

SENIOR INVESTMENT MANAGERS SEMINAR 2019

ACLI
Financial Security...for Life

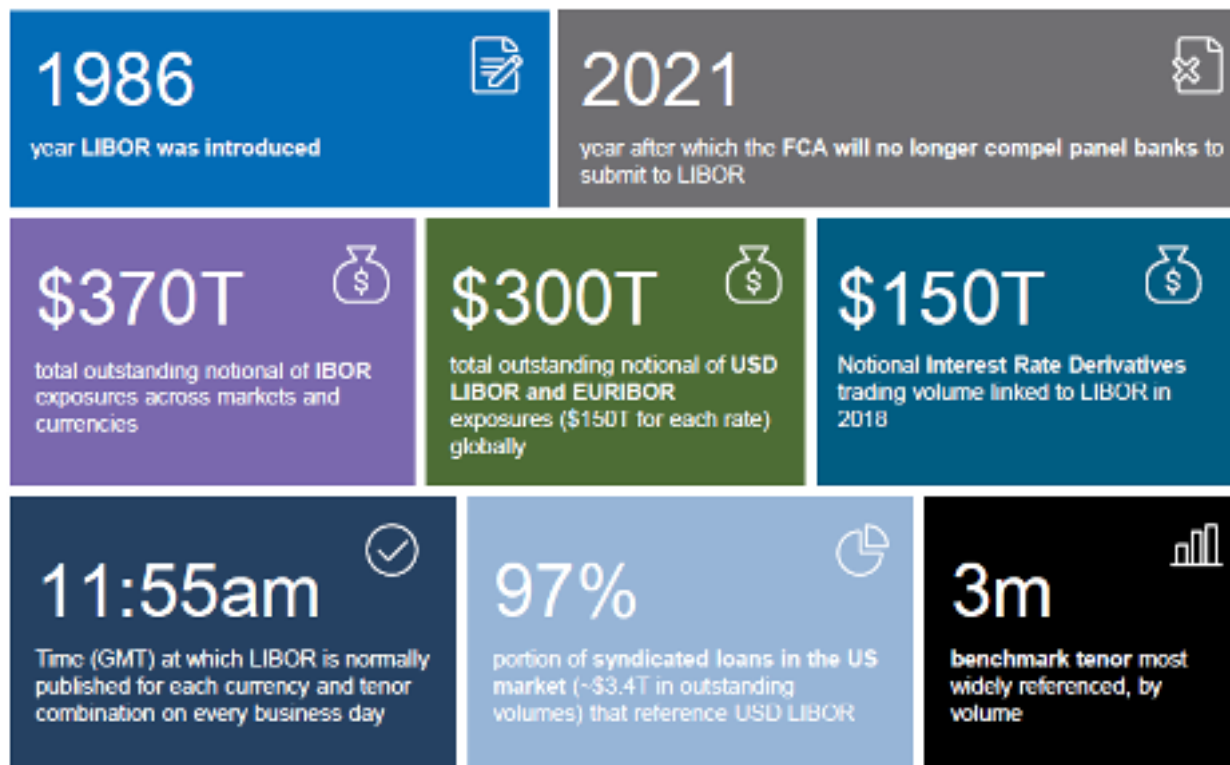
NOVEMBER 3-6

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End of LIBOR and Implications for Life Insurance Industry

LIBOR & Its Impact



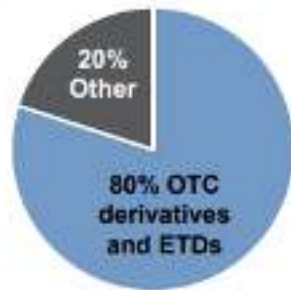
Source: ISDA, *IBOR Global Benchmark Survey 2018 Transition Roadmap*, February 2018; Goldman Sachs (data as of 2014)

The World's Most Important Number



The main categories of contracts indexed to IBORs include OTC derivatives and ETDs, syndicated loans, securitized products, business loans, retail loans, floating rate bonds and deposits.

