

Armenia Money Market Working Group

December 2018



European Bank
for Reconstruction and Development

Money Market : Role and main features

Preconditions and building blocks for well functioning money markets

Money Market benchmark rates and why they are so important?

Proxies for MM benchmark rates

Guiding principles for a reliable Money Market benchmark rates

International Tendencies

Case of Armenia

CBA Money Market Contact Group



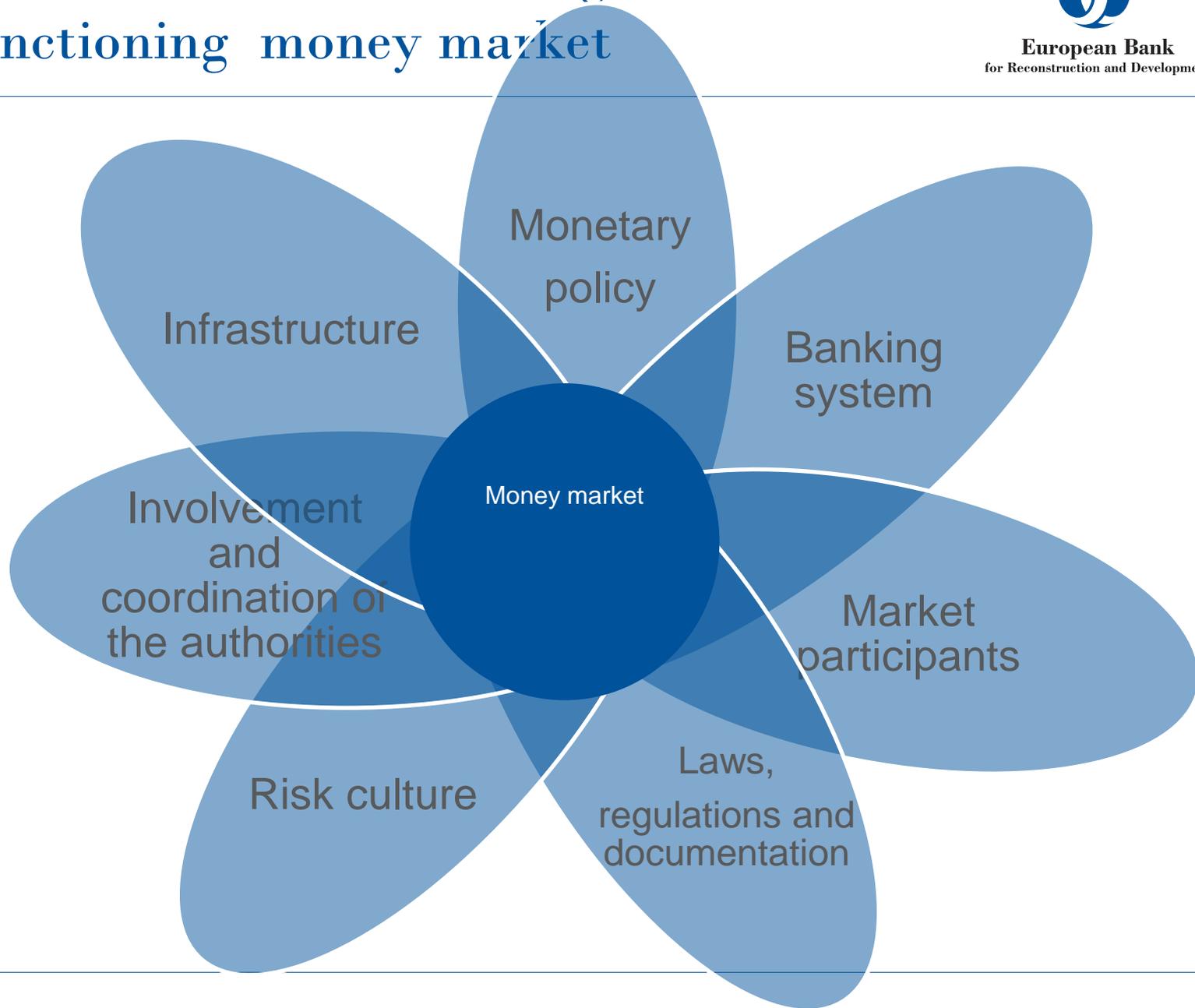
Well-functioning money markets are a cornerstone of resilient financial markets, effective monetary policy transmission and capital market development:

- Money markets lay the foundation of stability and efficiency in the **banking system**,
- Smooth functioning money market support transmission of **monetary policy** across the **financial system** to the real economy without impairment
- Transparent money markets provide important feedback loops for the evolution of **monetary policy** frameworks (perceived credibility and effectiveness in lowering inflation materialises in longer term and less steep yield curve)
- Money markets form the basis for pricing of capital market instruments and the creation of risk management instruments,
- They enhance the liquidity of the capital market instruments and reduce the liquidity premium that is priced in primary Treasury auctions,
- ... and in turn support **capital market** instruments tenor extension.

