under the standard formula, IIFS are not required to hold regulatory capital for exposures funded by profit-sharing investment accounts (PSIA), so the RWA with respect to commercial risks (credit and market risks) funded by such accounts are excluded in calculating the denominator of the CAR;

b. Under the supervisory discretion formula, IIFS account for the loss absorption of UPSIA after considering the impact of DCR. In this approach, a proportion of the RWA funded by UPSIA ("alpha value"), is required to be included in the denominator of the CAR. A supervisory authority may also decide to extend this treatment to RPSIA.

30. IFSB-23 recommends that supervisors assess the extent of risks borne by PSIA to determine the degree of DCR and the way it informs the computation of capital adequacy. The main challenge facing IIFS and their supervisors is to assess the risk-sharing level between IIFS' own capital (shareholders' funds) and that of the investment account holders (IAH); the supervisory assessment of how an IIFS manages the risk-return mix of PSIA would determine the alpha factor, with a value of alpha near zero reflecting an investment-like product with investors bearing the commercial risk, while a value of alpha close to unity would reflect a deposit-like product with depositors effectively bearing virtually no commercial risk.[18]

2.8 Liquidity Risks and Asset-Liability Mismatches

31. Managing liquidity risk is especially challenging for IIFS, because, unlike conventional banks, IIFS have limited access to short-term liquidity management tools, including standing credit operations and liquidity insurance facilities from central banks. They cannot hold interest-bearing deposits or source funding in the (conventional) interbank market. While money markets are key to any liquidity risk management framework many jurisdictions where IIFS operate do not have a mature, well-developed Islamic money market. Also, the general lack of Sharīʿah-compliant high-quality liquid assets (HQLA) limits their ability to build sufficient

[18] See Figure 6 IMF Working Paper 20/156. *The Nature of Islamic Banking and Solvency Stress Testing—Conceptual Considerations*.

counterbalancing capacity to absorb net cash outflows during times of stress. These impediments put IIFS at a disadvantage, compared with their conventional peers. Despite recent improvements in liquidity risk management, available instruments tend to be hardly traded, mostly in less developed secondary markets, and are difficult to transfer across borders.

Section 3: System-Wide Vulnerabilities and Macroprudential Policy For IIFS

3.1 System-wide Vulnerabilities

Differences in risk exposure and contractual agreements in Islamic banking also lead to different ways in which these specificities manifest in system-wide vulnerabilities, and, thus, require additional macroprudential considerations. System-wide vulnerabilities generally arise from excessive leverage and/or credit growth together with asset mispricing in the presence of rising financial distortions and externalities. Asymmetric information, limited enforcement of contracts, and other forms of market failures tend to encourage excessive risk-taking and asset mispricing, which leads to the build-up of systemic vulnerabilities, especially under loose financial conditions. These vulnerabilities are typically amplified by liquidity risk and asset-liability mismatches. In addition, asset concentration and interconnectedness increase the chances of system-wide spillover effects and adverse feedback loops with real activity (Figure 2). In Islamic banking, asymmetry of information can become more acute if partnership contracts (where the *wakīl*, *muḍārib,* or *mushārik* (partner) is not liable to guarantee the principal or profit) are applied more widely in the absence of the appropriate governance, oversight and disclosures, which could encourage excessive risk-taking and may lead to moral hazard.

32. Since the Islamic financial sector (banking, capital market, and *takāful*) is also relatively small in many jurisdictions and exposures tend to be common, greater interconnectedness seems inevitable (due to the concentration of transactions within the small number of players and sectors), which can exacerbate contagion risk and raise associated negative externalities. Furthermore, a country's general laws could conflict with the enforceability of Islamic contracts, and, thus, might lead to legal uncertainty or even disputes. Additional factors, such as strategic complementarities – mutually reinforcing private agents' decisions – and interconnectedness among financial institutions could amplify system-wide vulnerabilities.[19]

[19] IIFS face spillover risks from the build-up of financial vulnerabilities, but the propagation of negative shocks via fire sales is limited. For instance, selling debt at a discount is not permissible under Sharī`ah rulings and principles. Therefore, fire sales in IIFS are limited to physical and non-debt-based contracts.

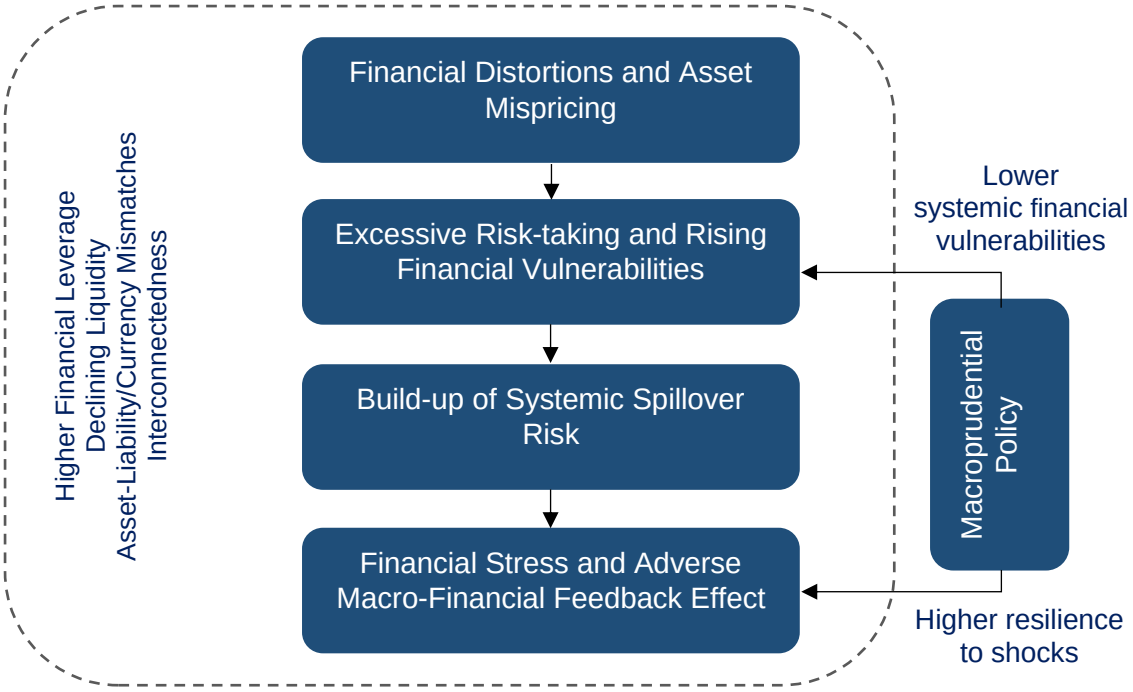

Figure 2. Rationale for Systemic Risk Analysis and Macroprudential Policy[20]

3.2 Macroprudential Policy

33. Macroprudential policy aims to limit the build-up of system-wide vulnerabilities by boosting the resilience of the banking sector, and the financial system at large. The macroprudential policy stance varies with financial and economic conditions to prevent financial distortions and asset mispricing while avoiding any unnecessary burden on the economy due to its distributional effects.

34. Macroprudential policy relates objectives to indicators and tools. Indicators help identify the risks and assess their severity, while instruments help prevent and mitigate the materialisation of these risks. In addition to common macroprudential measures that can be used for both Islamic and conventional banking, Islamic banking requires the differentiated application of some tools or even the use of other tools. The identification of system-wide risks and vulnerabilities is a complex task, more specifically for the Islamic banking sector with the presence of additional risks that are unique to this sector. For example, the RSA should be able to identify the vulnerabilities that may arise due to the decrease in rate of return to the IAHs or due to rise of SnCR. Due to the unique nature of Islamic banking contracts and

[20] FSB, IMF, Jobst (2023).

activities, vulnerabilities can be exposed/created in a different manner compared to conventional banking contracts and activities.

3.3 Available Macroprudential Tools

35. There are four categories of macroprudential tools that are available in most jurisdictions and have also been applied in countries with dual banking systems: broad-based tools, sectoral tools, liquidity and FX tools, and structural tools. Some of the tools have been introduced in IFSB-23: *Revised Capital Adequacy Standard for IIFS (Banking Segment)* to cover IIFS specificities and some others elaborated in the previous IFSB work on WP-17: *Effectiveness of Macroprudential Tools for Islamic Banking*.

