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Resource Guide Change Summary

This LIBOR ARM Transition Resource Guide may be updated periodically as new information becomes available. The chart below will summarize changes made to the document after its initial publication. This will not be an exhaustive list of changes; therefore, we recommend that you review the current version of the document in its entirety.

Section	Description of Change	Change Date

Introduction

LIBOR ARM Transition Resource Guide Purpose

The Consumer Products Working Group of the Alternative Reference Rates Committee (ARRC) created this LIBOR ARM Transition Resource Guide (Resource Guide) to assist in the transition of residential LIBOR-based Adjustable Rate Mortgages (ARMs), including home equity products (collectively referred to herein as LIBOR ARMs), to a new index upon LIBOR cessation. This Resource Guide reflects the ARRC's efforts to develop voluntary recommendations, tools, and resources intended to serve all stakeholders throughout the transition process, with consideration for the downstream effects on the consumer of changing the index on a LIBOR ARM. Use of this Resource Guide and other materials could supplement your firm's broader LIBOR transition execution plans and facilitate a successful transition for mortgage industry participants.

IMPORTANT DISCLOSURES

- References to LIBOR in the Resource Guide are intended for US Dollar LIBOR only
- References to LIBOR ARMs are related to consumer, residential mortgage and home equity products only
- The Resource Guide is intended to provide a consolidated source of information and tools for voluntary
 use by impacted stakeholders in preparing for the transition of LIBOR ARMs to a new index
- The Resource Guide does not express or detail any regulatory or supervisory expectations or requirements
- Each stakeholder should decide for itself whether and to what extent to use the Resource Guide in preparing for the transition from LIBOR (i.e., use of the information is voluntary, and it will not necessarily address all material risk management concerns of each stakeholder)

What the Resource Guide IS:

- A consolidated information source that includes reference information or related links
- A framework to assist stakeholders in thinking through impacts related to the transition from LIBOR, both operational and for consumers
- A potential source of examples and templates that stakeholders can choose to use if they find them helpful
- A living document that will be updated as new questions arise and outstanding questions are answered

What the Resource Guide is NOT:

- An exhaustive source of all LIBOR transition information or guidance
- A prescriptive guide to what replacement index should or may be chosen
- A regulatory directive to take any actions
- A source of regulatory or supervisory requirements
- A source for legal, accounting, tax, or financial advice
- A source of operational or technical requirements
- A policies or procedures manual

If you have questions or recommendations about the content of this Resource Guide or recommendations for additional information that it could include, please contact the ARRC at ARRC@ny.frb.org.

About the ARRC

The Alternative Reference Rates Committee is a group of private-market participants convened by the Federal Reserve Board and the Federal Reserve Bank of New York to help ensure a successful transition from U.S. dollar (USD) LIBOR to a more robust reference rate, its recommended alternative, the Secured Overnight Financing Rate (SOFR). The ARRC is comprised of a diverse set of private-sector entities that have an important presence in markets affected by USD LIBOR and a wide array of official-sector entities, including banking and financial sector regulators, as non-voting ex-officio members: the Federal Reserve Board (FRB), the Federal Reserve Bank of New York, the Department of the Treasury, the Office of Financial Research (OFR), the Securities and Exchange Commission (SEC), the Consumer Financial Protection Bureau (CFPB), the Office of the Comptroller of the Currency (OCC), the Federal Housing Finance Agency (FHFA), the Commodity Futures Trading Commission (CFTC), the Federal Deposit Insurance Corporation (FDIC), the Department of Housing and Urban Development (HUD), the New York State Department of Financial Services, and the National Association of Insurance Commissioners (NAIC).

For more information, visit the ARRC's website at: https://www.newyorkfed.org/arrc

LIBOR ARM Transition Stakeholders

The transition of LIBOR ARMs to a replacement index requires diligent planning informed by input from, and the transition activities of, many different advisory and regulatory organizations and stakeholders. Most stakeholders will be actively involved in the transition process. However, some stakeholders, such as Borrowers or Residential Mortgage-Backed Securities (RMBS) Investors, will not have to undertake any activities to effect the transition; nonetheless, they should be aware of its impact.