Preconditions and building blocks for a well functioning money market



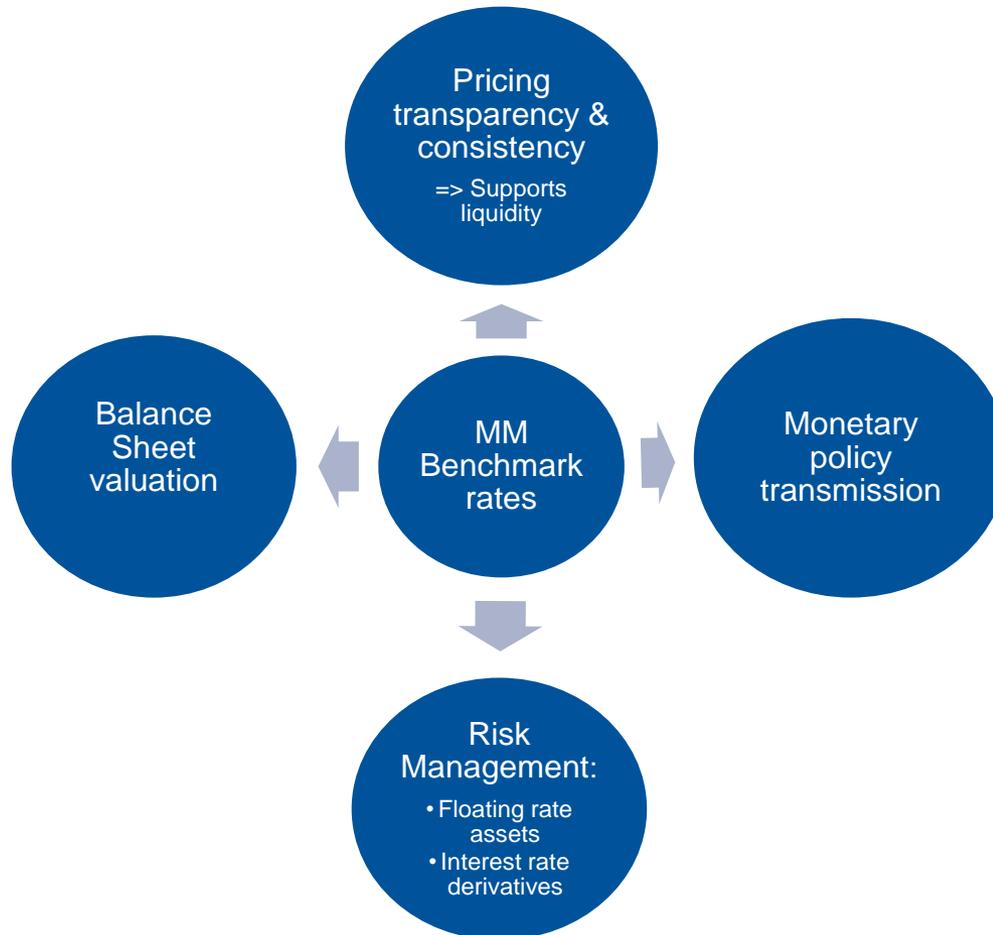
European Bank
for Reconstruction and Development



Importance of Money Market Benchmarks



European Bank
for Reconstruction and Development



Support development of longer term and more flexible financing to economy at more efficient prices

