



# Bond market implications of EURIBOR reform

12 June 2019

## State of play and upcoming milestones in €reference rate reform

Date	Event
Q1 2019	Libor: ICE finishes transition to waterfall methodology
6 May 2019	EURIBOR: EMMI applies for FSMA authorisation, begins transition to hybrid methodology
31 May 2019	ECB fixes one-off spread between €STR and EONIA at 8.5bp
2 October 2019	€STR: ECB starts publishing €STR at t+1
end 2019	EURIBOR: Transition to hybrid methodology set to be completed
1 January 2020	Initial deadline for benchmark regulation, delayed by 2yrs
end 2021	Transitional period under BMR ends, FCA ends Libor support

Source: Commerzbank Research

# Agenda

**1** How large are the IBOR risks in bond markets?

**2** New conventions for FRNs

**3** Mortgage market – the one real difference to other IBOR markets

**4** Bond documentation and preparation

**5** Discussion points

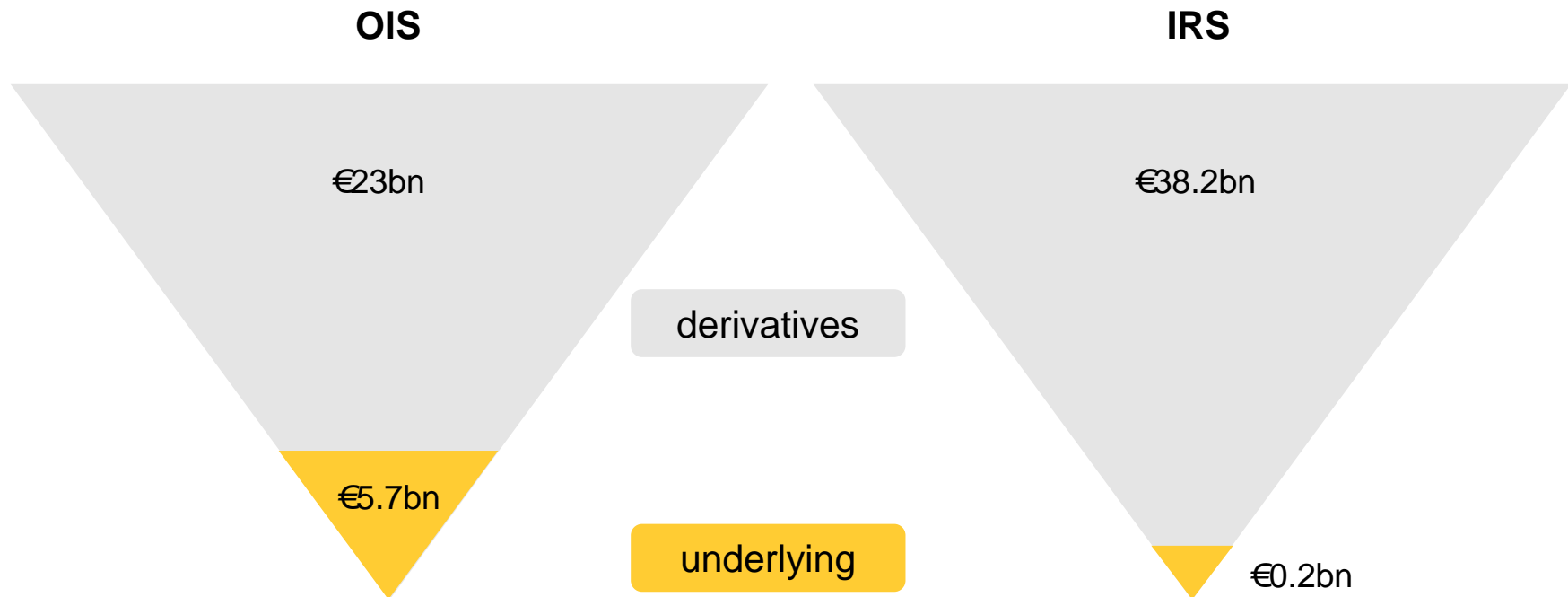


# 1 How large are the IBOR risks in bond markets?

# The 'inverted pyramid'

## Underlying and derivative trading volumes

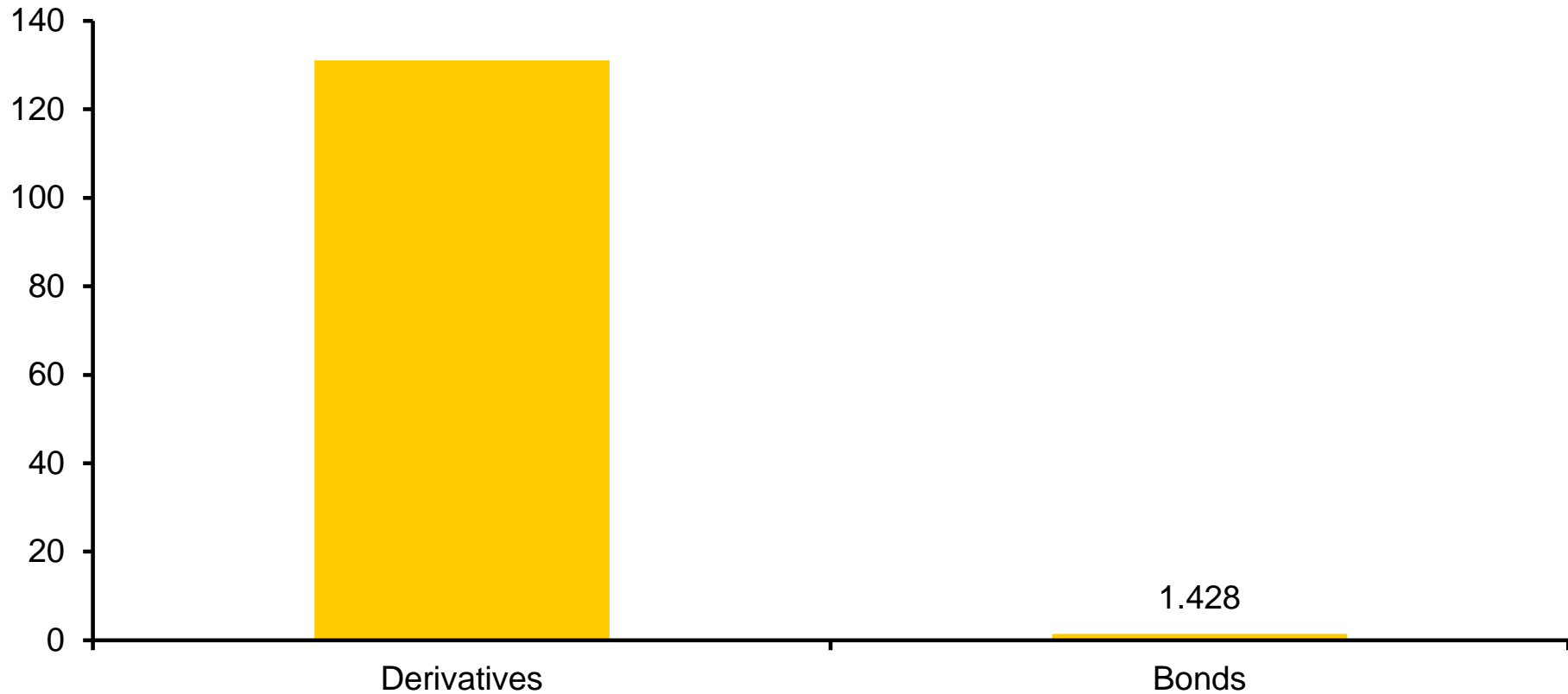
Average daily trading in underlying rate and derivatives, May17-May18, in € bn