% IBOR linked contracts by total notional outstanding

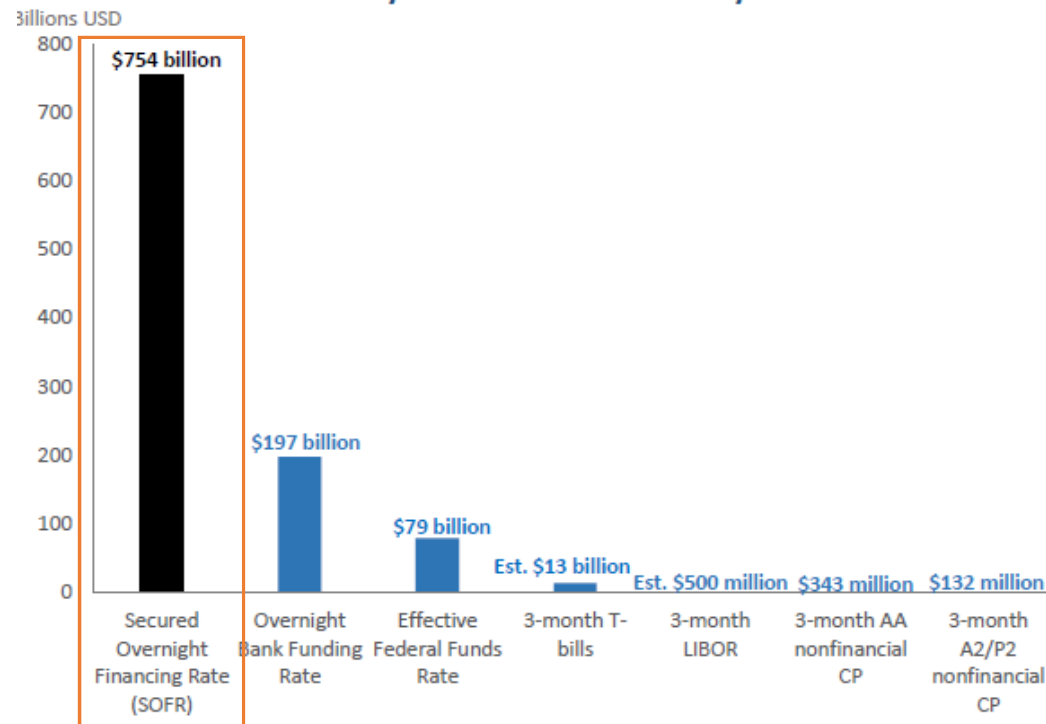


Product	Product examples
• OTC derivatives	+ Interest rate swaps, FRAs, cross-currency swaps
• ETDs	+ Interest rate options, Interest rate futures
• Loans	+ Syndicated loans, business loans, mortgages, credit cards, auto loans, consumer loans, student loans
• Bonds and FRNs	+ Corporate and non-US government bonds, agency notes, leases, trade finance, FRNs, covered bonds, capital securities, perpetuals
• Short-term instruments	+ Repos, reverse repos, time deposits, CDs, commercial paper
• Securitized products	+ MBS, ABS, CMBS, CLO, CMO
• Other	+ Late payments, discount rates, overdraft

Source: ISDA, *IBOR Global Benchmark Survey 2018 Transition Roadmap*, February 2018

Goodbye LIBOR, Hello SOFR

Daily Volumes in U.S. Money Markets

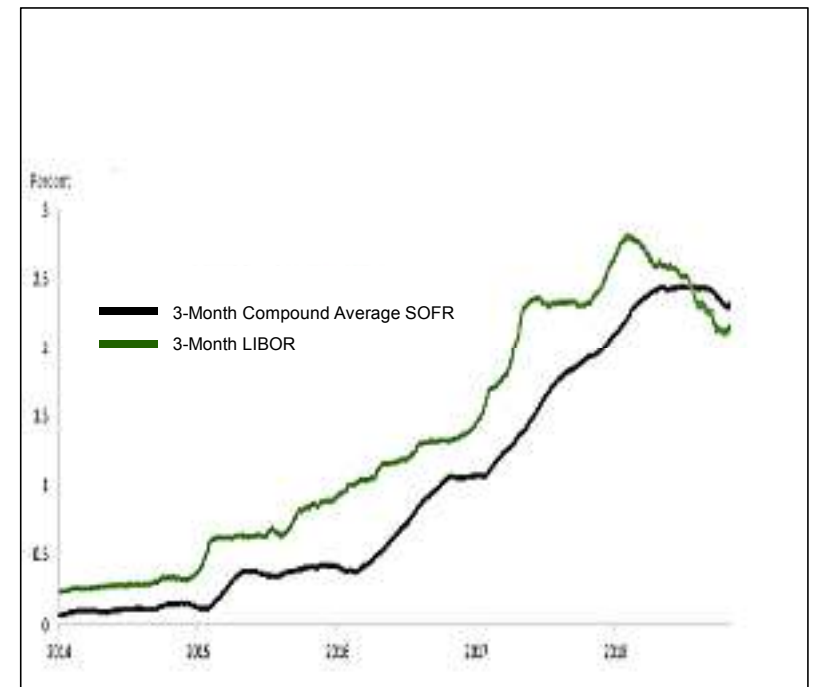
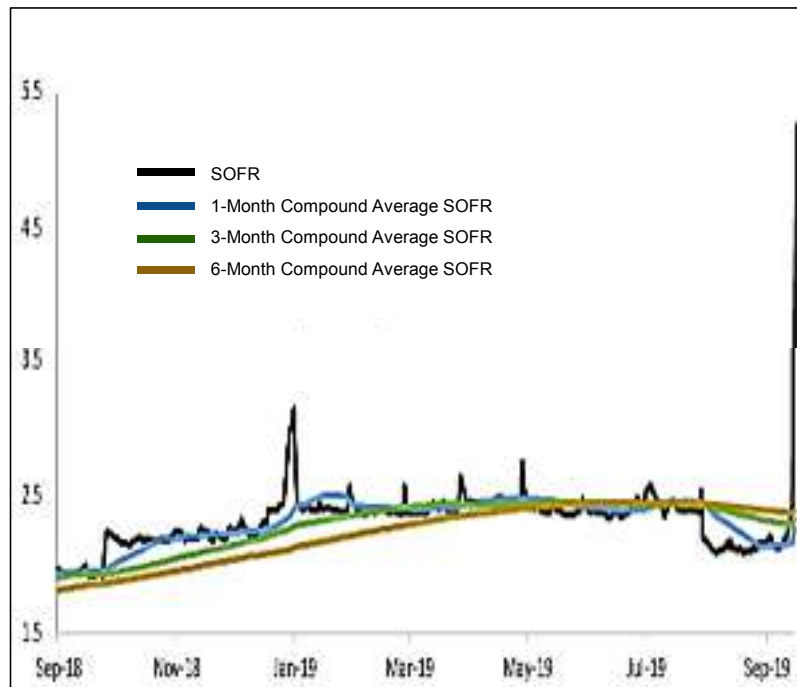