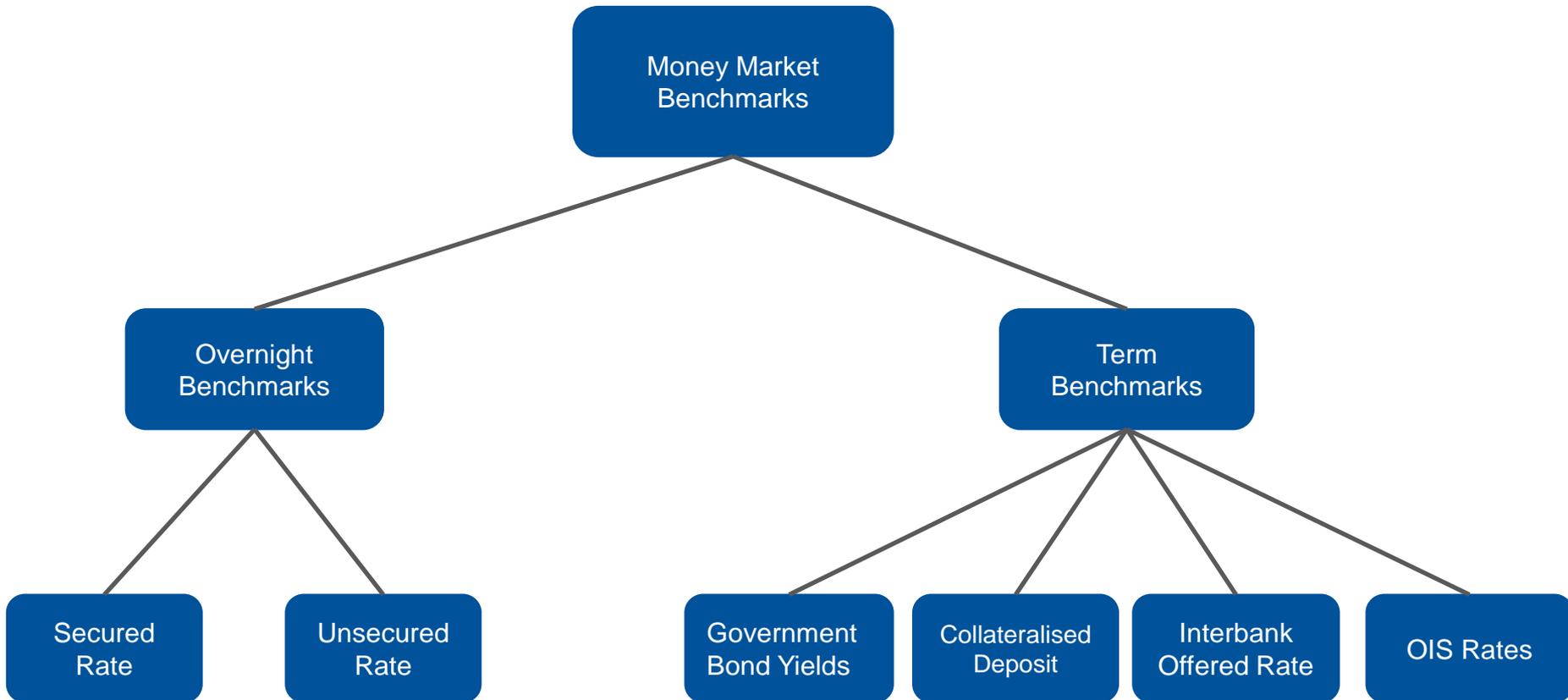
How do benchmarks support better risk management?