Source: Bloomberg SDRV, ECB MMSR, Commerzbank Research

## Bond markets seem less exposed, but only on a relative scale

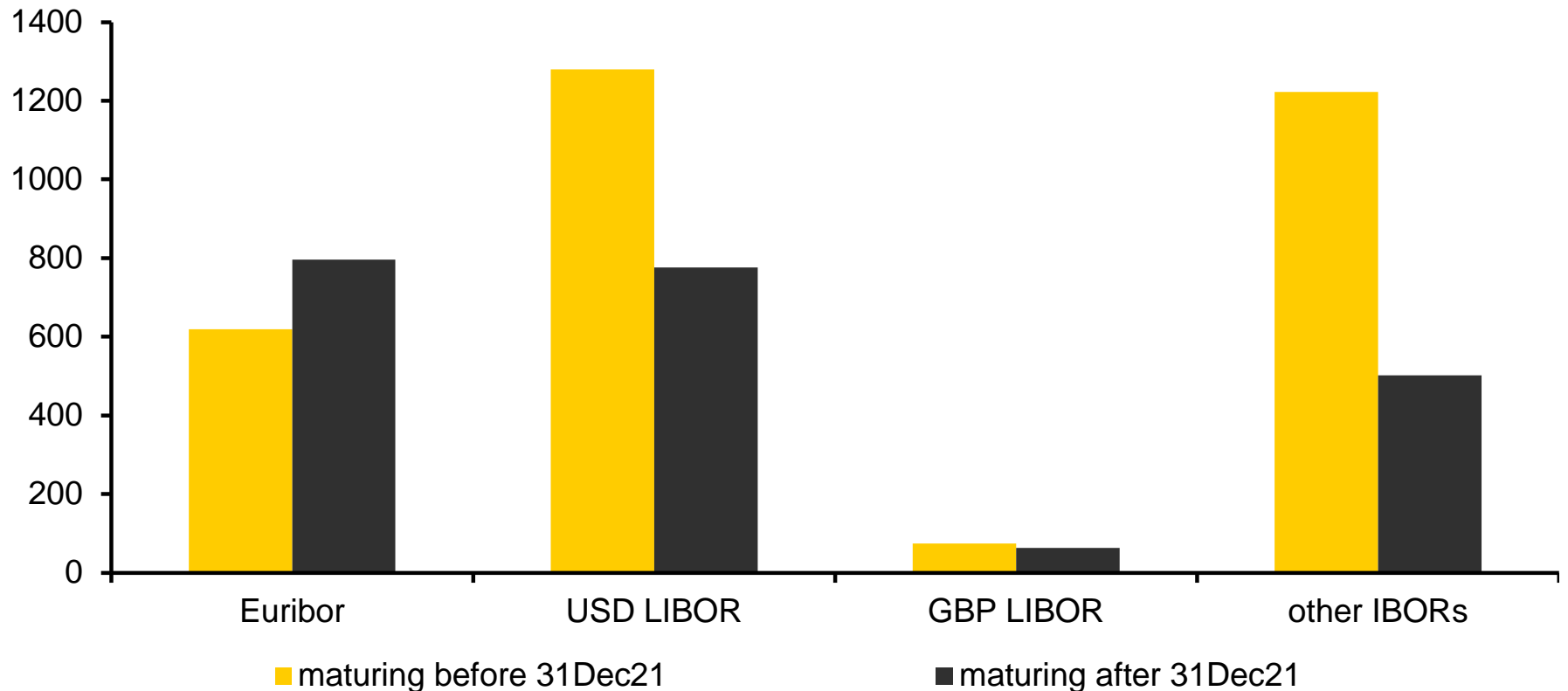
Total exposures tied to EURIBOR and EONIA, in € trn



Source: Derivatives data from ECB Quantitative Mapping Exercise, Working Group on Risk-Free Interest Rates (17May18 and 20Apr18), bond data from Bloomberg as of 26 May 2019, Commerzbank Research

