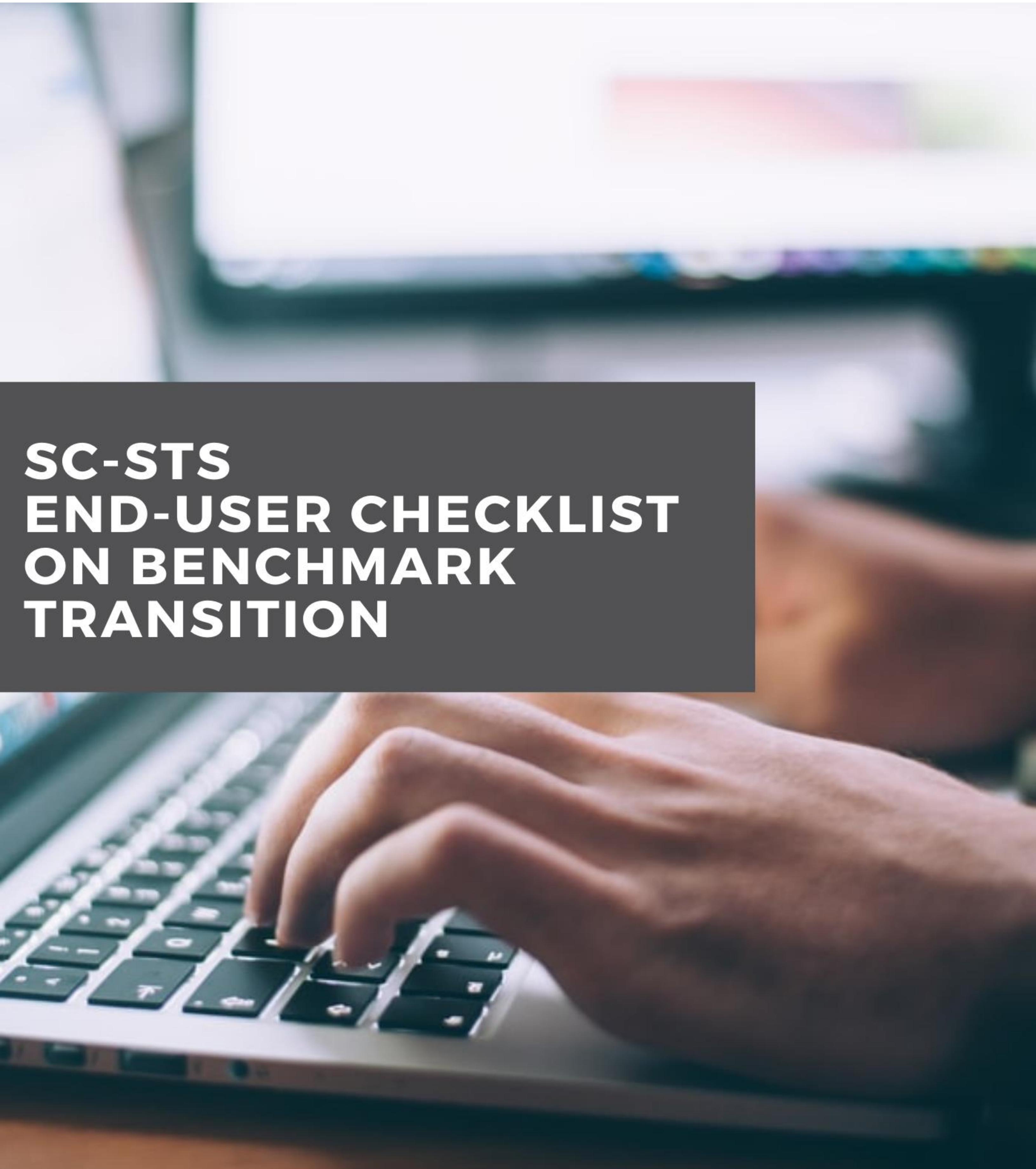
SC-STS END-USER CHECKLIST ON BENCHMARK TRANSITION



Introduction

The Association of Banks in Singapore and the Singapore Foreign Exchange Market Committee have identified the Singapore Overnight Rate Average (SORA) as the alternative interest rate benchmark to replace Singapore Swap Offer Rate (SOR) and have set out a roadmap for this transition.