European Bank
for Reconstruction and Development

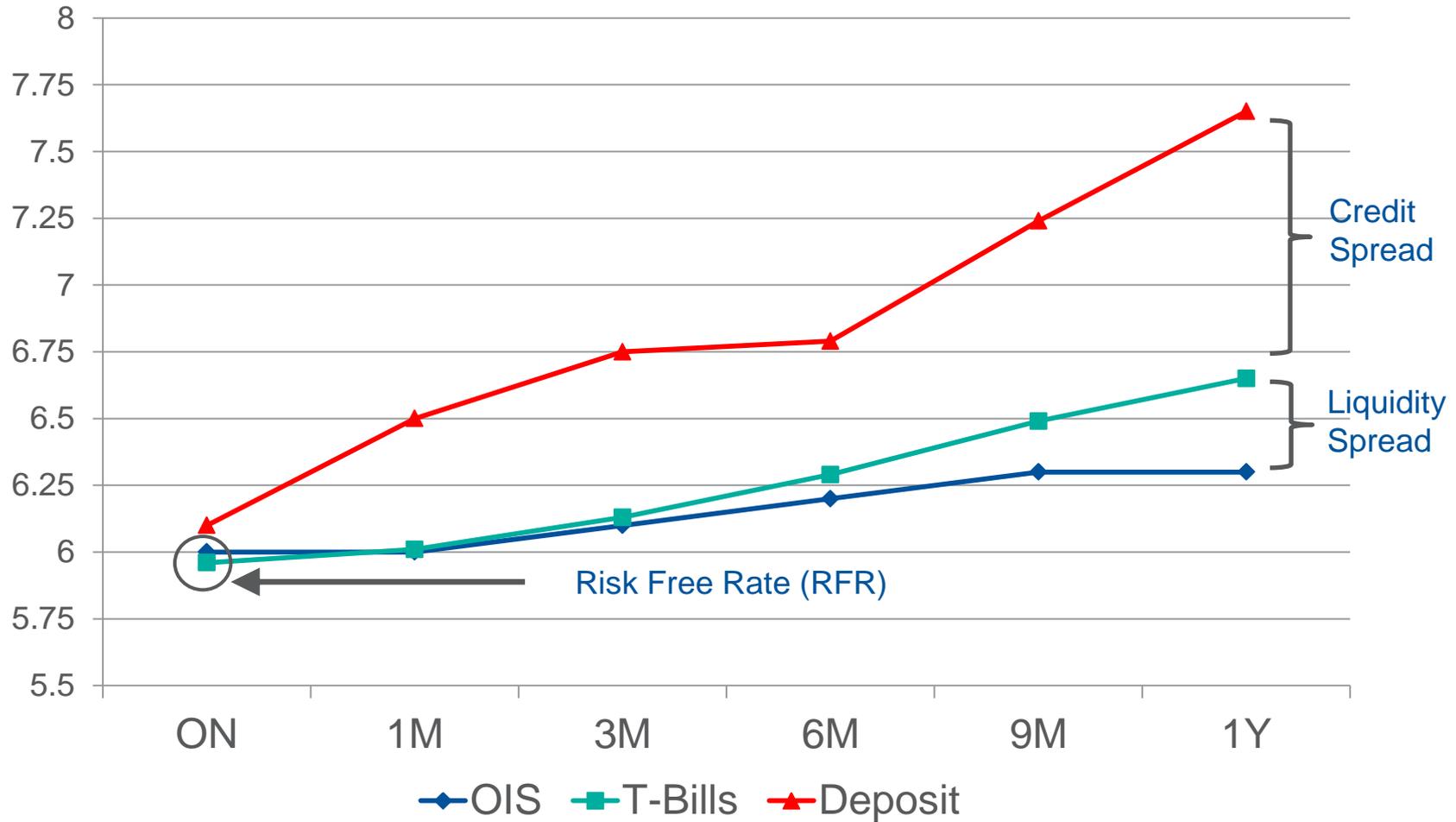
- Manage interest rate risk in more efficient manner:
 - reduce or increase exposure to fluctuations in interest rates
 - or obtain a marginally lower interest rate than would have been possible without the swap (gives access to wider range of counterparties and allows to reduce risk premium for taking interest rate risk that cannot be managed)
- Improve domestic interest rate risk allocation (transfer between market players)
- Support capital market development (supports increased liquidity and lower risk premium)
- Means to reduce all-in funding cost for borrowers
- Derivatives are efficient in terms of credit and capital charges (more efficient than using cash instruments or balance sheet adjustments)
- Managing interest rate risk with Interest Rate Swaps allows to manage interest rate risk independently from FX liquidity (which is not the case for FX swaps and Cross Currency swaps)
- Allow for better monitoring of effectiveness of monetary policy

Proxies for MM benchmark rates



➔ ? Which index(es) can be most relevant and credible for a given market?