## €796bn in FRNs linked to EURIBOR maturing after 2021

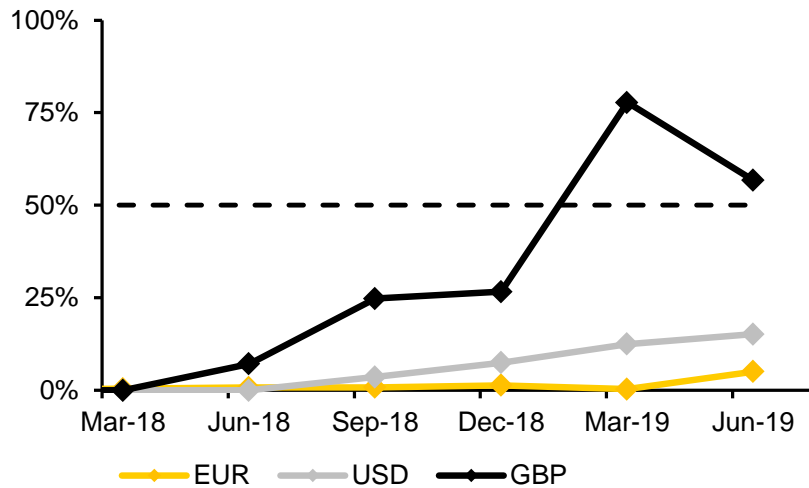
Amount outstanding of FRNs with variable rate coupons, in €bn\*



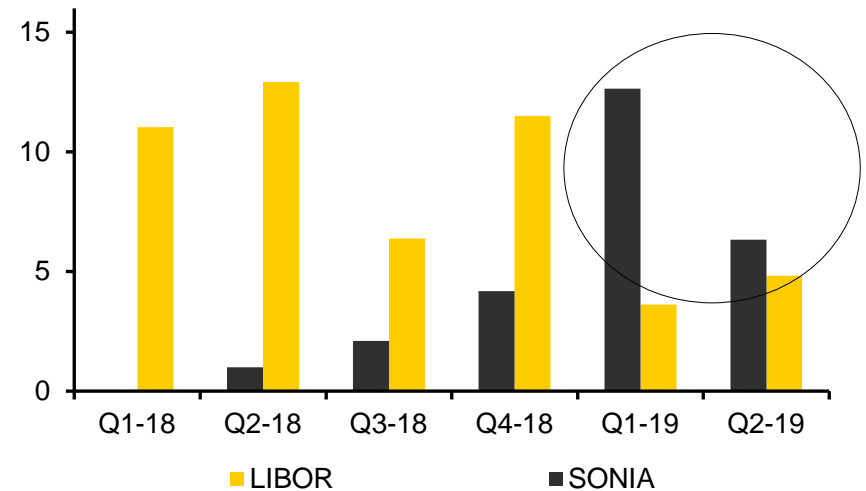
\* as of 9 June 2019; outstanding notionals transferred into EUR to facilitate comparability  
Source: Bloomberg, Commerzbank Research

# Issuance linked to SONIA overtaking LIBOR in GBP

Shares of o/n-linked issuance in total FRN issuance, quarterly data



GBP FRN issuance by underlying index, in GBP bn



Source: Bloomberg, Commerzbank Research





## 2 New conventions for FRNs

## Conventions for SOFR and SONIA FRNs and OIS

	SOFR FRNs	SONIA FRNs	SOFR and SONIA OIS
Averaging	Generally simple average	Compound average	Compound average
Payment Delay	None (payment due next business day after the interest period ends)	None (payment due next business day after the interest period ends)	payment due next business day after the interest period ends
Lookback	One business day	5 business days	None
Lockout / Suspension period	Generally 2 business days	None	None



SOFR standards are evolving with first issuers using compounding and different lookback/lockout periods since May/June