Impacted Stakeholders

- Borrowers
- Note Holders¹
- Loan Servicers²
- Vendors
- RMBS Issuers³
- RMBS Certificate Administrators⁴
- RMBS Trustees⁵
- RMBS or LIBOR ARM Investors

¹ "Note Holder" as used in the Fannie Mae/Freddie Mac Uniform Instruments, or a party with similar obligations stated in the relevant note or agreement.

Includes sub-servicer relationships. The servicer is expected to know and understand any sub-servicing constructs. Any reference in this Resource Guide to Loan Servicer includes sub-servicers. No further distinction will be provided.

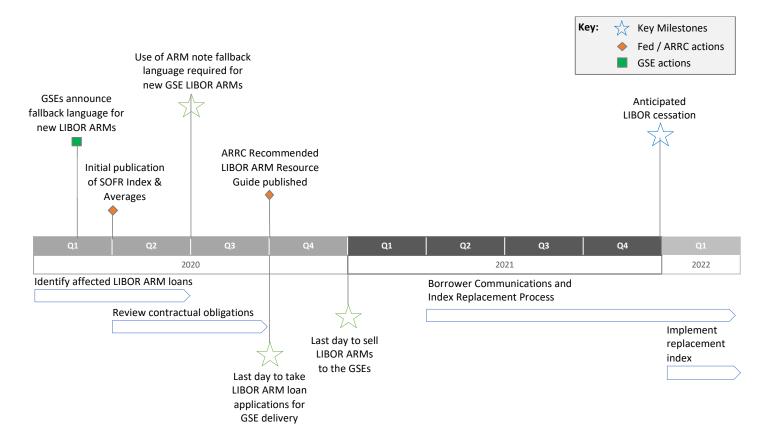
³ Issuers of Residential Mortgage-Backed Securities (RMBS) into the capital markets including depositors and sponsors.

⁴ Entities with varying duties to the RMBS or similar trust (e.g., administrative or oversight).

⁵ Entity with the legal obligation and power to administer the RMBS or similar trust.

Timeline: Key milestones and suggested readiness timeframes to support LIBOR transition

This timeline highlights some key industry milestones (announced or anticipated) and offers suggested timeframes for engaging in certain activities related to LIBOR transition; however, stakeholders may choose to complete their transition activities outside of the suggested windows of time based upon their firm's unique analysis, decisions and contractual terms. It is important to note that that the planning and execution activities reflected in the timeline assume LIBOR cessation on 12/31/2021. If the anticipated LIBOR cessation date changes from 12/31/2021, then planning and execution activities may shift earlier or later than reflected in the timeline. Also, other factors could affect planning and execution of LIBOR transition.



Because the planning and execution activities include multiple steps that are dependent on certain milestones, the suggested timeframes may vary. For example,

- Consumer Communication activities (outside of notifications required by regulation) could occur within a wide window from approximately early Q2 2021 or perhaps earlier through final LIBOR transition execution. The communications may occur in phases to initially educate the borrower about LIBOR cessation and subsequently provide details of the selected replacement index and related timing.
- Activities related to analyzing and selecting a replacement index may occur in phases. The suggested timeframes assume that transition will trigger upon LIBOR cessation; however, certain products or contracts may allow for transition at different times and the stakeholders should plan transition execution accordingly. It is recommended that servicers plan to communicate with Noteholders at least six months prior to expected

LIBOR cessation. This is to allow enough time to complete communications with Noteholders, including Noteholder selection of a replacement index, and execute the LIBOR transition on the affected consumer products following LIBOR cessation.

Risk in the LIBOR ARM Transition Process

Although the scope and nature of LIBOR transition impacts will vary widely by stakeholder, any stakeholder with LIBOR ARM exposure should consider the operational, reputational, financial, litigation, compliance, and other risks associated with the transition. Those risks are not addressed in this Resource Guide.