SORA is the volume-weighted average rate of borrowing transactions in the unsecured overnight interbank SGD cash market in Singapore between 8.00am and 6.15pm. Administered by MAS, SORA is underpinned by a deep and liquid overnight funding market, and is commonly monitored by money market participants as a reflection of daily conditions in SGD money markets.

This shift is necessary given the expected discontinuation of USD LIBOR, following the announcement by the UK regulatory authorities that the benchmark will not be sustained by regulatory powers after end-2021. SOR relies on USD LIBOR in its computation methodology and the likely discontinuation of USD LIBOR after end-2021 directly impacts the future sustainability of SOR. In addition, to facilitate an orderly transition away from SOR ahead of its discontinuation after end-2021, SC-STS has set out a plan to cease the use of SOR in new contracts from end-April 2021[1]. This is akin to timelines in other major jurisdictions globally[2], adding urgency to preparations needed for the adoption of alternative reference rates.

The industry-wide interest rate benchmark transition from SOR to SORA is overseen by the Steering Committee for SOR Transition to SORA (SC-STS), a group of industry participants convened by MAS. The SC-STS recognises the importance of providing guidance on practical considerations for the transition away from SOR, and in collaboration with consultancy firms and trade associations, is setting out a checklist for end-users' reference in preparations for benchmark transition.

Additionally, end-users may access materials (publications, announcements, webinar replays and FAQs) on the SOR to SORA transition i.e. background, key concepts, transition roadmap and a brief overview of global IBOR reform from the SOR to SORA website. Specifically, the newly launched SORA market compendium and the report on customer segments and preferences are useful resources that could help users prepare for the shift away from SOR, and for adoption of SORA across a range of financial products (derivatives, floating rate notes, business and retail loans).

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[1] Refer to media release on announcement of timelines to cease issuance of SOR-linked loan products, and publication of market guidance to support the transition to SORA, 27 October 2020, <https://abs.org.sg/docs/library/sc-sts-announces-timelines-to-cease-issuance-of-sor-linked-loan-products-and-publishes-market-guidance-to-support-transition-to-sora.pdf>

[2] Refer to:

- UK Sterling Risk Free Rate WG statement on the impact of coronavirus on the timeline for firms' LIBOR transition plans, April 2020, <https://www.bankofengland.co.uk/-/media/boe/files/markets/benchmarks/rfr/rfrwg-further-statement-on-the-impact-of-coronavirus-on-timeline-for-firms-libor-transition-plans.pdf>
- ARRC Recommended Best Practices for Completing the Transition from LIBOR, 3 Sep 2020, <https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2020/ARRC-Best-Practices.pdf>

Important disclosures about the checklist

Whilst the scope of the SC-STS is focused on SOR to SORA transition, many businesses in Singapore have exposures to 'Inter-Bank Offered Rates' ('IBORs') in other currencies that are also being replaced by alternative overnight rates. As an example, businesses may have exposure to US Dollar LIBOR or GBP LIBOR. This checklist therefore refers to 'IBOR' more broadly, though due care should be taken to understand the specifics of transition for IBORs other than SOR.

1. It is provided for informational purposes only.
2. It does not constitute legal, accounting, tax or financial advice and is not exhaustive.
3. It does not define regulatory or supervisory expectations, and whether and to what extent any market participant makes use of it is voluntary.
4. It identifies risks and mitigations for asset managers and corporates. Specific suggestions may not be applicable to all firms. Each market participant should assess for itself whether and to what extent to use the checklist in preparing for the transition from SOR.
5. While it might be helpful for other types of users, this checklist is focused on corporates and asset managers.

Practical implementation checklist summary

The SOR transition is a significant event impacting a broad set of financial products and market segments. Given how deeply embedded SOR is in the financial ecosystem, it is important to plan, mobilise and execute a program that encompasses all of the firm's potential exposures.