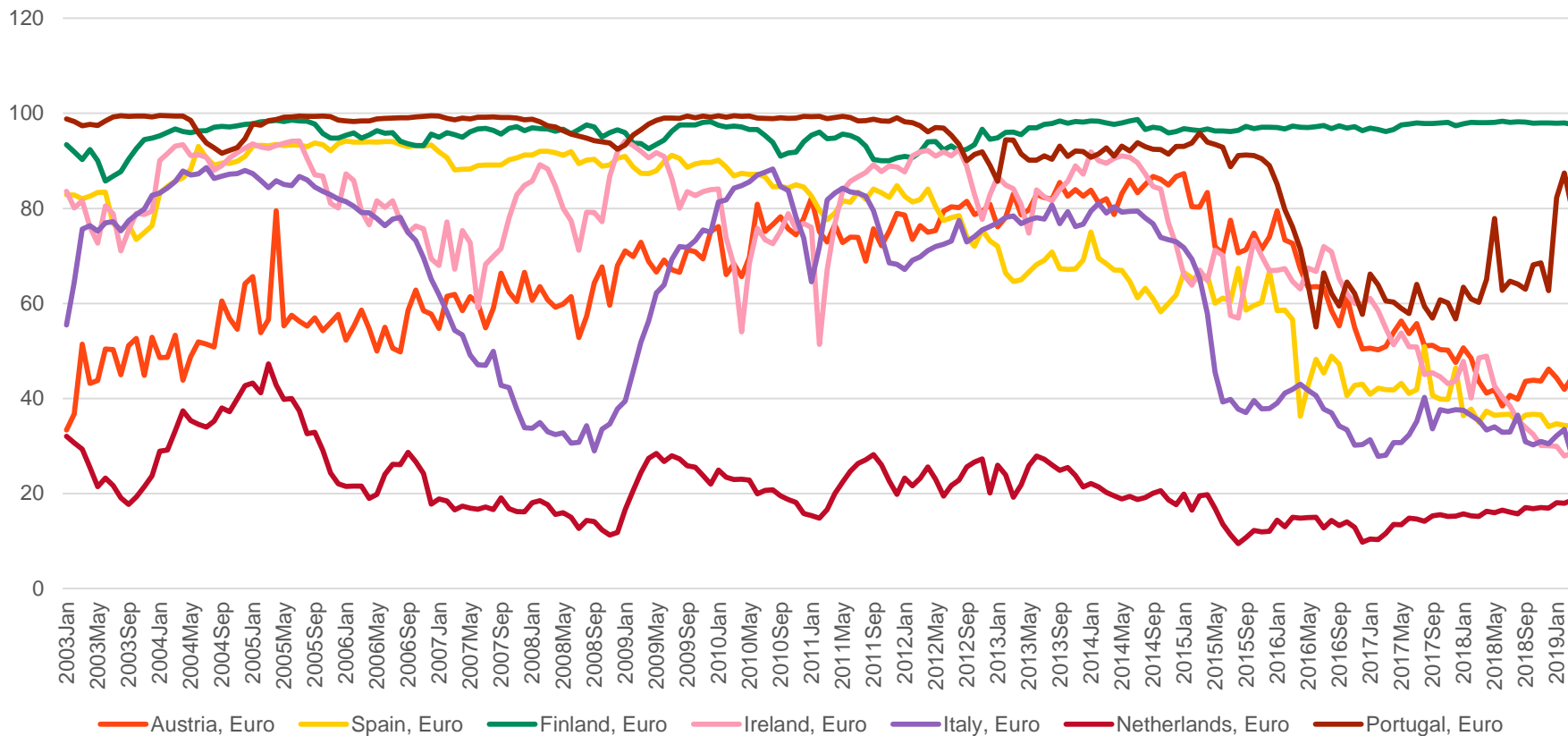
Source: IFR, Alternative Reference Rates Committee: A Users Guide to SOFR, April 2019, Commerzbank Research

### 3

## Mortgage market – the one real difference to other IBOR markets

# Mortgage market and variable rates

## Share of floating rate mortgages in new production for most exposed countries



## Mortgage market and variable rates

### Loans to households in millions EUR

COUNTRY	FRN	TOTAL
GE	186,775	1,242,095
FR	131,514	1,060,540
SP	381,242	515,821
IT	237,666	380,294
NE	103,375	482,744
AS	72,680	113,231
IR	56,137	74,661
FI	94,006	98,067
SV	5,755	6,330
SO	4,373	28,821
BE	29,448	164,556
PO	84,701	93,856
GR	41,704	55,949
	1,429,376	4,316,965

Why are mortgages sensitive – they already resulted in 10s of billions hit to banks for miss-behaviour?