36. Each of these four categories has its own purposes based on its relevant system-wide vulnerabilities (Figure 3).

a. **Broad-based tools** represent general capital and provisioning measures to address excessive credit growth and leverage while at the same time increasing the IIFS resilience to shocks. The tools in this category affect all credit exposures and operate mostly through capital add-ons, such as the capital conservation buffer (CCB) and countercyclical capital buffer (CCyB), as well as the leverage ratio;

b. **Sectoral tools** represent household and corporate sector-specific capital and provisioning measures as well as borrower-based measures to address vulnerabilities from excessive credit to the household and corporate sector. The tools in this category include increases in capital requirements (risk weights) for particular sectors, financing-to-value (FTV), debt-service-to-income (DSTI) and financing-to-income (FTI). These tools have been used in several countries and a range of empirical studies show that these instruments were effective in addressing systemic risk externalities when used appropriately. Since the GFC, these sectoral tools are increasingly being adopted in both emerging market economies (EMEs) and advanced economies (AEs);

c. **Liquidity and FX tools** represent general liquidity measures to mitigate excessive maturity mismatches and market illiquidity. Policy tools in this category aim primarily to mitigate the impact of potential liquidity stress through the system-wide use of adequate microprudential measures, including LCR, NSFR, core funding ratio, and FDR, which can take different forms and are frequently used to manage liquidity and FX mismatches associated with increasing banks' reliance on non-core funding,

such as short-term, wholesale, or foreign currency funding to fund illiquid assets;[21] and

d. **Structural tools** represent structural measures to limit exposure concentrations and the systemic impact of misaligned incentives to address risks arising from interconnectedness and the risk of contagion from the failure of individual systemic institutions (i.e., those institutions whose failure poses risks to the entire financial system). Interconnectedness can arise due to credit exposures or funding dependencies between financial institutions, such that the failure of a systemically important bank can, directly or indirectly, create contagion through spillovers between institutions and across the system. Banks and other financial institutions can be exposed to cascading effects from a solvency or liquidity shock, leading to system-wide liquidity squeezes and runs, as well as fire sales.

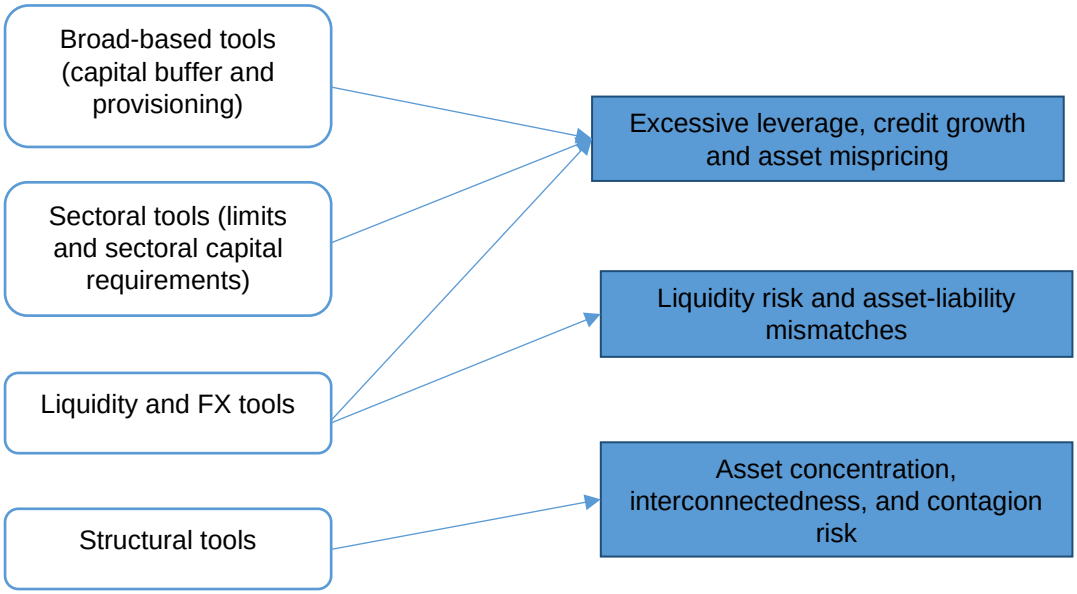

Figure 3. Mapping of Macroprudential Policy (MaPP) Tools to System-wide Vulnerabilities

3.4 Identification Methods For System-Wide Vulnerabilities

37. Although macroprudential policy is intended to mitigate systemic financial risk and to safeguard financial stability, there is no reliable direct method for measuring the extent to which these objectives are being met. As a result, authorities not only track financial variables

[21] In addition, restrictions on dividend payout ratios or profit-sharing ratios after supervisory reviews and/or in response to identified liquidity shortfalls as part of system-wide stress tests provide a consistent and equitable way of establishing sufficient liquidity buffers outside prudential ratios. In countries with structural liquidity surplus, reserve requirements can also be adjusted to manage excess liquidity in a counter-cyclical manner.

as proxies for systemic risk, but also use them as intermediate objectives for setting and adjusting policy.

38. Operationalising macroprudential policy requires a comprehensive framework for monitoring systemic financial risk arising from both the scale and the scope of vulnerabilities. To assess the build-up of risks over time ("time dimension"), authorities typically examine: (a) system-wide vulnerabilities from excessive credit growth or rapidly rising asset prices; (b) sectoral vulnerabilities, for example, those arising from rising household sector indebtedness or from increasing exposures to the corporate sector; and (c) vulnerabilities from a build-up of maturity and foreign currency mismatches. To assess vulnerabilities related to the concentration of risk within the financial system ("cross-sectional" dimension), authorities monitor risks from linkages within and across key asset classes, intermediaries, and market infrastructures as well as the impact of the failure of financial institutions on the system as a whole. Both the time and cross-sectional dimensions underpin the categorisation of macroprudential tools (broad-based, sectoral, FX/liquidity, and structural).

3.4.1 Stress Testing

39. RSA use macro-prudential assessments to test the resilience of financial institutions to various macroeconomic scenarios, such as a recession or dislocations in the financial sector. Stress tests assess the liquidity and/or solvency impact of identified risks based on the sensitivity of various types of financial activities to negative shocks to economic and financial conditions; this helps inform appropriate and timely mitigating actions. Stress tests require a strong governance framework, good-quality economic and financial data, and the adoption of an appropriate methodology within the relevant scope outlined for stress tests.

40. Stress tests are particularly useful to address the specificities of IIFS and derive a differentiated assessment of vulnerabilities for macroprudential policy purposes. The IFSB TN-2: *Stress Testing for IIFS* highlights that stress testing tools have some basic requirements and important limitations, which should be fully considered for stress tests of financial systems with a strong presence of IIFS. This also involves bringing to bear relevant capabilities and knowledge of the specificities of IIFS products and their adequate inclusion and coverage in stress tests.

41. As in conventional banks, the most common risk factors for stress testing IIFS are: (a) credit risk, if a counterparty fails to perform its payment obligations; (b) market risk, if market prices are volatile, e.g., foreign exchange and equities, etc.; and (c) operational risk, if the failure of systems, internal procedures, and controls (as well as external events, such as natural disasters) lead to financial loss. More specifically, these risk factors operate through

three channels: (i) changes in pre-impairment income, including investment shortfall due to indirect interest rate risk and/or higher funding costs; (ii) deteriorating asset quality due to asset impairment charges (credit losses and other losses) of hold-to-maturity assets *(amortised cost)*, valuation changes of traded MtM/AfS securities *(fair value P&L/fair value OCI)*, and operational risk losses; and (iii) changes in capital intensity due to changes in unexpected losses (due to deteriorating asset quality) net of the positive impact of charge-offs and net new lending/financing and investment.