There are two checklists included in this guidance depending on the firm's potential impact from IBOR. The following questions are designed to help firms navigate which checklist is more applicable for the organization:

Which best describes your business exposures?

- **Small number of single currency (USD, or SGD) loans;**
- **No derivative contracts; and**
- **No fixed income securities (e.g. Floating Rate Notes (FRN), perpetual bonds)**

→ **Checklist #1**

- **Several SGD loans; or**
- **Loans in multiple currencies; or**
- **Derivatives for treasury or hedging activity; or**
- **Fixed income securities (e.g. FRNs, perpetual bonds)**

→ **Checklist #2**

Checklist #1

1. Governance and Project Setup

Goal: Implement a robust governance framework to oversee IBOR transition	
1.1	Appoint a member of management to oversee IBOR impact analysis and transition.
1.2	Set out periodic reporting framework to the Board or those charged with governance on - • the impact of IBOR change across the organisation; • quantified IBOR exposure; and • status of transition. The broader SC-STS Transition Roadmap can be used as a reference.
1.3	Identify resources and budget for the transition program, including, where necessary - • engagement of external consultants and legal counsel; and • system changes.

2. Quantify IBOR Exposure

Goal: Quantify and monitor IBOR exposure	
2.1	Establish an inventory of IBOR-linked exposures (by product and maturity) for on-balance sheet items (loans, insurance contracts, deposit and investments, bond issuances) as well as off-balance sheet exposures such as lines of credit.
2.2	Quantify IBOR exposures maturing beyond 2021 including estimated future products.
2.3	Design templates and a repeatable process for periodic reporting / management monitoring as IBOR exposures are managed down and replaced with new reference rates.

3. Contract Analysis

Goal: Address the financial, counterparty, and legal impacts arising from IBOR contracts	
3.1	Review and establish an inventory of existing IBOR contracts. The primary impact of IBORs are on contracts relating to loans, derivatives, and investments (e.g. fixed income securities, bonds purchased, other capital market products). However, consideration should also be given to material IBOR exposures from commercial agreements such as, but not limited to, service level agreements, supplier and sales agreements (including late payment invoicing), offering memorandums, insurance policies, fund documentation and rental agreements.
3.2	The inventory should identify the presence and financial impact of 'fallbacks' (i.e. the applicable rate if the IBOR were not to exist), as well as a risk assessment of the impact on counterparties, investors, operations and legal.
3.3	Begin dialogue with internal and external counterparties (such as banks or on an

	intragroup/intercompany level e.g. with Head Office/parent company) on IBOR discontinuation on existing and expected product needs. • For **new** contracts that reference IBOR, ensure there are robust fallbacks where possible, such as the recommended fallback language being developed by SC-STS, and other industry working groups. • For **existing** contracts that reference IBOR, renegotiate / repaper contracts that mature after December 2021 with relevant counterparties to incorporate enhanced fallbacks or amendments.

4. Operational and System Impact Assessment

Goal: Address the operating model and technology implications for successful transition	
4.1	For each business function, enquire and prepare an inventory of where IBOR reference rates are used and could be impacted across systems, processes, end-user computing and modelling. Examples include - • Net Present Value (NPV) calculations for accounting, valuation or business use; • Bond issuance programme processes and investor notification/disclosure; and • Cash management, cashflow forecasting or payment processing.
4.2	Assess technology, operational, accounting and settlement capability for the changes to how interest will be calculated and paid. Specifically, this should consider - • Capability to use rates that may be set in arrears, as compared to LIBOR/SOR rates that are set in advance; • Whether the published Compounded SORA rates (e.g. 3-month Compounded SORA rate published on MAS' website) are sufficient for business needs, or whether daily rate collection is required; and • Updates required in systems for changes to contract rates (including the spread above the reference rate) as compared to existing IBOR contracts.
4.3	Ensure that any valuation models using IBOR inputs (such as LIBOR or SOR yield curves) can handle new reference rate (e.g. SORA) inputs.
4.4	Begin to plan for internal testing and third-party validation, where applicable.
4.5	Update documentation on key controls impacted by the change.
4.6	Establish role of key control functions such as Internal and External Audit.