- FX loans
- Mortgage floors
- Mortgage tax
- IRPH index
- PPI

# CASE STUDY: IRPH index in Spain

## NEW LITIGATION RISKS?

Litigation risks	SAN	BBVA	CABK	BKIA	SAB	BKT	LBK
Multicurrency mortgages	-	Yes, but limited exposure (€450m)	Yes but not disclosed. Exposure from Barclays Spain (€50m P&L impact per quarter for new cases)	-	Yes but Inmaterial (€50m)	Yes, around €2bn total exposure. (€20-25m per quarter in P&L for new cases)	-
IRPH Mortgages	Yes (Eur 5bn inc. POP)	Yes (Eur 4bn, from CX & Unnim)	Yes (Eur 7bn)	Yes (Eur 1.5bn or 1.5% of total mortgages)	Yes (Eur 0.8bn after renegotiations)	-	Inmaterial
Mortgage set up costs	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mortgage floors (inc. previously amortized exposures)	-	Tail risk	Tail risk	-	Tail risk	-	Tail risk
Other	Not very likely in our view but if materialises it could be very significant: 1) Resolution & acquisition of Popular.	-	Not very material: 1) Swaps 2) Small money laundering case.	Not very material: 1) Institutional investors IPO litigation (c. Eur 65m). 2) Castor	TSB: IT glitch in the UK.	Not very material: 1) Old legacy of dips. 2) Lehman bonds.	-

The IRPH index - Mortgage Loan Reference Index published by the Bank of Spain, which was used instead of Euribor to set interest rates for reportedly 1.3 million mortgages (estimated 5-10% of total mortgage market in value terms).

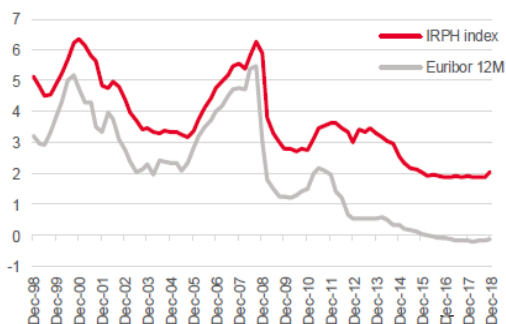
IRPH represented the average of fixed rate mortgages (3y+ in tenor) for fixing period

Unlike Euribor, the IRPH index did not turn negative, and according to press reports the IRPH index was at times 2ppts higher than the Euribor rate.

The Spanish Supreme Court ruled in favour of the banks in December 2017

Customers have since challenged this decision and so the matter is now at the European Court of Justice.

Potential capital impact from IRPH litigation risk (IRPH extra rate vs Euribor – 20y backwards)



IRPH CET1 impact	CABK	SAN	BBVA	BKIA	SAB	BKT	LBK
Exposure (€bn)	7.0	5.0	4.0	1.5	0.8	0.0	0.3
% of CET1	42%	8%	10%	15%	9%	0%	12%

Capital impact (bp) for different litigation scenarios (% of outstanding loans that litigate)	CABK	SAN	BBVA	BKIA	SAB	BKT	LBK
100%	-109	-19	-26	-42	-23	0	0
75%	-82	-14	-20	-31	-17	0	0
65%	-71	-13	-17	-27	-15	0	0
50%	-55	-10	-13	-21	-11	0	0

CET1 ratio pro-forma for each litigation scenario	CABK	SAN	BBVA	BKIA	SAB	BKT	LBK
100%	10.4%	10.8%	11.0%	12.0%	10.9%	-	-
75%	10.6%	10.9%	11.1%	12.1%	10.9%	-	-
65%	10.8%	10.9%	11.1%	12.1%	10.9%	-	-
50%	10.9%	10.9%	11.2%	12.2%	11.0%	-	-