42. However, the characteristics of these risk factors have different implications for IIFS due to differences in financial instruments, contractual agreements, and business models. These risk factors include (a) rate of return risk (and indirect interest rate risk in dual banking systems) of financing and investment instruments and its interaction with DCR; (b) credit risk of all exchange-based and profit- and loss-sharing contracts (*mudārabah, mushārakah*/diminishing *mushārakah*); (c) market risk affecting the valuation of exchange-based contracts (special sales, such as *salam* and *istisnā*) as well as inventory and equity exposures in the investment/trading portfolio; and (d) operational risk from Sharīʿah non-compliance.

43. Given the limited access of IIFS to short-term and high-quality Sharī`ah-compliant funding, stress tests would also need to be flexible enough to incorporate liquidity risk affecting solvency (through higher funding costs and/or deleveraging needs) and specific risk factors, including foreign currency risk as well as the impact of current regulatory reforms and behavioral assumptions to determine the capacity of banks to absorb the manifestation of macro-financial stress.

44. Stress tests may be particularly helpful, as they are forward-looking and various extreme scenarios can be studied consistently. For this reason, stress tests are a valuable instrument for assessing specific systemic vulnerabilities, for instance, assessing the amount of capital required in response to hypothetical low-probability but high-impact macro-financial shocks. Thus, they are suitable for informing judgments and for giving rise to a “guided discretion” approach to the need for macroprudential action. IIFS are encouraged to ensure that stress testing is embedded into their risk management framework and processes.

45. Stress tests also have significant shortcomings, such as the difficulties in meaningfully modelling the dynamics of financial distress and in identifying risks early and sufficiently. Authorities often wait to see whether a development will have adverse consequences, for example, affecting the timing of tightening actions during a credit boom. This shortcoming makes stress tests less useful as a tool for identifying risks when the range of scenarios is more open. Still, they can help in assessing the immediate impact of declines in house prices

and increased mortgage defaults on bank balance sheets. Moreover, authorities complement stress tests with surveillance and analytical capabilities when identifying and monitoring the build-up of systemic risks.

46. Aside from stress testing, early warning indicators and threshold analysis are additional tools that are frequently used for macroprudential policy. While the IIFS-specific elements are limited in this context, they are essential to a holistic assessment of changes in system-wide risk affecting IIFS. Using a diverse set of tools allows RSA to lengthen the lead time in identifying vulnerabilities to inform the implementation of available macroprudential tools.

Section 4: Recommendations for Macroprudential Policy Tools for IIFS

47. In most jurisdictions with dual banking systems, the same (or similar) macroprudential policy instruments are applied to both IIFS and conventional banks. Any differentiated treatment of IIFS has been squarely focused on the adaptation and implementation of well-established macroprudential tools rather than the development of new approaches and techniques. However, with the growing significance of IIFS, additional work is necessary to better address the unique risks faced by IIFS and the way they can give rise to system-wide vulnerabilities. There is no one-size-fits-all solution when it comes to macroprudential policy given the varying characteristics of IIFS and considerable cross-country differences. Building on existing macroprudential policy frameworks, specific risks from Islamic banking suggest several recommendations for the development of a more differentiated treatment of IIFS in mitigating system-wide vulnerabilities from excessive leverage, declining liquidity, and rising concentration. Appendix 2 summarises these recommendations.

48. As an integral component of this TN, a survey was conducted to investigate the practices within diverse jurisdictions where IIFS is operating (see Appendix 3). Drawing from the survey findings, jurisdictions shared their insights into the specificities of IIFS that could potentially influence financial stability and macroprudential policy. These specificities include, among others:

- Greater structural vulnerability to funding shocks;
- Sharīʿah non-compliance risk;
- Indirect interest rate risk;
- Capital requirements and smoothing practices in PSIA;
- Concentration risk;
- Asset-liabilities mismatches;
- Market risk due to holding high asset inventory.

Recommendations for Effective Macroprudential Policy for IIFS (Banking Segment)

Broad-Based Tools

Recommendation 1 (Asset Performance and Inventory Risk): *Authorities may consider the valuation risks from the inventory of underlying asset(s) in Sharīʿah-compliant debt-based contracts when applying broad-based tools.*

Recommendation 2 (Loss Absorption): *Authorities may consider the level of loss absorption by IAHs and its impact on displaced commercial risk.*

Recommendation 3 (Partnership Contracts): *Authorities may consider additional credit risk in partnership contracts when determining the capital charge for these exposures.*

Recommendation 4 (Leverage)*: Authorities may, where necessary, establish appropriate requirements to reduce the build-up of leverage*

Liquidity and Foreign Exchange Tools

Recommendation 5 (Structural Liquidity Buffer*): Authorities may design and implement measures that help boost structural liquidity buffers and enhance liquidity risk management.*

Recommendation 6 (Forward Contracts): *Authorities may consider limiting the use of forward-exchange contracts if liquidity buffers are deemed insufficient.*

Recommendation 7 (Commodity-based Exchange Contracts): *Authorities may consider system-wide restrictions on the repetitive and frequent use of a specific class of commodities for commodity-based exchange contracts.*

Recommendation 8 (Profit Smoothing Mechanisms): *Authorities may require IIFS to have clear and definitive mechanisms for profit distribution and the use of reserves if funding arrangements via partnership contracts are material.*

Recommendation 9 (Net Open Foreign Exchange Positions): *Authorities may consider appropriate restrictions on unhedged net open foreign exchange positions.*

Structural Tools

Recommendation 10 (Concentration): *Authorities may amend structural tools that specifically address potential contagion risks stemming from large and/or concentrated exposures to commodities or other underlying assets.*

Recommendation 11 (Sharīʿah Non-compliance Risk): *Authorities may consider potential systemic implications of structural non-compliance or inconsistent application of Sharīʿah rulings.*

Recommendation 12 (Interconnectedness): *Authorities should consider the potential for increased institutional interconnectedness of IIFS due to limited number of institutions.*

Governance

Recommendation 13 (Sharīʿah governance): *Authorities need appropriate governance mechanisms to ensure Sharīʿah-compliance is considered in formulating macroprudential policy for IIFS.*

Recommendation 14 (Leakage and regulatory arbitrage): *Authorities should consider appropriate mechanisms to ensure that the risk of leakage and regulatory arbitrage is considered in formulating macroprudential policy for IIFS in dual banking systems.*

4.1 Excessive Leverage, Excessive Credit Growth, and Asset Mispricing

49. Excessive credit growth occurs when credit is extended at a pace that exceeds the underlying economic growth, and beyond the ability of the borrowers to repay and the overall financial system's capacity to absorb and manage the associated risks. At times of rapid credit

growth, financial institutions, including IIFS, become more leveraged and may face funding challenges (outside their traditional funding mix). In this situation, there is a higher likelihood of asset mispricing in certain markets, such as real estate or securities, which triggers greater risk-taking and speculation.

Recommendation 1 (Broad-based Tools – Asset Performance and Inventory Risk): ***Authorities may consider the valuation risks from the inventory of underlying asset(s) in Sharīʿah-compliant debt-based contracts when applying broad-based tools.***

50. Due to the more prevalent use of asset-based contracts in Islamic finance, IIFS are more exposed to market risks arising from adverse asset price movements. IIFS hold considerable inventories of commodities to pre-endow future sales contracts or fund the trading of asset-based transactions; e.g., selling a *murābaḥah* or *salam* contract exposes the bank to the risk of a decline in the future market price of the underlying asset, which would reduce the expected rate of return. IIFS tend to have a high and concentrated exposure to real estate and commodities, which may also make it difficult to liquidate assets during times of asset price corrections.

51. IIFS may face credit risk of asset performance and market risk from inventory of underlying asset(s) in all exchange-based contracts (*murābaḥah, ijārah*), which could lead to potentially larger/longer financial/business cycles due to stronger asset re-pricing, further amplified by larger sectoral concentration. This dynamic is particularly significant in sectors where IIFS have substantial exposures, potentially exacerbating systemic vulnerabilities. Additionally, credit risk might also be amplified in contexts where IIFS are not permitted to charge penalties on late payments; this absence of deterrents may contribute to a higher incidence of late payments, thereby elevating credit risk. Moreover, the absence of conventional liquidity facilities, which are not compliant with Sharīʿah principles, may limit the ability of IIFS to manage liquidity risk effectively, further emphasising the need for robust macroprudential measures.