Proxies for MM benchmark rates

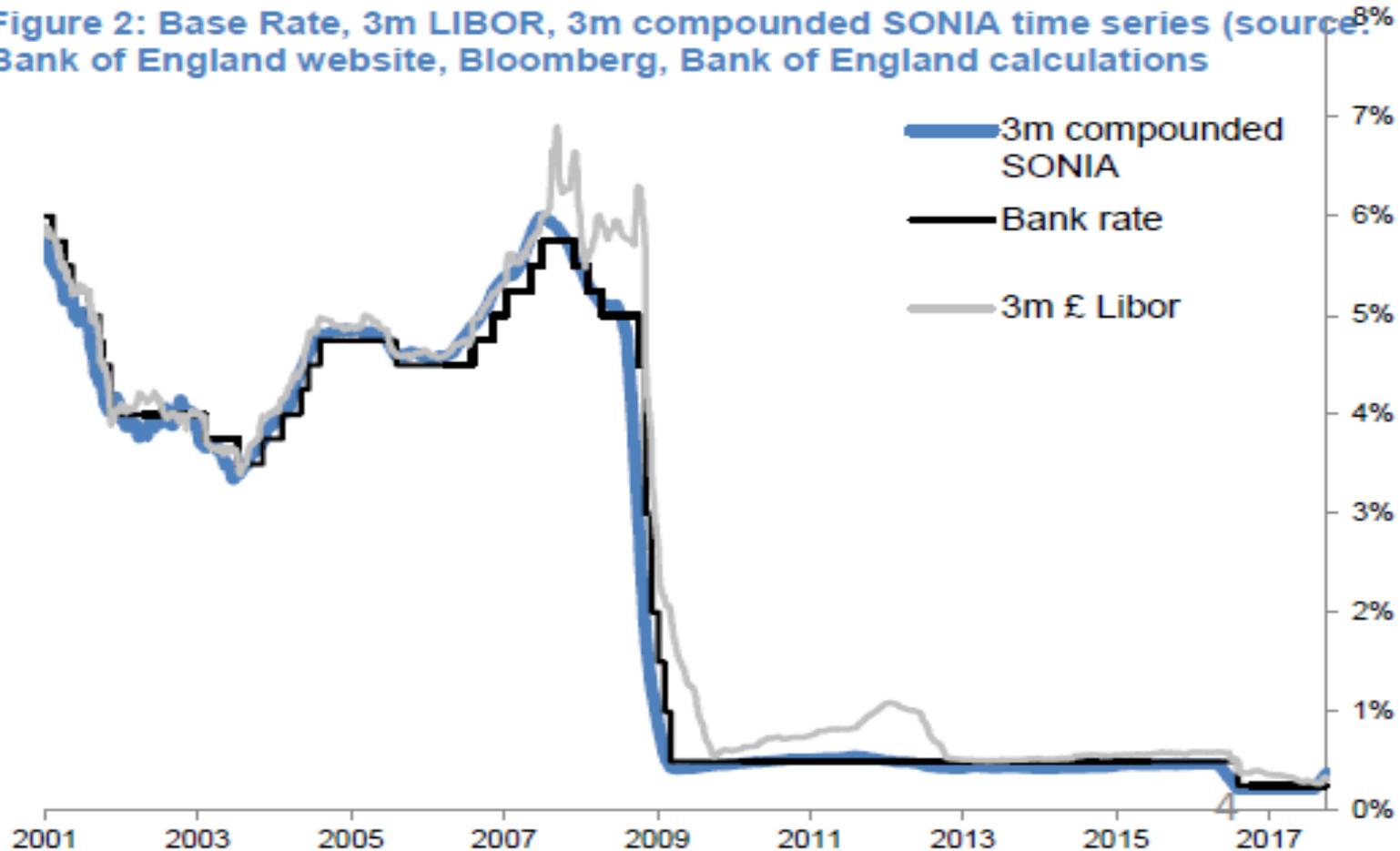


Proxies for MM benchmark rates



European Bank
for Reconstruction and Development

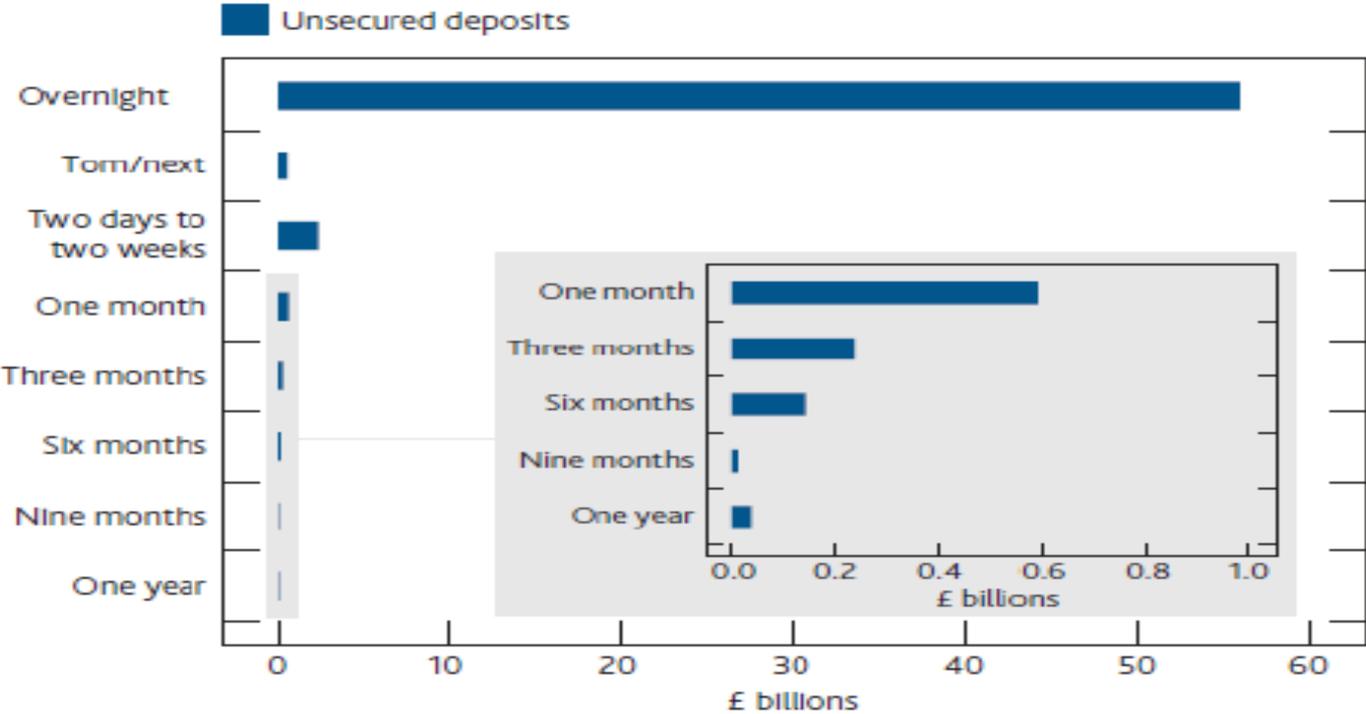
Figure 2: Base Rate, 3m LIBOR, 3m compounded SONIA time series (source: Bank of England website, Bloomberg, Bank of England calculations)



Source Bank of England report on Libor transition

Proxies for MM benchmark rates

Figure 1: Average daily sterling unsecured deposit market volumes (a) (source: Bank of England Quarterly Bulletin Q1 2018)



(a) Daily average from 1 September 2017 to 30 November 2017; only includes transactions of £1m or over

Source Bank of England report on Libor transition

Guiding principles for a reliable Money Market benchmark rate

Guiding principles for a reliable MM interest rate benchmark

Reflecting a tradable underlying by all market participants

Expressive of the policy target of the Central Bank

Transparent definition that is robust to adverse changes in market structure

Appropriate Governance

Immune to manipulation

Conducive to building a term extension and curve

International Tendencies

From Libor to Risk Free Rates

From term unsecured indicative deposit rates to overnight 'risk free' traded rates:

IBORs - universal benchmarks for all transactions

IBOR type indices reflecting unsecured indicative interbank rates including credit and liquidity premium which could be volatile at times of interbank stress and don't always reflect actual market rates (for lack of underlying market)

Dual work streams on IBORs+ and RFRs

Acknowledgement that IBORs may not be best benchmarks for some types of floating rate transactions eg interest rate derivatives that manage pure interest rate risk

=> Parallel work streams on IBOR+ (reforming IBORs) and Risk Free Rates

IBORs to be replaced by RFRs?

