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Life After Libor

NCSHA annual conference

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October 2019

Libor exposure in the public finance sector

» Less than 1% of Moody's-rated credits have significant exposure to Libor sunset in 2021

» Exposure concentrated in 3 sectors

- Gas Prepayment: **29%**
- Housing: **7%**
- Higher Education: **5%**

» Strong credit profile and structural provisions will allow issuers to mitigate Libor transition risk

Libor exposure in the housing sector

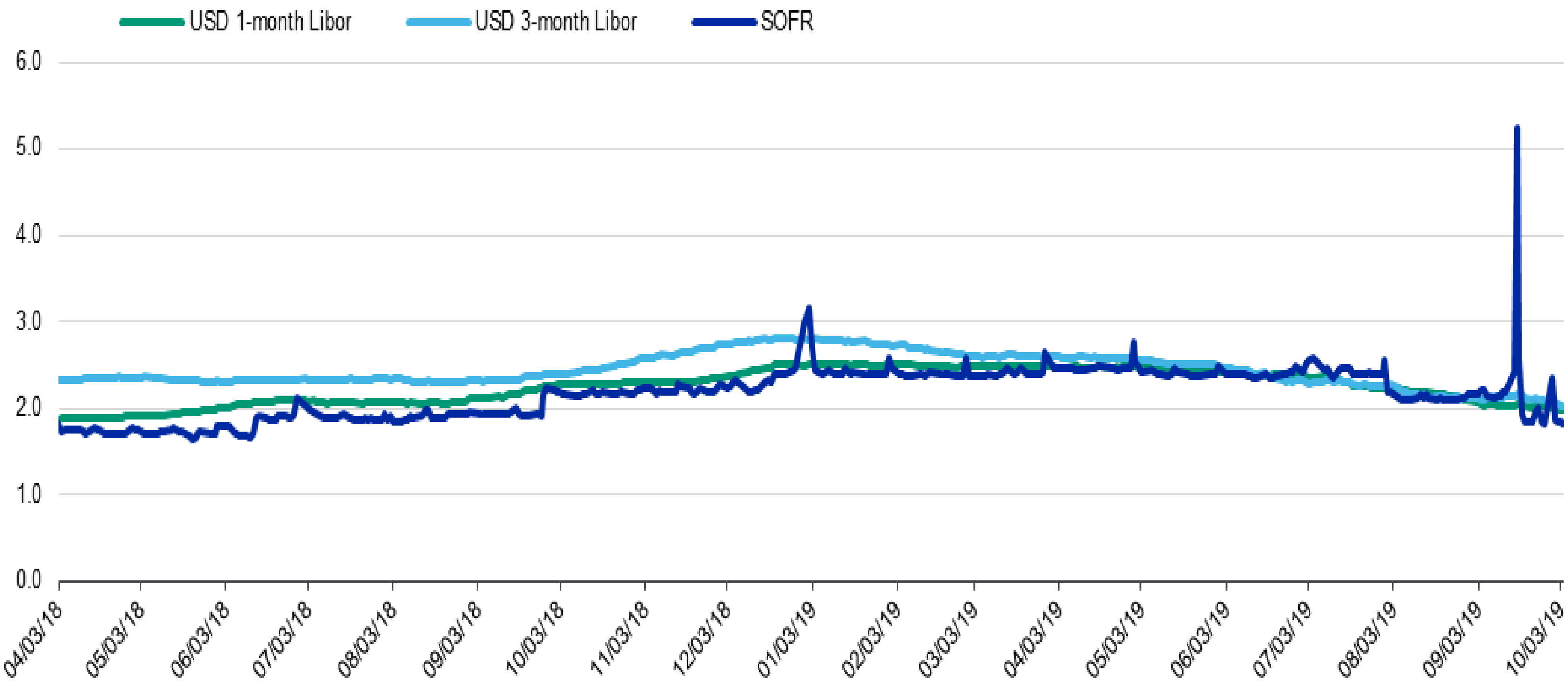
- 7% of Moody's-rated housing credits have significant exposure to Libor; mainly on the swap side
  - 15 single-and-multi-family programs
  - 6 issuer ratings
  - 1 military housing rating
- Like other municipal issuers, HFAs have been slow in addressing Libor transition, awaiting guidance from:
  - ISDA: replacement language in the derivative contracts
  - U.S. Treasury: tax guidance (comment period ends 11/25)
  - GASB: accounting guidance (comment period ends 11/27)

Actions taken by HFAs on swaps

- In January 2019, NDHFA entered into a hybrid SIFMA-based swap, switching to Libor after 5 years
  - Par termination option at the end of the 5^{th} year
  - Hedges interest rate risk on Day 1, but also provided transition flexibility
- IHDA & IFA subsequently engaged similar swaps with par termination option effective at the end of the initial SIFMA period
- MN Housing and NDHFA also started incorporating replacement language into their swap contracts
  - Flexibility to change to a mutually-agreed upon replacement index