Impacts by Stakeholder

Impacts for most stakeholders will vary based on their level and type of exposure to LIBOR ARMs, and the contract language that outlines key roles and responsibilities regarding an index replacement. This section provides information and "thought starters" for the different stakeholders who are likely to be impacted by the transition away from LIBOR. Consider the following points as you read and use the information in this section:

- There are multiple variations on process, roles and order of operations depending on the contract language of individual LIBOR ARM notes, servicing agreements and other types of investor agreements what is allowable, and who is designated with key roles, responsibilities, and decision rights.
- In general, there will be an entity responsible for key decisions, and an entity responsible for executing the index replacement these may not necessarily be the same entity. For example, in some cases, the process may be initiated by Loan Servicers who will then work with Note Holders as needed for instruction and approval. In other cases, the issuer, trustee, or administrator may initiate key steps of the process.
- Each Note Holder will need to complete its own independent analysis and selection of a replacement index.
- There are no "one size fits all" industry best practices or standard processes or procedures that instruct Note Holders on how to evaluate and select a replacement index. While industry groups, such as the ARRC and, regulators such as the CFPB, and others may publish recommendations or relevant information, the Note Holder is ultimately responsible for substantiating the process by which it evaluates and selects a replacement index.
- Regulators may review LIBOR transition plans and related execution, including activities concerning replacement index analysis, selection, and decisions. Stakeholders should consider consulting with their respective regulators to share relevant documentation and record keeping plans in connection with the index selection and transition process. Affected stakeholders should also consider relevant disclosure and other obligations under federal securities laws.
- Borrowers with LIBOR-based products will not need to take any actions to effect the transition away from LIBOR; nonetheless, they should be aware that LIBOR is slated to be discontinued. Their Loan Servicer should provide materials to explain how LIBOR transition will affect their loans and that they should direct any questions about their loans to their Loan Servicer.

Regardless of the variation in roles and responsibilities, a number of activities will generally need to be carried out for all LIBOR ARM loans pursuant to relevant contracts.

STAKEHOLDERS MOST LIKELY TO HAVE A LIBOR TRANSITION ROLE

Suggested Activities:	Vendors	Note Holders	Loan Servicers	RMBS Issuers	RMBS Admin	RMBS Trustees
Inventory LIBOR ARM- related exposure		Ø	Ø	Ø	⊘	Ø
Assess contracts & determine responsibilities		⊘	Ø	⊘	⊘	Ø
Assess impacts	Ø	Ø			Ø	
Develop LIBOR transition plans	⊘	Ø	Ø		Ø	Ø
Manage transition	⊘	Ø	Ø		Ø	
Choose replacement index		Ø				Ø
Manage communications	✓	Ø	Ø		Ø	Ø

Inventory Exposure of LIBOR ARMs

Determine and inventory your organization's LIBOR ARM exposure, including instruments that may have imbedded LIBOR ARM exposures such as RMBS

STAKEHOLDERS MOST LIKELY TO HAVE A LIBOR TRANSITION ROLE

Suggested Activities:	Vendors	Note Holders	Loan Servicers	RMBS Issuers	RMBS Admin	RMBS Trustees
Inventory LIBOR ARM- related exposure		Ø	Ø	Ø	Ø	⊘

- 1. Compile a list of all LIBOR ARM-related contractual requirements or ancillary exposures (e.g., mortgage servicing, subservicing contracts, RMBS bond interest, mortgage servicing rights modeling)
- 2. Quantify all LIBOR ARM exposure (including those backing other investments such as RMBS) in dollars and units
- 3. Determine which LIBOR tenor(s) your LIBOR exposure(s) utilize (e.g., 1 month, 1 year, etc.) as well as if the tenor uses a different tenor calculation method (e.g., 3-month average of 1-month LIBOR)
- 4. Create an inventory of all exposure areas to help prioritize planning, transition timing, and resource allocation