52. Thus, IIFS should have a larger counter-cyclical capital buffer than conventional banks to address these cyclical vulnerabilities. However, no RSA has currently set the counter-cyclical capital buffer outside the conventional range of 0-2.5%.

Recommendation 2 (Broad-based Tools – Loss Absorption): ***Authorities may consider the level of loss absorption by IAHs and its impact on displaced commercial risk.***

53. IIFS might face pressure to align the actual returns for investors with market benchmarks, which may require smoothing profits to IAHs when returns fall short. This practice, aimed at maintaining competitive returns in the face of lower-than-expected performance from investments, can significantly impact the financial soundness and risk profile of IIFS.

54. DCR underscores a critical linkage between solvency and liquidity in IIFS, particularly under stress conditions. This linkage is exacerbated by the need to transfer shareholder funds to unsecured depositors, utilising reserves to mitigate the impact of lower returns, as well as navigating the interest rate risks created by deposit competition in dual banking systems. Such dynamics pose a unique challenge, as they necessitate a delicate balance between maintaining shareholder equity and fulfilling obligations to depositors, all the while ensuring compliance with Sharīʿah principles.

55. RSA need to adequately assess the loss-sharing between shareholders and IAHs. Adopting a market-based calibration of the alpha-factor could help mitigate the risk of overstating the extent to which unrestricted IAHs bear losses (i.e., the alpha-factor is too low, or conversely, the implied loss-bearing is too high). Furthermore, enhancing loan/financing loss coverage through higher reserves could serve as a prudent measure to address the delayed recognition of impairments, a common issue that can obscure the true financial state of an institution.

56. No RSA currently specifies a macroprudential measure targeting DCR. However, some jurisdictions have taken steps towards imposing higher standardised loan/financing loss provisioning for IIFS compared to their conventional counterparts.

Recommendation 3 (Broad-based Tools – Partnership Contracts): ***Authorities may consider additional credit risk in partnership contracts when determining the capital charge for these exposures.***

57. Partnership contracts, such as *muḍārabah* and *mushārakah*, introduce a set of risk dynamics that are distinct from those in conventional finance. In these contracts, the entrepreneur or project manager (*muḍārib* in *muḍārabah* contracts and partner in *mushārakah* contracts) may undertake riskier projects or investments, knowing that the financial losses will be shared with the bank (*rab al-mal*). This risk-taking can lead to sub-optimal project selection and management, potentially jeopardising the invested capital. In this context, IIFS face the challenge of distinguishing between high-risk and low-risk projects or entrepreneurs at the time of contract initiation. Entrepreneurs with riskier projects may be more inclined to seek

such financing, anticipating that losses will be shared, while safer projects may opt for other forms of financing. This can lead to a portfolio skewed towards higher-risk investments, increasing the likelihood of financial losses for the bank.

58. Given these elevated risks, imposing a higher capital charge on financing and investments predicated on partnership contracts, possibly in combination with higher loan/financing loss coverage through increased reserves, might be appropriate as recommended in IFSB-23. This measure aims to ensure that IIFS maintain a capital buffer sufficient to absorb potential losses arising from these high-risk exposures. This approach compensates for the typically delayed recognition of impairments in Islamic finance, offering an additional layer of financial protection against underperforming investments.

59. Some jurisdictions have already recognised the unique risk profile of partnership contracts and have raised credit risk weights for these contracts when determining capital adequacy. Additionally, certain countries have adopted more stringent standards for loan/financing loss provisioning, significantly exceeding the requirements for conventional banks. These regulatory measures acknowledge the distinct challenges posed by partnership contracts and aim to mitigate the associated financial stability risks.

Recommendation 4 (Broad-based Tools – Leverage): ***Authorities may, where necessary, establish appropriate requirements to reduce the build-up of leverage.***

60. Financial leverage of IIFS is lower compared to conventional banking, because Sharī'ah principles require that any financing must be linked to real activity, i.e., production, services, and trade. Similarly, there are restrictions on the exchange of debts and engaging in products involving speculation, but risk-sharing funding structures are encouraged. The combination of these requirements inhibits, but does not rule out, leverage in Islamic finance.

61. IIFS do not raise material levels of funding using fixed-return instruments to achieve leverage. UPSIAs tend to be a major source of funds for IIFS, except in some jurisdictions where commodity *murābahah* transaction (CMT) or *tawarruq*-based funding are the primary funding sources (despite the differing opinions of the Sharī'ah scholars on this mechanism). Similarly, IIFS do not become involved in transactions involving *gharar* or other leveraged transactions, such as collateralised debt obligations (CDOs) or re-securitisations. However, some IIFS offer CMT-based fixed-return deposits (*tawarruq*). Banks also use CMTs on the asset side of the balance sheet, not just for liquidity management but also for providing financing to their customers. The combination of CMT-based deposits and CMT-based term financing has the potential to create unlimited debt.

62. RSA could consider implementing specific macroprudential measures, such as imposing limits on the use of *tawarruq* transactions and restricting the use of certain commodities in CMTs, which can serve as effective tools to curb the excessive build-up of leverage. Some jurisdictions have already taken steps to impose restrictions on *tawarruq* transactions, *murābahah* profit margins, and/or established minimum down payment requirements for assets financed through *murābahah* contracts. These measures not only help in managing leverage but also in promoting responsible lending practices and ensuring that financing is provided in a way that supports financial stability.

4.2 Liquidity Risk, Asset-Liability/Currency Mismatches, and Volatility

63. System-wide vulnerabilities of IIFS to liquidity stress can arise from structural and cyclical factors. *Structural liquidity risk* stems from the characteristics of the financial system (e.g., interconnectedness and availability of Sharīʿah-compliant liquidity risk management tools) and the inherent illiquidity of certain asset exposures or contractual arrangements (e.g., partnership contracts, real estate). For instance, *ṣukūk* based on *murābaḥah*, *istisnā*', and *salam* contracts may have limited secondary market liquidity. In addition, IIFS tend to use PSIAs for funding their assets. The underlying profit-sharing feature in these contracts could result in situations when actual asset returns are lower than the expected returns or profit-sharing obligations with depositors or investment partners. Such an imbalance could expose IIFS to potential liquidity shortfalls if they are unable to roll over their short-term funding.[22] Cyclical liquidity risks are related to the business and financial cycles. For example, during economic downturns or periods of financial stress, asset values may decline, market liquidity can dry up, and customer deposit and PSIA withdrawals may increase. These cyclical factors can strain the liquidity position, which might be further amplified by the concentration of financing/investments in certain sectors.

Recommendation 5 (Liquidity Tools – Structural Liquidity Buffer): ***Authorities may design and implement measures that help boost structural liquidity buffers and enhance liquidity risk management.***

64. Several constraints impede efficient liquidity risk management in Islamic banking at every level (institutional, interbank, and central bank) and typically include: (a) scarcity of

[22] The rollover or refinancing of the IIFS short-term funding is not Sharīʿah compliant; there should be alternatives that are in compliance with Sharīʿah rules and principles, such as extension of financing term without any increase.

Sharīʿah-compliant liquid assets; (b) lack of Sharīʿah-compliant money market activities, including active Sharīʿah-compliant trading or repurchase (repo) agreements; (c) insufficient Sharīʿah-compliant mechanisms to mitigate liquidity risk; and (d) limited central bank liquidity support to IIFS in normal and stressed market conditions, including lender-of-last-resort schemes. Also, the particularly high duration gap between assets and liabilities and the reliance on investment accounts for funding increase the potential for liquidity pressures.

65. RSA should consider implementing specific macroprudential measures, including a stricter definition of High-Quality Liquid Assets (HQLA) or Alternative Liquidity Approaches (ALA) for IIFS as set out in GN-6,[23] higher reserve requirements, and a diversified funding mix to reduce dependence on volatile funding sources, together with limits on fixed-return contracts, which could help manage liquidity mismatches. Several countries have imposed greater cash reserve requirements for IIFS, and some have introduced restrictions on the definition of HQLA. However, no RSA currently mandates differentiated Liquidity Coverage Ratio (LCR) or Net Stable Funding Ratios (NSFR) for IIFS.