Source: Cross Asset Research/Equity, Bloomberg, company data

Source: Socgen

# 4

## **Bond documentations – not ready for change in benchmark rate**

## Fallback provisions in new contracts are being included but with considerable differences

- Benchmark regulation and LIBOR reform has prominently raised the issue with many legacy contracts' inability to switch to an alternative rate upon a permanent cessation
- New floating rate notes referencing EURIBOR are including fallback language that address the potential for a discontinuation in the future
- ECB Working Group's guidance paper on fallbacks<sup>1</sup> is welcome, but in a market where adoption is voluntary, considerable differences are emerging within the underlying bond documentation
- In certain instances, investors are having to give full discretion of a switch to an alternative rate to the debt issuers, sometimes with no clear framework around an appropriate adjustment spread
- Part of the inconsistency arises due to lack of clarity around the existence of a ESTER-based term rate that could more easily replace EURIBOR making a hard-wired transition more difficult
- Inconsistent trigger language among cash and derivative instruments risk a disorderly transition across markets in the future

<sup>1</sup> Guiding principles for fallback provisions in new contracts for euro-denominated cash products, January 2019



## Example bond documentation – trigger events can be worded loosely in light of uncertainty

### EUR Financials (Unsecured FRN)

#### Benchmark Replacement Events

- › (i) any **material change** in such Benchmark;
- › (ii) the permanent or indefinite cancellation or cessation in the provision of such Benchmark; or
- › (iii) a regulator or other official sector entity prohibits the use of such Benchmark.
- › (iv) any authorisation, registration, recognition, endorsement, equivalence decision or approval in respect of the Benchmark or the administrator or sponsor of the Benchmark has not been or will not be obtained;
- › (v) the Benchmark or the administrator or sponsor of the Benchmark has not been or will not be included in an official register; or
- › (vi) the Benchmark or the administrator or sponsor of the Benchmark does not or will not fulfil any legal or regulatory requirement applicable to the Notes, the Issuer, the Calculation Agent or the Benchmark
- › (vii) the relevant competent authority or other relevant official body rejects or refuses or will reject or refuse any application for authorisation, registration, recognition, endorsement, equivalence decision, approval or inclusion in any official register which, in each case, is required in relation to the Notes
- › (viii) the Benchmark or the administrator or sponsor of the Benchmark is or will be removed from any official register where inclusion in such register is or will be required under any applicable law in order for any of the Issuer, the Calculation Agent or any other entity to perform its obligations in respect of the Notes

### EUR Covered Bonds

#### Benchmark Replacement Events

- › (a) a public statement by (i) the administrator of the Reference Rate that it will cease publishing the Reference Rate or that the Reference Rate will not be included in the register under Article 36 of the Regulation (EU) 2016/1011 permanently or indefinitely (in circumstances where no successor administrator exists) or any other permanent and final discontinuation of the Reference Rate and by (ii) the relevant competent authority supervising the administrator of the Reference Rate that the Reference Rate has been or will be permanently or indefinitely discontinued; or
- › (b) the applicability of any law or any other legal provision, or of any administrative or judicial order, decree or other binding measure, pursuant to which it would be unlawful for the Issuer to longer use the Reference Rate as a reference rate to determine the payment obligations under the Notes, or pursuant to which any such use is subject to not only immaterial restrictions or adverse consequences.

Source: Transaction documentation (Bond prospectus/term sheets)

## Example bond documentation – spread adjustment may be discretionary with no opportunity for investors to object

### EUR Financials (Unsecured FRN)

- › ... If the Calculation Agent or Principal Paying Agent notifies the Issuer that it is unable to determine such an alternative reference rate, the Issuer will appoint a determination agent (which may be the Issuer or an affiliate of the Issuer, the Principal Paying Agent or the Calculation Agent) who will determine a replacement reference rate, as well as any required changes to the business day convention, the definition of business day, the interest determination date, the day count fraction and any method for calculating the replacement rate **including any adjustment required to make such replacement reference rate comparable to the relevant reference rate. Such replacement reference rate will (in the absence of manifest error) be final and binding, and will apply to the relevant Notes**