EXAMPLE Exposure Inventory

Area	Exposure Classification	Contract Counterparty	\$ Current Exposure (b)	# Units	Issue	Contact
Servicing	Residential Mortgage	Note Holder 1	45.6	180,000 loans	Change Index	John Doe
Servicing	Residential Mortgage	Note Holder 2	21.0	35,000 loans	Change Index	David Jones
Vendor	Serving System	Vendor A	N/A	N/A	New rate/index table(s)	Jane Doe
Vendor	Serving System	Vendor B	N/A	N/A	Change late fee calculation	Sally Smith
Investment	Reporting system	Internal	88.0	15 systems	Change index	Rand McNally
Investment	Accounting	Internal	88.0	15 systems	Accounting Changes	Jeff Doe
RMBS Administration	Certificate/ Bond Admin System	Internal	10.0	100 bonds Or systems	Change Index	Joe Doe

Complete Contract Review



Assess LIBOR-based contracts and determine stakeholder responsibilities

STAKEHOLDERS MOST LIKELY TO HAVE A LIBOR TRANSITION ROLE

Suggested Activities:	Vendors	Note Holders	Loan Servicers	RMBS Issuers	RMBS Admin	RMBS Trustees
Assess contracts & determine responsibilities		Ø	Ø	⊘	Ø	Ø

- 1. Identify and obtain access to all of your LIBOR-indexed contracts and other LIBOR-related documents
- 2. Analyze all LIBOR ARM and ARM-related loan and contract documents
 - Loan Servicer review of mortgage note/rider index replacement language
 - Loan Servicer and Note Holder (could include RMBS stakeholder) review of servicing agreement terms for index replacement
 - RMBS Administrator & Trustee of RMBS documents for index replacement of collateral or bonds
- 3. Review and capture what, if any, trigger and fallback language is contained in each existing mortgage note, related servicing agreement or RMBS contract
 - Identify party responsible to select replacement index
 - Identify any stated trigger events for index replacement, if any (e.g., "unavailable" or "no longer quoted," permanent or pre-cessation triggers)

Potential steps to take:

- Identify the specified replacement index, if any, or other index replacement parameters, such as adjustments to margins and interest rate caps, if any
- 4. Review your relevant documents (e.g., mortgage documents, servicing agreements) to determine LIBOR transition timing and responsibilities, including notification and disclosure
- 5. Identify parties to each contract and determine how you may need to interact with them for LIBOR transition
- 5. Categorize LIBOR ARM contracts to facilitate transition planning and execution activities:
 - By responsible parties and requirements
 - Responsibility may be assigned or modified by subsequent agreements (e.g., servicing agreement, pooling and servicing agreement, RMBS documents)
 - By permissible actions for index replacement
- 7. Consult your legal counsel for interpretation and assistance, as needed

Assess Impacts



Assess operational, technical, and other impacts

STAKEHOLDERS MOST LIKELY TO HAVE A LIBOR TRANSITION ROLE

Suggested Activities:	Vendors	Note Holders	Loan Servicers	RMBS Issuers	RMBS Admin	RMBS Trustees
Assess impacts	⊘	Ø	Ø	Ø	Ø	

- 1. Identify process, cost impacts and timeline of changes needed within loan servicing systems
- 2. Identify process, cost impacts and timeline of analytical system changes (e.g., models, forecasting systems)
- 3. Identify process, cost impacts and timeline of reporting changes (e.g., for operations, investments, treasury)
- 4. Identify process, cost impacts and timeline of changes needed in other financial systems
- 5. Review your relevant sites and operational documents (e.g., websites, talking points, emails, training materials, procedures) to locate LIBOR references that require updates
- 6. Identify process, cost impacts and timeline of changes needed to support Borrower disclosure and notifications, Loan Servicer communications and other updates

Develop LIBOR transition plans



Develop plans for implementation, communication, and education

STAKEHOLDERS MOST LIKELY TO HAVE A LIBOR TRANSITION ROLE

Suggested Activities:	Vendors	Note Holders	Loan Servicers	RMBS Issuers	RMBS Admin	RMBS Trustees
Develop LIBOR transition plans	Ø	Ø	Ø		Ø	Ø