Recommendation 6 (Liquidity Tools – Forward Contracts): *Authorities may consider limiting the use of forward-exchange contracts if liquidity buffers are deemed insufficient.*

66. Forward-exchange contracts, such as *salam* and *istisnā*, carry additional market risks given the scarcity of appropriate hedging tools.[24] These contracts involve the advance payment for goods to be delivered at a future date. Since most conventional hedging instruments do not comply with Sharīʿah principles, asset price fluctuations can significantly affect the valuation of these contracts and expose IIFS to higher market risk from shared or common exposures.

67. RSA may require a higher capital charge or provisioning for unhedged exposures to reflect the increased risk profile of forward-exchange contracts. Additionally, higher liquidity buffers would provide IIFS with a greater capacity to absorb shocks arising from market volatility, thereby enhancing their overall resilience. Such buffers could be crucial in times of

[23] IFSB Guidance Note 6: *Guidance Note on Quantitative Measures for Liquidity Risk Management in Institutions Offering Islamic Financial Services [Excluding Islamic Insurance (Takāful) Institutions and Islamic Collective Investment Schemes]*

[24] Parallel *salam* and *istisnā* (a second contract with a third party to sell/manufacture the product at a specified future date) may reduce the effect of price fluctuation.

market stress, where the valuation of assets underlying forward-exchange contracts might fluctuate significantly.

68. However, so far, no RSA has implemented special restrictions or frameworks catering specifically to these risks.

Recommendation 7 (Liquidity Tools – Commodity-based Exchange Contracts): ***Authorities may consider system-wide restrictions on the repetitive and frequent use of a specific class of commodities for commodity-based exchange contracts.***

69. The use of specific commodities in commodity-based exchange contracts can create system-wide vulnerabilities. For instance, the routine buying and selling of commodities integral to *murābahah* contracts can expose IIFS and the wider financial system to market risks by creating artificial demand, which could result in higher price volatility.[25]

70. RSA are encouraged to limit the use of *tawarruq* and/or frequently used commodities in CMTs.[26] This approach would help curtail artificial demand and, thus, prevent excessive price volatility. Limits on the volume or value of commodities that can be used in such transactions could further protect against market manipulation and speculation.

71. So far, no RSA has imposed restrictions to address market risks from commodity-based exchange contracts.

Recommendation 8 (Liquidity Tools – Profit Smoothing Mechanisms): ***Authorities may require IIFS to have clear and definitive mechanisms for profit distribution and the use of reserves if funding arrangements via partnership contracts are material.***

72. Indirect interest rate risk could amplify deposit competition for IIFS. The returns on PSIAs are directly tied to the actual performance of assets financed by these accounts. If they underperform relative to prevailing market rates, the gap between expected and actual returns can precipitate redemptions, especially when conventional banks offer interest-bearing deposits. The challenge for IIFS to attract and retain low-cost deposits is further complicated by the non-guaranteed nature of the capital provided by IAHs. Unlike conventional banks that

[25] This occurs because commodity prices are inherently cyclical but also sensitive to a wide range of additional factors, including the organization of international trade, regulatory changes, and government policies.
[26] See IFSB GN-2: *Guidance Note in Connection with the Risk Management and Capital Adequacy Standards: Commodity Murābaḥah Transactions* (December 2010).

guarantee depositor funds, IIFS do not guarantee the “investment deposits” by IAHs, thereby exposing them to capital losses.

73. RSA should require IIFS to adopt clear and binding profit payout mechanisms. This may include the establishment of reserves such as PER and IRR. These mechanisms create realistic return expectations by UIAHs. The use of PER allows IIFS to smooth out payments to IAHs during periods of lower-than-expected investment returns, while IRR provides a financial cushion to absorb losses, protecting the bank's capital and offering some degree of protection to IAHs.

74. Some jurisdictions have already recognised the importance of such mechanisms and mandate the use of PER for the absorption of losses incurred by unrestricted PSIAs, reflecting a proactive approach to protecting investors.

Recommendation 9 (Liquidity Tools – Net Open Foreign Exchange Positions): ***Authorities may consider appropriate restrictions on unhedged net open foreign exchange positions.***

75. Unhedged or unmatched foreign exchange exposures might result in liquidity risk. Similarly, any changes in the market liquidity may make it difficult to sell assets in foreign currency at acceptable prices.

76. While the use of Sharī‘ah-compliant hedging is possible, it requires a linkage to a real, profit-generating asset. However, most Islamic hedging transactions are traded over-the-counter (OTC) rather than through an organised exchange, which tend to be less transparent. Although some Sharīʿah-compliant alternatives have been developed, suitable Sharīʿah-compliant options for IIFS in hedging their risks are still limited.

77. RSA may impose, where necessary, limits on net open foreign exchange positions and/or higher market risk weights on exposures that involve currency mismatches, as strategic approaches to manage and mitigate the risks associated with currency fluctuations.

4.3 Asset Concentration, Interconnectedness, and Contagion Risk

78. System-wide vulnerabilities can arise from common and/or concentrated exposures as well as high interconnectedness within the financial system. Concentration risk is most common as an important aspect of credit risk and arises from the insufficient diversification of either idiosyncratic risk or systematic risk due to large exposures to specific obligors and

sectoral factors, respectively. Sector concentration emerges when the portfolio is not perfectly diversified across sectoral factors, corresponding to systematic components of risk.[27]

79. Adverse spillover effects are externalities related to interconnectedness, caused by the propagation of shocks from systemically significant banks or through financial markets or networks ("contagion"). Banks and other financial institutions are highly interconnected, with distress or failure of one affecting others. Spillovers can arise because of bilateral balance sheets (interbank) and other exposures, asset price movements, or aggregate feedback from the real economy.

Recommendation 10 (Structural Tools – Concentration): ***Authorities may amend structural tools that specifically address potential contagion risks stemming from large and/or concentrated exposures to commodities or other underlying assets****.*

80. Concentration risk can expose IIFS to common shocks, directly and/or indirectly. Direct concentration risk arises from large exposures to specific sectors (e.g., real estate, interbank, or economic sectors) or asset classes.[28] Indirect concentration risks arise when a shock weakens banks through contagion, such as interconnectedness, asset fire sales, and a general drying up of liquidity.[29] IIFS' exposure to inventory risk, particularly from significant commodities transactions (e.g., *tawarruq*) and special sales contracts (e.g., parallel *salam*) that are not covered, alongside a concentration in specific underlying assets such as those involved in commodity *murābaḥah* transactions, amplifies these institutions' risk profiles. IIFS also have relatively high exposures to real estate through various types of financing[30] and investing.[31] Thus, the impact of an asset price shock in this sector is likely to extend beyond a single bank, especially if multiple banks are exposed to the same concentrated risk. The

[27] Name concentration implies less than perfect granularity of the portfolio, while sectoral concentration implies that risk may be driven by more than one systematic component (factor).
[28] They are direct in the sense that a shock to a particular sector or asset class would affect all banks' balance sheets with common exposures to this sector or asset class.
[29] These risks are indirect in the sense that they may stem from fragilities in other parts of the financial sector with repercussions on the pricing or quality of bank assets.
[30] "Financing of real estate" refers to an IIFS providing financing as a part of usual financial intermediation activities to generate revenues from scheduled payments made by its customers. Similar to other types of financing, real estate financing exposes the IIFS to a variety of risks, requiring effective risk management practices to be in place. In the case of an *ijārah muntahia bittamlīk* (also known as *ijārah wa iqtinā*`) contract, since the customers intend ultimately to purchase the underlying asset, the assets held by the IIFS under such a contract during the lease period will be considered as part of financial intermediation activities.
[31] "Investment in real estate" essentially refers to an IIFS investing in immovable properties when the IIFS invests its own and/or customers' funds directly in real estate assets or in real estate projects (or in partnerships in real estate or real estate projects) for commercial purposes to achieve profits from property development, or to benefit from asset price appreciation. In the case of an operating *ijārah* contract, though an IIFS leases a specified asset to the customer for an agreed period against specified instalments of lease rental, the market or price risk attached to the residual value of the leased asset at the end of the contract remains with the IIFS.

limited availability of Sharīʿah-compliant hedging tools exacerbates concentration risk and associated contagion effects.