5. Tax and Accounting Assessment

Goal: Determine and address the applicable tax, accounting and disclosure implications	
5.1	Consider accounting implications to the following, with reference to (i) the relief provided by the International Accounting Standards Board ('IASB') on IBOR reform; (ii) guidance available through SC-STS; and (iii) consultation with external auditors - • Whether changes to legacy loan contracts are deemed to be loan modifications • Updates to calculations for impairment provision, goodwill impairment and lease accounting, where relevant/material.
5.2	Follow announcements from key tax jurisdictions on IBOR treatment and assess tax requirements. Consider transfer pricing mechanism and any references to IBORs that require update and re-consideration of 'arm's length' support.
5.3	Consider international implications, including overseas finance teams' ability to operationalise finance changes based on overseas jurisdiction IBOR progress and tax requirements
5.4	Consider disclosure requirements. These include debt filings/prospectus to investors as a risk disclosure item, the annual report on the impact and management of the transition, and in the financial statements on accounting policy change and estimation.

Checklist #2

1. Governance and Board Reporting

Goal: Implement a robust governance framework with accountable senior executives to assess the impact of transition and oversee the firm's response	
1.1	Appoint an accountable Senior Executive to coordinate and oversee the multi-year IBOR transition program activities across business lines and functions.
1.2	• Mobilise a Steering Committee chaired by the Senior Executive, with appropriate senior leadership representation across all business lines and enterprise functions. • Mobilise workstream leaders accountable to the Steering Committee.
1.3	Define periodic communications and reporting with Board of Directors, Executive Management Committee and appropriate sub-committees.

2. IBOR Programme Setup and Funding

Goal: Establish enterprise-wide programme to monitor resources dedicated to IBOR transition	
2.1	Conduct an initial impact assessment across financial products, contracts, business processes (including systems, models, accounting, regulatory reporting and treasury).
2.2	Identify accountable business sponsors, project/workstream leads, and project management staff to execute transition program activities.
2.3	Identify resources and budget that are required to implement the transition program, including the engagement of external consultants and legal counsel.
2.4	Obtain internal funding approval.
2.5	Develop an implementation roadmap for impacted businesses, products and enterprise functions. The roadmap should identify inter-dependencies. Applicable IBOR working groups can be used as a reference for example the SC-STS Transition Roadmap.
2.6	Identify internal and external stakeholder groups, and develop communication strategy to proactively engage and increase levels of education with impacted stakeholders including senior management, the corporate Board, and external parties.

3. Quantifying IBOR Exposure

Goal: Quantify and monitor IBOR exposure	
3.1	Establish an inventory of IBOR-linked exposures (by product and maturity) for on-balance sheet items (loans, insurance contracts, deposit and investments, bond issuances) as well as off-balance sheet exposures such as lines of credit.
3.2	Quantify IBOR exposures maturing beyond 2021 including estimated future products.
3.3	Define business strategy and timeline for reducing the reliance on IBOR for new transactions.
3.4	Design templates and a repeatable process for periodic reporting / management monitoring as IBOR exposures are managed down and replaced with new reference rates.

4. Contract Analysis

Goal: Understand and address the financial, counterparty, and legal impacts from IBOR contracts.	
4.1	Review and establish an inventory of existing IBOR contracts. The primary impact of IBORs are on contracts relating to loans, derivatives (where special attention may be needed for non-linear derivatives e.g. caps, floors, in-arrears etc.) and investments (e.g. fixed income securities, bonds purchased, other capital market products). However, consideration should also be given to material IBOR exposures from commercial agreements such as, but not limited to, service level agreements, supplier, and sales agreements (including late payment invoicing), offering memorandums, insurance policies, fund documentation and rental agreements.
4.2	The inventory should identify the presence and financial impact of 'fallbacks' (i.e. the applicable rate if say SOR were not to exist), as well as a risk assessment of the impact on counterparties, investors, operations and legal.