Source: *Second Report of the Alternative Reference Rates Committee*, March 2018

Key Features & Differences

LIBOR	SOFR
London Interbank Offered Rate (LIBOR) Average interest rate for short-term, inter-bank unsecured loans	Secured Overnight Financing Rate (SOFR) Secured overnight repo rate based on US Treasury repo transactions
Term (O/N, 1-mo, 3-mo, 6-mo, & 12-mo)	Overnight (compounded)
Incorporates credit risk premium	No credit risk premium
Forward looking	Backward looking
Based on submissions from panel banks	Based on observable market transactions
Illiquid, not deep and not transparent	Liquid, deep and transparent
Reflects bank cost of funds	Reflects cost of borrowing against Treasuries
Source: ICE Benchmark Administration	Source: Federal Reserve Bank of NY
11:55 am London time	8:30 am New York time

Averages of SOFR are Less Volatile than LIBOR



Source: Alternative Reference Rates Committee, *Frequently Asked Questions*, September 19, 2019

SOFR – Market Adoption



Source: Alternative Reference Rates Committee, *SOFR: A Year in Review*, April 2019
 Data from CME Group (cash Issuances, futures and cleared swaps), ICE (futures) and LCH (cleared swaps)

ARRC's Paced Transition Plan

STEP	ANTICIPATED DATE OF COMPLETION	ACTUAL DATE
1. Infrastructure for futures and/or OIS trading in the new rate is put in place by ARRC members	2018 H2	✓ ARRC members already trading futures and OIS
2. Trading begins in futures and /or bilateral, uncleared, OIS that reference SOFR.	By end 2018	✓ CME began SOFR Futures on May 7, 2018 ; ICE to launch on October 22, 2018
3. Trading begins in cleared OIS that reference SOFR in the current (EFFR) PAI and discounting environment	2019 Q1	✓ LHC offered SOFR OIS and basis swap clearing on July 18, 2018 ; CME began clearing OTC SOFR swaps on October 1, 2018
4. CCPs begin allowing market participants a choice between clearing new or modified swap contracts (swaps paying floating legs benchmarked to EFFR, LIBOR, and SOFR) into the current PAI/discounting environment or one that uses SOFR for PAI and discounting	2020 Q1	✓ CME began clearing swaps using SOFR PAI/discounting on October 1, 2018
5. CCPs no longer accept new swap contracts for clearing with EFFR as PAI and discounting expect for the purpose of closing out or reducing outstanding risk in legacy contracts that se EFFR as PAI and discount rate. Existing contracts using EFFR as PAI and the discount rate continue to exist in the same pool, but would roll off over time as they mature or are closed out.	2021 Q2	✓ LCH has announced that is expects to move SOFR PAI/discounting on both new and legacy swaps during the second half of <u>2020</u>
6. Creation of a term reference rate based on SOFR-derivative markets once liquidity has developed sufficiently to produce a robust rate.	By end of 2021	

Preparedness is Key

- Understand your exposures
 - Financial
 - Legal
 - Valuation, risk management, & operations
 - Tax, accounting, & regulatory
- Education
- Transition plan
- Transition LIBOR positions