81. The contagion risk posed by these common exposures, stemming from limited diversification opportunities within the Sharīʿah-compliant framework, underscores the need for RSA to define large exposure limits with lower thresholds and higher credit/market risk capital requirements.

82. Current exposure thresholds for IIFS often mirror or exceed those applied to conventional banks, suggesting that it may not fully account for the distinct risk dynamics of Islamic finance. This is particularly concerning for real estate used as collateral or for financing arrangements (e.g., sale and leaseback transactions). The high demand generated by IIFS in the real estate sector can lead to price distortions, exposing these institutions to the risks associated with inflated property values.

Recommendation 11 (Structural Tools – Sharīʿah Non-compliance Risk): ***Authorities may consider potential systemic implications of structural non-compliance or inconsistent application of Sharīʿah rulings.***

83. The potential systemic implications of structural non-compliance or inconsistent application of Sharīʿah rulings within the Islamic banking sector necessitate a vigilant regulatory approach to uphold the integrity and stability of Islamic finance. Operational risks stemming from Sharīʿah non-compliance not only threaten individual institutions but also have the potential to erode system-wide confidence, amplifying the risk of spillover effects across the financial system. Such non-compliance risks are particularly acute in Islamic banking, where adherence to Sharīʿah principles is fundamental to the bank's operations, products, and investments. Deviations from these principles can lead to significant reputational damage, undermining trust among depositors/IAHs and other stakeholders.

84. RSA should place SnCR at the heart of the Supervisory Review Process (Pillar 2), including a comprehensive evaluation of the Sharīʿah governance systems to ensure all aspects of their operations conform to Sharīʿah rulings and principles. Such governance systems should include rigorous Sharīʿah compliance checks, regular audits by Sharīʿah reviewers, and transparent reporting mechanisms to ensure any instances of non-compliance are promptly identified and rectified.

85. Most RSA have recognised the critical importance of Sharīʿah governance and have set comprehensive requirements for each IIFS to establish robust governance frameworks. These frameworks are essential for maintaining the Sharīʿah compliance of products and

processes, thereby protecting the Islamic banking sector against the systemic risks associated with non-compliance.

Recommendation 12 (Structural Tools – Interconnectedness): *Authorities should consider the potential for increased institutional interconnectedness of IIFS due to limited number of institutions.*

86. The interconnectedness of financial institutions can create a risk of contagion, as the distress or failure of one institution can spread to others. Excessive interconnectedness can also lead to herd behaviour, as financial institutions engage in similar investment or financing activities. If IIFS are highly interconnected, either directly or indirectly through different channels, adverse events or shocks affecting one institution can quickly spread to others. This contagion could undermine confidence in the financial system, leading to a broader systemic crisis.

87. IIFS can be highly interconnected and the distress or failure of one institution can have spillover effects on others. These spillovers can occur through various channels, including relationships between banks, asset price movements, and feedback from the real economy. The potential for increased institutional interconnectedness within the Islamic finance segment, exacerbated by the relatively limited number of players, poses significant systemic risks and potential contagion effects, especially during periods of financial stress. This interconnectedness is particularly pronounced in less developed financial systems where IIFS, *takāful* operators, and Islamic capital markets are closely linked, not just through financial transactions but also through shared governance frameworks and market practices. The compact nature of this ecosystem means that difficulties faced by one institution can quickly spread to others, amplifying systemic vulnerabilities and the potential for widespread financial disruptions.

88. RSA should consider implementing limits on exposures to connected counterparties and related parties, making a clear distinction between direct counterparties and ultimate risk owners. Such macroprudential measures would help in managing concentration risk and reducing the likelihood of contagion by ensuring that exposures among entities within the IFSI are prudently managed and diversified. This approach necessitates a more granular understanding of counterparty relationships and the cascading effects that may ensue from the failure of a single entity within the network.

89. No RSA seems to have implemented special provisions or restrictions tailored specifically to address the unique systemic risks and contagion potential within the IFSI.

Section 5: Macroprudential Policy Governance for IIFS

90. The key elements for enhancing governance in macroprudential policy involve legal clarity and transparency. This may sometimes include a designated agency for macroprudential policy with defined objectives, clear relationships with other regulators and organs of Sharīʿah governance, where relevant, as well as an articulated framework for independence, skills, accountability, and disclosure. The decision-making process should be well-defined, supported by clear processes and a set of macroprudential tools. Macroprudential authorities may at times require access to a Sharīʿah Board in formulating appropriate policies for IIFS, for example, when dealing with SnCR as a systemic risk. Having appropriate and clear structures and roles for how this takes place is important.

Recommendation 13 (Sharīʿah Governance): ***Authorities need appropriate governance mechanisms to ensure Sharīʿah-compliance is considered in formulating macroprudential policy for IIFS.***

91. Sharīʿah governance varies across jurisdictions. Most jurisdictions require each IIFS to have its own Sharīʿah Board, along with internal mechanisms for Sharīʿah compliance and Sharīʿah audit. Additionally, some jurisdictions have established centralised or national Sharīʿah authorities, with the aim of harmonising practices in the jurisdiction in line with Sharīʿah principles and rules.

92. When introducing a set of macroprudential tools to IIFS by macroprudential authorities, particularly with respect to those that may require cognisance of relevant Sharīʿah principles, due consideration should be given to ensuring that these mechanisms are in accordance with Sharīʿah rulings and principles. While the full scope of the Sharīʿah governance framework may not be applicable to macroprudential authorities, access to a Sharīʿah Board or authority that can provide advice on Sharīʿah-considerations relevant to the application of macroprudential policies to IIFS is important.

93. It would be helpful for a macroprudential authority to have an appropriate mechanism in place for obtaining Sharīʿah rulings or advice from a Sharīʿah authority, where relevant, and monitoring Sharīʿah compliance in all relevant aspects.

94. The macroprudential authority possesses the discretion to determine the suitable Sharīʿah governance approach for macroprudential policy in IIFS. This authority could be a single or a group of government institutions with such mandate and power.

95. If a specific Sharīʿah governance approach is decided upon by the macroprudential authority, a clear definition of the roles and responsibilities for each component of Sharīʿah governance should be identified and disclosed. The Sharīʿah governance structure adopted should be commensurate and proportionate with the size, complexity, and nature of Islamic banking industry within the jurisdiction.

Recommendation 14 (Leakage and Regulatory Arbitrage): ***Authorities should consider appropriate mechanisms to ensure that the risk of leakage and regulatory arbitrage is considered in formulating macroprudential policy for IIFS in dual banking systems.***

96. The potential for leakages poses challenges to the effective implementation of macroprudential policy tools. “Leakages” refers to the migration of financial activity outside the scope of application and enforcement of the macroprudential tool, potentially undermining its effectiveness. The risk of leakage is greater in dual banking systems, when different macroprudential requirements for IIFS could create incentives for arbitrage. For example, the differences in regulations and application of tools between the Islamic and conventional banking can establish a competitive advantage for one these sectors, which in turn leads to migration of activities that creates leakage and may impact the effectiveness of the tools.

97. The additional enforcement imposed on IIFS operating in a dual banking system may lead to additional costs borne by the shareholders. For example, if the RSA decided to increase the alpha factor and ask the IIFS to provide more capital, this will increase its cost of capital relative to their conventional counterpart. Another example is the requirement of maintaining HQLAs for LCR given the scarcity of these tools in the Islamic market: this implicitly means lower profits from maintaining idle cash or reserves with the central banks. The application of these macroprudential tools in both cases can create an incentive to investors (not driven by religious and ethical factors) to migrate.

98. Islamic banking activities are also closely related to other Sharīʿah-compliant financial activities operated by other IIFS. To manage its balance sheet, IIFS may invest in Sharīʿah-compliant assets, such as *sukūk*, which are under Islamic capital market supervision. IIFS may also use strategies such as collaboration with Islamic microfinance institutions to increase their financing growth. Such cross-sectoral activities should be considered when macroprudential policy is being implemented to avoid any leakages of macroprudential policy where these potential unobserved areas are not subject to observe such policy, thus questioned the policy implementation effectiveness.