4.3	Begin dialogue with internal and external counterparties (such as banks or on an intragroup/intercompany level e.g. with Head Office/parent company) on IBOR discontinuation on existing and expected product needs. • For **new** contracts that reference IBOR, ensure there are robust fallbacks where possible, such as the recommended fallback language being developed by SC-STS, and standardised fallback language by other industry bodies e.g. International Swaps and Derivatives Association (ISDA) IBOR Fallback Supplement. • For **existing** contracts that reference IBOR, renegotiate / repaper contracts that mature after December 2021 with relevant counterparties to incorporate enhanced fallbacks or amendments and/or through standardised contractual amendments published by different industry bodies e.g. ISDA IBOR Fallback Protocol[3].

5. Treasury Impact Assessment

Goal: Identify, measure, monitor, and control treasury and valuation risks.	
5.1	Assess the impact of transition on treasury activities and valuation. This should consider any **economic** and **cashflow 'mis-match' risks** that may arise and how these are mitigated. Specific examples include: • Identifying any new difference in underlying rates – for example where a SOR loan was historically hedged with a SOR swap, and now may have SORA swap hedging a Fallback Rate (SOR) loan. • Identifying any new differences between cashflow settlement and pricing convention between swaps and underlying hedged exposures. • Assessing implications of cashflow mis-match risks to cash reserves as well as foreign currency risk management.
5.2	Understand new benchmark data needs for **valuation**, **pricing** and **models**. For example: • Consider whether the Treasury Management systems and valuation models are able to cater for rates that may be set in arrears, as compared to LIBOR/SOR rates that are set in advance. • Consider whether capability is required to build new yield curves, for example for pricing, calculating interest on collateral posted or received or valuation of derivatives. • Consider whether the published indices for alternate reference rates (e.g. 3-month Compounded SORA rate available on MAS' website or 90-day Average SOFR published by Federal Reserve Bank of New York) are sufficient for business needs,

[3] A protocol is a multilateral contractual amendment mechanism that is used to make standard amendments to ISDA documentation among adhering counterparties, providing an efficient way to implement industry standard contractual changes to legacy trades and avoiding the need to bilaterally negotiate the same amendments with each party individually.

	and accessible on different financial data platforms i.e. Bloomberg/Eikon/others or whether daily rate capture and calculation of compounded rates is required. • Consider updates required in systems for changes to contract rates (including the spread above the reference rate) as compared to existing IBOR contracts.
5.3	Confirm vendor system readiness, and any new vendors such as market data suppliers, for pricing, risk and valuation.
5.4	Establish processes for updating business risk management procedures.
5.5	Periodically report the identified material risks to management.

6. Operational and System Impact Assessment

Goal: Address the operating model and technology implications for successful transition.	
6.1	For each business function, enquire and prepare an inventory of the technology, operational processes, end-user computing and modeling tools that captures where SOR or IBOR reference rates are used and could be impacted. Examples include: • Net Present Value (NPV) calculations for accounting, valuation or business use; • Bond issuance programme processes and investor notification/disclosure; and • Cash management, cashflow forecasting or payment processing.
6.2	Assess technology, operational, accounting and settlement capability for the changes to how interest will be calculated and paid, including for rates that may be set in arrears.
6.3	Begin to plan for internal testing and third-party validation for operationalising these alternate reference rates.
6.4	Conduct table-top exercises with internal stakeholders and/or key vendors to cover the transition, ongoing processing, and contingency planning.
6.5	Ensure that documentation around key controls is updated.
6.6	Establish role of key control functions such as Internal and External Audit.
6.7	Begin to plan for internal testing, third party validation and readiness for transition.