### EUR Covered Bonds

- › ... in addition to any replacement of the Reference Rate with a Successor Reference Rate, **the Issuer may apply an adjustment factor or fraction as recommended by a relevant body or, if such recommendation is not available, specify an interest adjustment factor or fraction** which shall be applied in determining the Rate of Interest and calculating the Interest Amount (as defined below) and may also make any further adjustments to the Terms and Conditions (e.g. with respect to the Day Count Fraction, Business Day Convention, Business Days, Interest Determination Dates, the method to determine the fallback rate to the Successor Rate), as are necessary **for the purpose of achieving a result which is consistent with the economic substance of the Notes before the Benchmark Event occurred and which is not to the economic detriment of the Holders of the Notes**

Source: Transaction documentation (Bond prospectus/term sheets)

## What if... ?

What would happen in € bond markets if EURIBOR screens turn blank tomorrow?

- › **No common source for fall-back provisions like ISDA for derivatives or LMA for loans, so fall-back provisions generally follow law firm-standards**
- › **Changes to bond documentation generally difficult to implement due to unrealistic quorums**
- › **General fall-back provisions applicable in legacy products follow a waterfall approach:**
  1. quotes to be obtained from 4 – 5 reference banks
  2. in case not at least 2 quotes have been obtained, either
    - (i) last published reference rate will apply or
    - (ii) calculation agent may determine applicable interest rate in its sole discretion
- › **This would not be sufficient in case of a permanent discontinuation of a reference interest rate because**
  - reference banks would be reluctant to provide quotes
  - re (i): permanent discontinuation of reference rate publication would turn floaters into fixed rate bonds
  - re (ii): calculation agents are reluctant to determine applicable rates to avoid liability + wide discretion may be challenged under consumer protection law



No standard market solution found yet. *ECB WG Guiding principles for fallback provisions (Jan19)* provide only recommendations on trigger events and consequences, no actual wording suggestions (in contrast to *ARRC Recommendations* from April 19)

**What do we tell investors – lot of work ahead of all of us**

## Example of what we say to clients: What do pension schemes need to do?



### › Short term potential actions

1. **Engage with regulator DNB to understand impact on economic and regulatory (UFR) discount curves**
  - ▶ What will be the discount curve to calculate the present value of liability cash flows and the funding level?
  - ▶ When will the new benchmark be applicable and will there be a phase-in period?
2. **Identify portfolio exposures that will be impacted by changes in the interbank rates including offsetting derivative positions**
  - ▶ Bilateral positions with different counterparties provide scope for discounting mismatch and hence risk
3. **In case of not using BLK Agency ISDA documentation - Review CSA provisions and fallback language**
  - ▶ What are the exact provisions in each ISDA in case reference rates cease to be published?
  - ▶ What provision is in place for permanent cessation of indices?
  - ▶ For clients on BLK Agency ISDA documentation, BLK will ensure that legal documentation is robust



### › Long term potential actions

- ▶ **Manage discounting risk as changes to discount rate will have an impact on valuations**
  - ▶ Changes from EONIA to €STR as the discount curve will impact valuations
  - ▶ EMMI consultation will advise to use “Clean discounting” (eg use only €STR ) or “Dual Discounting” (eg EONIA for legacy trade and €STR for new trades)
  - ▶ Having the possibility to trade centrally cleared positions decreases dependency on various CSA fallbacks and counterparties applying different methodologies
  - ▶ One could think about recouping positions to bring the mark-to-market closer to zero and hence lower discounting risk
- ▶ **Preparing the IMA for a potential transition by not strictly specifying “6M EURIBOR swaps” but rather “Interest rate swaps against an overnight, 3M or 6M rate”**
  - ▶ BlackRock will contact you about this

Source: BlackRock, April 2019 | Subject to change



## 5 Discussion

## Discussion points

- Would the market standards adopted for SONIA and SOFR also work for euro markets?
- Will euro liquidity also move toward overnight benchmarks?
- Is legislation needed to ensure smooth transition from Euribor to e.g. an overnight benchmark?
- With US and UK moving to OIS based swap markets how does this impact XCCY markets?
- What is the fallback plan if somehow Euribor is phased out?
- Expectations of cross border flows making OIS swaps in Europe more dominant?

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Source: Commerzbank Research

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Source: Commerzbank Research

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