99. Potential leakage can be considerable in jurisdictions with dual banking sectors and/or where conventional banks operate Islamic windows. Islamic windows require a governance arrangement that ensures a consistent macroprudential policy treatment between conventional and Sharī'ah-compliant financial intermediation while allowing for sufficient differentiation to recognise structural differences (based on IFSB-23, which guides the capital requirement on Islamic windows).

100. A different capital treatment might be applied to Islamic windows and that can vary considerably across jurisdictions. In some jurisdictions, supervisory authorities require Islamic windows to maintain a separate amount of capital and to follow the applicable minimum capital adequacy ratio requirements, while simultaneously requiring regulatory capital requirements to be met on a consolidated basis. In other jurisdictions, there is no specific requirement for Islamic windows to maintain a separate amount of capital or to meet separate regulatory capital requirements. Instead, these requirements are only imposed at the overall conventional bank level. Similarly, there might be capital adequacy issues related to the treatment of Islamic windows when the parent is based in another jurisdiction.

101. Authorities should therefore consider potential leakages and risk of regulatory arbitrage when applying differential treatment to IIFS and take appropriate measures to mitigate such risks. Authorities should be aware of the importance of thorough planning when activating any macroprudential tool to ensure that the activation of a tool specifically tailored for IIFS does not conflict with one activated for both Islamic and conventional banks in dual banking systems. Authorities should also take into consideration the integration of such tools with microprudential tools implemented at the institution level.

Appendix 1. Gap Analysis of Adapting And Calibrating Macroprudential Tools to IIFS

No	Category	Tools	Purpose	Transmission	Adaptation	Calibration	Islamic banking specificities
1	**Broad-based tools** (excessive credit growth and leverage)	CCyB	Increasing banks' loss-absorbing capacity	Slowing down credit growth by increasing funding cost	IFSB-23	• IFSB-23 • IMF Staff Guidance	• PSIA measures (alpha-factor, PER, IRR) in RWAs calculation and capital requirements • PLS Capital Requirements • Islamic banking windows (IBWs) with their own capital requirements
2		CCB	Increasing banks' loss-absorbing capacity	Possible impact on financial cycle through higher funding cost	IFSB-23	• IFSB-23 • IMF Staff Guidance	• PSIA measures (alpha-factor, PER, IRR) in RWAs calculation and capital requirements • PLS Capital Requirements • IBWs with their own capital requirements
3		Leverage ratio	Limit leverage to safeguard against error in risk-based capital buffers	Possible impact on financial cycle through higher funding cost	IFSB-23	• IFSB-23 • IMF Staff Guidance	• IBWs with their own capital requirements
4		Reserve requirements				• IFSB-23 • IMF Staff Guidance	• IBWs with their own capital requirements
5	**Sectoral tools** (cyclical challenges from exposures to households and corporate)	FTV/LTV cap	Decrease banks' LGD, decrease borrowers' PD	Direct restriction of financing	N/A	IMF Staff Guidance	• IBWs with their own capital requirements
6		LTI/DSTI cap			N/A	IMF Staff Guidance	• IBWs with their own capital requirements
7		Sectoral capital requirements			N/A	IMF Staff Guidance	• Targeted increase of RWA in PSIA • IBWs with their own capital requirements
8	**Liquidity and FX tools** (cyclica	LCR (or other liquidity buffer)	Increase stock of liquid assets to cover sudden outflows		GN-6	IMF Staff Guidance	• If relevant, where PSIA make up a significant part of the deposit base, the

							IRR should also be subject to MaPP policy • Inclusion of sukūk in the calculation
9		Liquidity charge (1)	Increase banks' loss absorption capacity				
10		NSFR	Increase stability of funding base to limit sudden outflow	Possible dampening effects on financial cycle (e.g., higher liquidity buffer and/or higher liquidity premia)	GN-6		
11		Other stable funding requirements (e.g., FTD limits)	Increase stability of funding base to limit sudden outflow	Possible dampening effects on financial cycle (e.g., higher liquidity buffer and/or higher liquidity premia)	GN-6	IMF Staff Guidance	• If relevant, where PSIA make up a significant part of the deposit base, the IRR should also be subject to MaPP policy • Inclusion of *sukūk* in the calculation
12		Net open foreign exchange position to regulatory capital					
13	**Structural tools** (address exposure concentration and misaligned incentives and moral hazard)	Capital requirements for G-SIB/D-SIB			IFSB-23	• IFSB-23 • IMF Staff Guidance	• PSIA measures (alpha-factor, PER, IRR) in RWAs calculation and capital requirements
14		Systemic risk buffer (SyRB) (2)	Increasing banks' loss-absorbing capacity	Prevent or mitigate systemic risks of a "long-term non-cyclical" nature which could disrupt the financial system and have serious negative consequences on the real economy			• PSIA measures (alpha-factor, PER, IRR) in RWAs calculation and capital requirements • IBWs with their own capital requirements

15		HLA			IFSB-23	• IFSB-23 • IMF Staff Guidance	
16		Large exposure restrictions	Limit counterparty, concentration, and contagion risk	Direct restriction of credit quality			
17		Exposure limits between financial institutions			IFSB-23	• IFSB-23 • IMF Staff Guidance	

Note: IBW=Islamic banking window; N/A=not available; (1) Liquidity charges could complement the above quantity-based ratios, such as a Pigouvian levy reflecting banks' contributions to systemic liquidity risk (e.g., the duration of their funding profile or their reliance on wholesale funding); (2) The systemic risk buffer (SyRB) aims to address systemic risks that are not covered by the CCyB or the G-SII/O-SII buffers. The level of the SyRB may vary across institutions or sets of institutions as well as across subsets of exposures. The systemic risk buffer can also be used as a sectoral capital instrument to address structural risks. However, cyclical risks should be addressed with other instruments.

Appendix 2: Overview of Specificities of Islamic Banking and Their Implications for Macroprudential Vulnerabilities and Measures

Vulnerabilities			Primary Macroprudential Measures			Comments	Recommendations
General	**Islamic-specific**	**General and Islamic-specific Implications**	**Type**	**Stylized Example**	**Country Experience**		
Excessive leverage, excessive credit growth, and asset mispricing	Credit risk of asset performance and market risk from large inventory of underlying asset(s) in all exchange-based contracts (*murābaḥah*, *ijārah*)	Potentially larger/longer financial/business cycles due to stronger asset re-pricing, amplified by larger sectoral concentration *(see below)*	Broad-based tools (earlier trigger/release, larger buffers and/or greater cyclicality component in the capital structure)	Larger counter-cyclical capital buffer	No RSA with CCyB above the conventional range (0-2.5%)		Authorities may consider the valuation risk from the inventory of underlying asset(s) in Sharīʿah-compliant debt-based contracts when applying broad-based tools.
	IIFS incurring "displaced commercial risk" (DCR) due to commercial pressure arising from the need to smooth profits to IAHs when the actual investments' pool rate of return is lower than the market benchmark	Stronger solvency-liquidity linkage under stress due to DCR, which implies a transfer of some shareholder value to unsecured depositors via reserves that help smooth profits from lending and investments (in case of lower-than-expected returns), and interest rate risk due to competition for deposits in dual banking systems;		Market-based calibration of alpha-factor determining loss-sharing;	No macroprudential calibration of DCR		Authorities may consider the level of loss absorption by IAHs and its impact on DCR.
	Counterparty and project risks from equity-based contracts (*mudarabah*, *musharakah*)	Stronger moral hazard and adverse selection of borrowers due to higher share of funding of equity-based contracts (compared to conventional banks).		Higher capital charge on financing and investments based on PLS contracts; and higher loan/financing loss coverage (reserves) to account for delayed recognition of impairments	Some jurisdictions impose higher risk weights on financing based on PLS contracts in the calculation of capital adequacy ratio and some countries with much higher (standardized) loan loss provisioning (compared to conventional banks)		Authorities may consider additional credit risk in partnership contracts when determining the capital charge for these exposures.
	Leverage through commodity *murābaḥah* transaction (CMT)-based deposits and term financing	A large share of CMT-based deposits funding CMT-based lending significantly increases leverage, and, if done systematically, can create credit risk-sensitivity due to higher debt levels within the financial system.		Limits on the use of *tawarruq* and/or certain commodities in CMTs	Weakly developed; some countries with restrictions on *murābaḥah* profit margin and minimum down payments on assets financed by *murābaḥah*		Authorities may, where necessary, restrict the build-up of leverage from debt-based contracts.