- 1. Establish key transition milestones and timing, including operational, communication, and LIBOR cessation transition trigger events
- 2. Determine all internal and external stakeholders involved in completing key milestones
- 3. Develop plan for execution and tracking, including consideration of any required system updates
- 4. Create written procedures that outline how you will execute an index replacement
- 5. Create broad communication strategy and plan i.e., who internally needs to be involved in executing communications, who externally may need to be informed of the change (e.g., Borrower, Loan Servicer, Mortgage Insurance company, RMBS holder), timing and method of communication
- 6. Loan Servicers establish a plan to communicate with responsible parties to explain and validate index replacement process plans
- 7. Note Holders or other stakeholders responsible to select a replacement index prepare to provide clear and timely direction on the replacement index to the Loan Servicers, as appropriate
- 8. Loan Servicers develop escalation protocols and a work plan in the event that the party responsible for the index replacement decision fails to provide guidance upon LIBOR cessation
- 9. Establish education strategy and training plan to support your firm's transition execution i.e., which groups among those with active roles in the transition need to be educated on the change (e.g., Loan Servicer employees, RMBS holders)
- 10. Develop a plan specifically related to Borrower education and index change notification
 - Refer to prior published ARRC materials, which include some timelines
 - Follow regulatory communication and notice rules related to your organization, which are not intended to be outlined or detailed in this Resource Guide
 - Consider communications or messages that are in addition to required regulatory notifications that can provide further education about LIBOR transition. Examples of such messages could include:
 - "Frequently asked questions" materials for use as employee talking points, internal or external website landing pages, and employee training. Example topics could include:
 - Why LIBOR is no longer available
 - What the replacement index is, how it was selected, and who administers it
 - Clarification that LIBOR cessation is an industry-wide event
 - Potential options for Borrowers (e.g., refinance to a fixed rate or non-LIBOR indexed adjustable rate mortgage, pay off the LIBOR ARM, allow the LIBOR ARM to transition to the replacement rate)
 - Details of the transition period for the spread adjustment, if appropriate
 - Information about how an index change might impact payments and why
 - An "early notification" type letter/template that could be sent to the Borrowers, notifying them of upcoming activity and high-level explanations

Potential steps to take:

- A "pre-LIBOR replacement notification" type letter/template that could be sent to the Borrowers, notifying
 them that the index replacement will occur in the coming months giving them further details, if available, such
 as what the new index is expected to be, the anticipated effective date, a reminder of why the index is
 changing, how the change will affect their payment and responsibilities, what they need to do, and who to
 contact with questions
- 11. Determine identification, escalation, and governance process for incoming questions and significant issues that are identified to ensure resolution (e.g., call center protocol, complaints management process). Consider including monitoring of complaints related to the transition
- 12. Determine post-transition testing and reviews

Manage transition



Actively manage the transition

STAKEHOLDERS MOST LIKELY TO HAVE A LIBOR TRANSITION ROLE

Suggested Activities:	Vendors	Note Holders	Loan Servicers	RMBS Issuers	RMBS Admin	RMBS Trustees
Manage transition	Ø		Ø		⊘	Ø

Potential steps to take:

- 1. Establish program structure and assign accountable leaders and team to manage through the transition
- 2. Identify needed project reporting
- 3. Establish a process to capture new exposure through LIBOR cessation
- 4. Determine if a database of changes or other documentation is required to be maintained for future use
- 5. Determine if you require Note Holder or other outreach plan to track issues and implement responses
- 6. Leverage an established, or create a new complaints management process for escalated issues during the transition

Choose replacement index



Conduct supporting analysis, documentation, and approval of decisions

STAKEHOLDERS MOST LIKELY TO HAVE A LIBOR TRANSITION ROLE

Suggested Activities:	Vendors	Note Holders	Loan Servicers	RMBS Issuers	RMBS Admin	RMBS Trustees
Choose replacement index		Ø	Ø			✓

Potential steps to take:

1. Determine at the loan, contract, or investor level who is responsible for operationally selecting and providing direction/approval for the replacement index (e.g., "Note Holders")

Potential steps to take:

- 2. Determine whether Federal or State regulatory requirements are relevant to your entity
- 3. Confirm that the Loan Servicer will be responsible for operationally enacting the index change and communicating with the Borrower
- 4. Loan Servicers initiate contact with responsible parties to discuss and validate index replacement process plans
- 5. Entity responsible for selecting the replacement index consider the analysis and documentation needed to evaluate whether the replacement index is an appropriate replacement for the relevant tenor of LIBOR. ARRC, or other industry recommendations or materials, as well as regulator recommendations or materials, may be useful for reference and support. Each entity is responsible for the process by which it evaluates and selects a replacement index.
- 6. Determine internal departments, executives, or other resources needed to sign off on replacement index. Consider areas such as legal, compliance, treasury, tax, and possibly other areas
- 7. Establish a process, including a timeline, to communicate the decision to Loan Servicers, or others who may be responsible for executing the rate replacement, and to authorize replacement

Manage communications



Manage communications throughout the transition

STAKEHOLDERS MOST LIKELY TO HAVE A LIBOR TRANSITION ROLE

Suggested Activities:	Vendors	Note Holders	Loan Servicers	RMBS Issuers	RMBS Admin	RMBS Trustees
Manage communications	Ø	⊘	Ø		Ø	Ø

- 1. Determine whether Federal or State regulations govern notifications for your entity
- 2. Identify examples of communications available or develop communications that align with your communication and education plans
- 3. Establish timing of information needed (e.g., provide potential "notional timeline" of activities and events leading up to changing the index for a LIBOR ARM Borrower)
- 4. Ascertain what information, if any, must be acknowledged by Borrowers
- 5. Execute communication and education plans established in the "Develop LIBOR transition plans" section of this Resource Guide

Published Guidance, Tools, and Templates

ARRC Guidance and Information

		ARRC Information and Guidance
Published	•	ARRC main site
Information	•	<u>Transition from LIBOR (including SOFR overview)</u>
	•	2020 Objectives
	•	Practical Implementation Checklist for SOFR Adoption
	•	Options for Using SOFR in Adjustable Rate Mortgages
	•	ARRC Recommendations Regarding More Robust LIBOR Fallbacks Contract Language For New Closed-End,
		Residential Adjustable Rate Mortgages
	•	ARRC Announces Recommendation of a Spread Adjustment Methodology for Cash Products
	•	ARRC Releases Best Practices for Vendors' Transition to SOFR
	•	<u>Vendor Readiness Survey Results</u>
	•	ARRC Buy-Side/Asset Owner Checklist
	•	ARRC Internal Systems and Processes: Transition Aid for SOFR Adoption

Other Published Guidance and Information

Other Published Guidance and Information	
Agency	Location
Consumer Financial Protection Bureau (CFPB)	 CFPB Blog CFPB Real Estate Settlement Procedures Act (Reg X) and Truth in Lending Act (Reg Z) Mortgage Servicing Rules (Small Entity Compliance Guide) CFPB Takes Steps to Facilitate LIBOR Transition
Federal Financial Institutions Examination Council (FFIEC)	Joint Statement on Managing the LIBOR Transition
Federal Housing Finance Agency (FHFA)	FHFA LIBOR Transition website
Federal Reserve Bank of New York	 Secured Overnight Financing Rate Data SOFR Averages and Index Data
Federal Reserve Board	■ Federal Reserve Board Supervision & Regulation Report Nov 2019
Financial Accounting Standards Board (FASB)	 Hedge accounting notice Main Site for FASB rate reform information
Internal Revenue Service (IRS)	Regulatory Tax Relief
Office of the Comptroller of the Currency (OCC)	 OCC Bulletin 2020-68 LIBOR Transition: FFIEC Statement on Managing the LIBOR Transition and Guidance for Banks OCC Semiannual Risk Perspective (Spring 2020)

Industry Resources, Tools, and Templates

Source	Location
Fannie Mae and Freddie Mac	 Fannie Mae LIBOR Transition Page Freddie Mac LIBOR Transition Page Fannie Mae & Freddie Mac LIBOR Transition Playbook Fannie Mae & Freddie Mac LIBOR Transition FAQs
Mortgage Bankers Association (MBA)	 MBA LIBOR Resources webpage MBA adjustable rate mortgage disclosure template
National Association of Federally-Insured Credit Unions (NAFCU)	Part 2: Preparing for the Phase-Out of LIBOR