- Banks won't be compelled to contribute to Libor from 2021
- Fear of financial penalties
- ISDA working group on Libor fall-backs
- Working Groups on Risk Free Rates and term Risk Free Rates

International Tendencies

Timeline of international benchmarks reform



European Bank
for Reconstruction and Development



2007-2008
crisis: Libor-OIS
spread explosion

2009: Libor
manipulation
scandal

July 2013:
IOSCO
publishes report
on 'Principles for
financial
benchmarks

July 2014: FSB
recommendations
on interest rate
benchmarks
=> **Recommending
multi-benchmark
approach: IBOR+
and Risk Free
Rates (RFR)**

2017:
April: WG for £ RFR
recommends Sonia
- **June:** ARRC
announces Broad Repo
Rate as its Preferred
Alternative Reference
Rate (SOFR)
- ISDA working group
working on Libor fall-
back referencing RFR
- **July:**
Announcement that
mandatory contribution
to **Libor to be
discontinued by 2021**

=> **Focus on
transition to RFRs**

**1/1/2018: EU
regulation on
financial benchmarks
effective:** Supervised
entities must not use
benchmarks in financial
instruments in the EU
unless benchmark is
provided by an
authorised/registered
EU administrator or is a
qualifying non-EU
benchmark (full
implementation by
1/1/20)

2018:
Acceleration of
global work done
on benchmarks
with RFR WGs
reflecting on Libor
transition:
- **April:** Reformed
Sonia and SOFR
start being
published
- Sept.: WG on
EUR RFR
announces
ESTER as
preferred EUR
RFR
- **ISDA fall-back
consultation**
- Sonia RFR WG
consultation on
Term Benchmark

etc

Q4 2021:

**Libor
production
may be
discontinued**

G7 Risk Free Rates Working Groups

Jurisdiction	Working Group	Alternative RFR	Regulator	Publication Date	Description of RFR
	Alternative Reference Rate Committee	Secured Overnight Financing Rate (SOFR)	Federal Reserve Bank of New York	April 3, 2018	SOFR is secured , overnight, and transaction-based. SOFR encompasses multiple repo market segments.
	Working Group on Sterling Risk-free Reference Rate	Reformed Sterling Overnight Index Average (SONIA)	Bank of England	April 23, 2018	Reformed SONIA is unsecured , overnight, and transactions-based. ESTER will reflect the wholesale euro
	Working Group on Euro Risk-free Rates	ESTER	European Central Bank (ECB)	By October 2019	unsecured overnight borrowing costs of euro area banks.
	The National Working Group on CHF Reference Rates	Swiss Average Rate Overnight (SARON)	Swiss National Bank	Currently being published	SARON is a secured overnight rate that reflects interest paid on interbank overnight repo transactions. The entire CHF Tomorrow Overnight Indexed Swap (TOIS) market was transitioned to SARON on December 29, 2017 upon the TOIS rate's discontinuation.
	Study Group on Risk-free Reference Rates	Tokyo Overnight Average Rate (TONA)	Bank of Japan	Currently being published	TONA is unsecured , overnight and transaction-based. It reflects the uncollateralized overnight call rate market
	Canadian Alternative Reference Rate Working Group	Expected to be an enhanced Canadian Overnight Repo Rate Average (CORRA)	Bank of Canada	TBD	CORRA is secured , overnight and transaction based. It is a measure of the average cost of overnight collateralized funding and covers the overnight repo market.



CBA presentation on AMD money markets

MMCG

Mission:

- Safe and efficient Money Markets

Objectives:

- Discuss developments in AMD Money Markets
- Recommend and catalyse developments to support the Mission

Money Market Instruments

Monetary policy and Money Markets

Risk Management and Money Markets

Infrastructure

Regulations and Money Market

Legal environment and documentation

⋮

Interest Rate Benchmarks

Proposed Terms of Reference for Armenia Money Market Working Group





This information is provided for discussion purposes only, may not be reproduced or redistributed and does not constitute an invitation or offer to subscribe for or purchase any securities, products or services. No responsibility is accepted in respect of this presentation by its author, the European Bank for Reconstruction and Development (the "Bank") or any of its directors or employees (together with the author and the Bank, the "EBRD") for its contents. The information herein is presented in summary form and does not attempt to give a complete picture of any market, financial, legal and/or other issues summarised or discussed. The EBRD is not acting as your advisor or agent and shall have no liability, contingent or otherwise, for the quality, accuracy, timeliness, continued availability or completeness of the information, data, calculations nor for any special, indirect, incidental or consequential damages which may be experienced because of the use of the material made available herein. This material is provided on the understanding that (a) you have sufficient knowledge and experience to understand the contents thereof; and (b) you are not relying on us for advice or recommendations of any kind (including without limitation advice relating to economic, legal, tax, regulatory and/or accounting risks and consequences) and that any decision to adopt a strategy, deal in any financial product or enter into any transaction is based upon your own analysis or that of your professional advisors, whom you shall consult as you deem necessary.