7. Tax and Accounting Assessment

Goal: Determine and address the applicable tax, accounting and disclosure implications.	
7.1	Consider accounting implications to the following, with reference to (i) the relief provided by the International Accounting Standards Board ('IASB') on IBOR reform; (ii) guidance available through SC-STS; and (iii) consultation with external auditors - • Hedge accounting assessment considering items under Section 5 on Treasury impact assessment • Whether changes to legacy loan contracts are deemed to be loan modifications • Updates to calculations for impairment provision, goodwill impairment and lease accounting, where relevant/material.
7.2	Follow announcements from key tax jurisdictions on IBOR treatment and assess tax requirements. Consider transfer pricing mechanism and any references to IBORs that require update and re-consideration of 'arm's length' support.
7.3	Consider international implications, including overseas finance teams' ability to operationalise finance changes based on overseas jurisdiction IBOR progress and tax requirements
7.4	Consider disclosure requirements. These include debt filings/prospectus to investors as a risk disclosure item, the annual report on the impact and management of the transition, and in the financial statements on accounting policy change and estimation.

About the Associations

The Association of Banks in Singapore (ABS)

ABS is a non-profit organisation that represents the interests of the banking community in Singapore. In doing so, ABS works closely with the relevant government authorities towards the development of a sound financial system in Singapore. Since its establishment in 1973, ABS has promoted a unifying voice on banking issues. It has brought its members closer together through various guidelines and banking practices as well as the support of projects of mutual benefit to face the challenges of the financial and banking community in Singapore. Today ABS has a membership of 153 local and foreign banks.

ABS Benchmarks Administration Co. Pte Ltd (ABS Co) is an independent locally incorporated company fully owned by the Association of Banks in Singapore. It was established in June 2013 specifically to own and administer the ABS Benchmarks in Singapore - the Singapore Interbank Offered Rate (SIBOR), the Swap Offer Rate (SOR), the SGD Spot FX and the THB Spot FX. ABS Co will also administer Fallback Rate (SOR).

More information on ABS is available at: https://abs.org.sg/.

Steering Committee for SOR Transition to SORA (SC-STS)

The SC-STS was established by the Monetary Authority of Singapore on 30 August 2019 to oversee the industrywide interest rate benchmark transition from SOR to SORA. Comprising senior representatives from key banks in Singapore, relevant industry associations, and MAS, the Committee is responsible for providing strategic direction on industry proposals to develop new products and markets based on SORA. The Committee is also engaging with stakeholders to seek feedback and raise awareness on issues related to the transition from SOR to SORA.

More information on SC-STS is available at: https://abs.org.sg/benchmark-rates/about-sc-sts.

Association of Corporate Treasurers Singapore (ACTS)

ACT(S) is a non-profit organisation of individual memberships drawn from corporate treasurers and finance professionals involved in corporate treasury work.

Members are typically in corporate organisations on the buy-side of the marketplace. Established in 1991 as the Treasurer's Club, the association has grown in numbers and spread. As Singapore increasingly become a treasury hub, membership now include group and regional corporate treasurers, treasury centre managers and other professional whose treasury activities cover a wide geographical spread.

More details can be found on the ACTS website: https://act.org.sg/.

Investment Management Association of Singapore

Representing over 100 investment managers with assets under management in Singapore of more than SGD1.4 trillion, the Investment Management Association of Singapore (IMAS) seeks to set the benchmark for the investment and fund management industry in Singapore by fostering high standards and professionalism while promoting exemplary practices among its members. IMAS was formed on 22 September 1997 and is the national representative body of investment managers spearheading the development of the industry in Singapore. It serves as a forum for members in discussions as well as a collective voice where representation is needed on behalf of the investment management industry, facilitating training for its members, and contributing towards investor education.

More details can be found on the IMAS website: http://www.imas.org.sg.

Life Insurance Association, Singapore (LIA Singapore)

Established in 1962, the Life Insurance Association, Singapore (LIA Singapore) is the not-for-profit trade body of life insurance product providers and life reinsurance providers based in Singapore and licensed by the Monetary Authority of Singapore (MAS). The vision of member companies is to provide individuals with peace of mind and to promote a society where every person is prepared for life's changing cycles and for those situations unforeseen. They are committed to being a progressive life insurance industry by collectively enhancing consumer understanding, promoting industry best practices, and through the association fostering a spirit of collaboration and mutual respect with government and business leaders.

More information can be found on the LIA website: https://www.lia.org.sg/.