Actions taken by HFAs on floaters

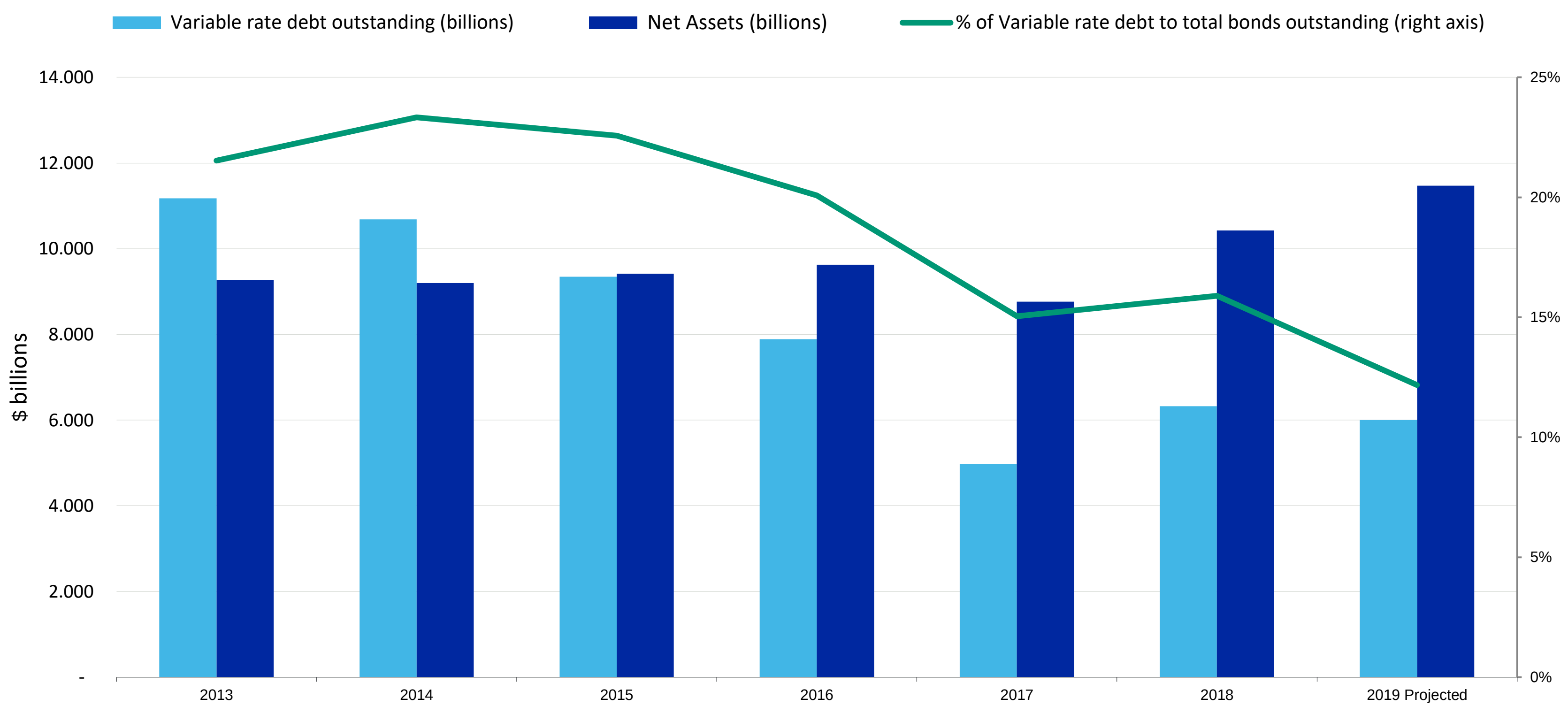
- » CHFA issued its first SOFR-linked floater in May
- » SOFR (secured overnight financing rate) has been volatile since its inception in April 2018



Sources: Bloomberg, Federal Reserve Bank of New York

HFA financial strength mitigates Libor risk

- » HFA fund balance grew by 20% to $10.4 billion in 2018
- » Variable rate debt as % of outstanding bonds likely to drop to 12% in 2019
- » Conservative stress test shows minimal effect on HFA financial strength



Sources: Moody's-adjusted HFA audited financial statement

Key Takeaways

» HFA financial strength and sophisticated management mitigate Libor transition risks

  – Par termination options are valuable and unique in the public finance space

» However, prolonged delay in the development of a comprehensive plan will be credit negative

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