Liquidity risk, asset-liability/currency mismatches, and volatility	Constrained liquidity risk management (e.g., scarcity of Shari'ah-compliant access to central bank money, interbank funding (due to Shari'ah impediments to securities trading and hedging) and larger (positive) duration gap compared to conventional banks (with liabilities repricing faster than asset exposures)	Larger effects of liquidity shocks and greater spillover risks, with limited scope for central banks acting as lender of last resort; higher deposit run risk due to investment accounts (as major funding source - depending on country-circumstances); potentially amplified by limited Shari'ah-compliant money market participants (concentration risk)	Liquidity/FX tools (earlier trigger/release, larger buffers)	More stringent definition of HQLA; higher reserve requirements and diversified funding mix; limits on fixed return contracts (sale-based contracts)	No RSA with higher LCR/NSFR ratios; some restrictions on the definition of HQLA; several countries with high cash reserve requirements		Authorities may design and implement measures that help build additional structural liquidity buffers and enhance liquidity risk management.
	Market risk of asset price fluctuations affecting the valuation of forward exchange-based contracts (*salam and istiṣnā'*);	Higher market risk due to shared/common exposures and greater impact of price volatility due to limited hedging opportunities;		Higher capital intensity/provisioning for unhedged exposures; higher liquidity buffer(s);	No RSA with special restrictions		Authorities may consider limiting the use of forward-exchange contracts if liquidity buffers are deemed insufficient.
	Frequent buying and selling of commodities in the context of *murābaḥah* contracts could expose participants to market risk due to price volatility.	IIFS might contribute to systemic risk if repetitive and frequent commodity Murabaha transactions create artificial demand and higher volatility in commodity prices		Limits on the use of *tawarruq* and/or certain commodities in CMTs	Some RSA have imposed limits on the use of *tawarruq*	Commodities can experience significant price fluctuations due to changes in supply and demand, geopolitical tensions, changes in regulations, and other external factors.	Authorities may consider restrictions on the repetitive and frequent use of specific commodities for commodity-based exchange contracts.
	Interest rate risk due to competition for deposits in dual banking systems	Return on PSIA is linked to the actual performance of the investment pool financed by the PSIA. The performance of this pool could be less than the current market interest rate (rate of return risk). This difference may create a withdrawal risk and bank run.		Require a clear and binding profit payout mechanism (PER and IRR) that provides some protection to the UIAHs to avoid run risk	Some jurisdictions mandate PER for unrestricted PSIA	Conventional banks typically offer interest-bearing deposit products, which can be perceived as more attractive to depositors seeking fixed returns. This competitive pressure can make it challenging for Islamic banks to attract a sufficient amount of low-cost deposits. Additionally, the capital provided by IAHs is not guaranteed by the Islamic Banks as compared to the guaranteed funds of depositors by conventional banks. PSIA is not guaranteed and the actual performance of PSIA may lead to loss of the equity invested by the IAHs	Authorities may require IIFS to have clear and definitive mechanisms for profit distribution and the use of reserves if funding arrangements via partnership contracts are material
	Shari'ah impediments on currencies trading (*sarf*)	*Sarf* contracts are treated similarly to the sale of debt, where parties take possession of the countervalues. Their pervasive and frequent use results in system-wide relevance.		Limits on net open foreign exchange position and/or higher market risk weights on exposures with currency mismatches	No RSA with special restrictions	Countervalues of the same currency must have the same amount, and the contract shall not contain any condition regarding the delivery of any of the countervalues. Based on these requirements the use of	Authorities may consider appropriate restrictions on unhedged net open foreign exchange positions.

						conventional tools to hedge currency risk is limited in Islamic banks.	
Asset concentration, interconnectedness, and contagion risk	Inventory risk in the investment/trading portfolio from significant commodities exposures (e.g., *tawarruq*) and uncovered/parallel special sales contracts (parallel *salam*); concentration of underlying asset (e.g. commodity *murābaḥah*); relatively high exposure to real estate market	Contagion risk from common exposures due to limited diversification	Structural tools (sector/asset class-specific requirements)	Large exposure limits have lower threshold, higher credit/market risk capital intensity	Exposure limits similar to (or even higher than) conventional banks	High demand for the real estate market -created by Islamic banks heavily relying on real estate as collateral or as a medium to provide financing (sale and lease back) can lead to distortions in property prices, and in this way Islamic banks are also exposed to inflated property values	Authorities may amend structural tools that specifically address potential contagion risks stemming from large and/or concentrated exposures to commodities or other underlying assets.
	Operational risk from Shari'ah non-compliance risk	Structural non-compliance (or inconsistent application of Shari'ah rulings) could result in a system-wide loss of confidence and increase the possibility of spillover effects		Special attention in Pillar 2 (Supervisory Review Process) reviews on policies and procedures (product/processes) to mitigate Shari'ah non-compliance risk	Most RSA have set comprehensive requirements of Shari'ah governance systems for each IIFS	Islamic banks must ensure that their operations, products, and investments comply with Sharī'ah principles. There is a risk of non-compliance if the bank's activities are not in line with the required Islamic finance principles, which could lead to reputational damage	Authorities may consider potential systemic implications of structural non-compliance or inconsistent application of Sharī'ah rulings that can result in a system-wide loss of confidence.
	Higher institutional interconnectedness due to less developed financial system(s)	There is high interconnectedness due to small number of players in Islamic finance (IIFS, *takaful,* and capital markets), which can pose challenges in terms of systemic risks and contagion effects during periods of financial stress.		Limits on exposures to connected counterparty and related parties (with greater distinction between direct counterparty and ultimate risk owner)	No RSA with special provisions		Authorities should consider the potential for increased institutional interconnectedness of IIFS due to limited number of institutions

Note: *The colour coding of Country Experience uses green to indicate areas that are satisfactory, orange for those that require some effort to improve, and red to highlight areas that are weakly developed.

Appendix 3: Specificities of Islamic Banking with Implications for Macroprudential Policy (Count of Responses from Survey Participants)

Differentiated/Specific Risks of Islamic Banking	**Highly significant for all banks**	**Somewhat significant for all banks**	**Significant for only a few banks**	**Little or no relevance**	*Responding Jurisdictions*
Capital requirements and smoothing practices in PSIA	31%	32%	19%	19%	*16*
Market risk due to large asset inventory holdings (1)	0%	62%	15%	23%	*13*
Higher structural vulnerability to funding shocks (2)	47%	13%	27%	13%	*15*
Concentration risk (3)	30%	25%	40%	5%	*20*
Sharīʿah non-compliance risk	47%	7%	27%	20%	*15*
Asset-liabilities mismatches (4)	29%	24%	41%	6%	*17*
Indirect interest rate risk (5)	42%	8%	25%	25%	*12*
Displaced commercial risk (DCR)	13%	33%	33%	20%	*15*
Other	20%	0%	40%	40%	*5*

Source: IFSB Survey (2023). Note: PSIA=profit-sharing investment accounts; risks are ordered based on relevance (which is defined as the combined percentage share of "highly significant for all banks" and "somewhat significant for all banks"); (1) in sale- or lease-based contracts; (2) due to scarcity of Sharīʿah-compliant liquidity management tools and/or deficiencies in financial market infrastructure (e.g. concentrated brokerage, illiquid securities); (3) due to focus on particular sectors (e.g., real estate), countries (e.g., less regional diversification); (4) including positive duration gap between investments and funding (i.e., between fixed-rate long-term assets and variable-rate short-term liabilities); (5) due to competition for deposits in dual banking systems