CARIBBEAN ACTUARIAL ASSOCIATION

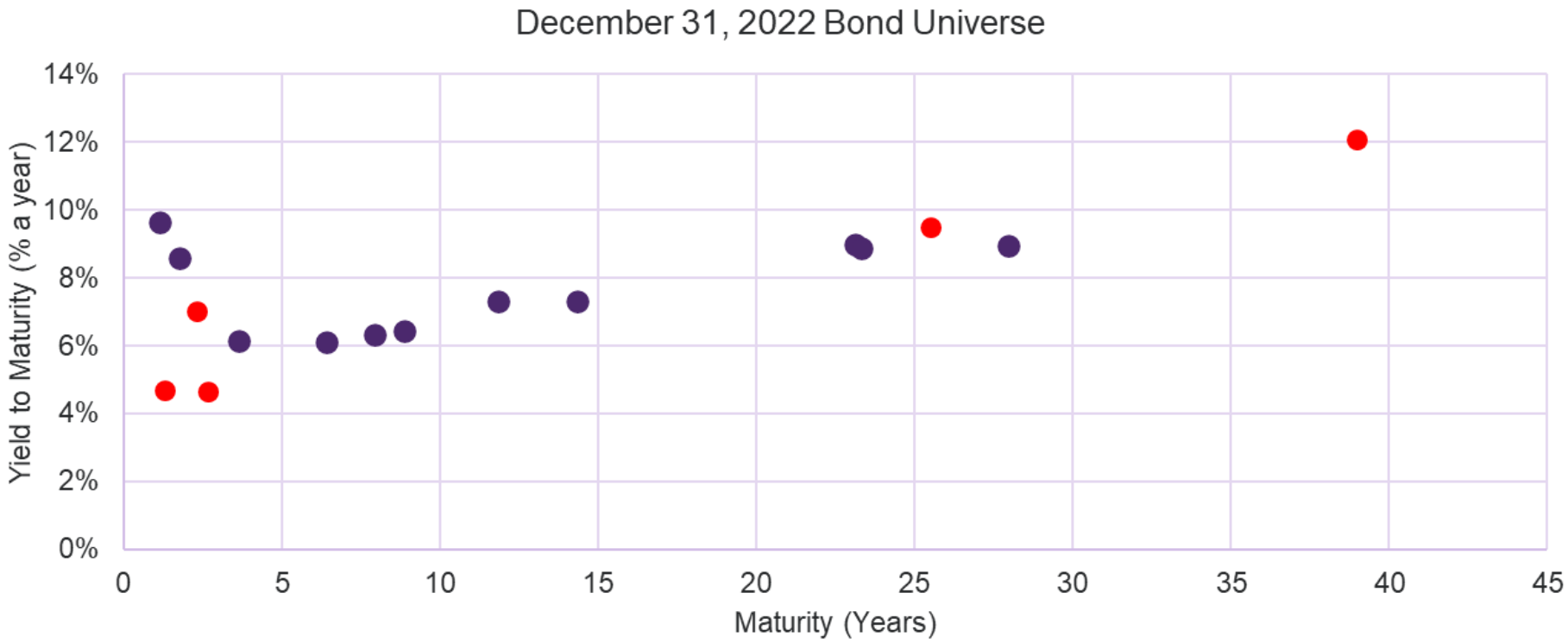
BALANCING THE EQUATION
SHAPING A SUSTAINABLE FUTURE
THE 33rd ANNUAL CONFERENCE

DEVELOPMENT OF IFRS 17 COMPLIANT DISCOUNT RATES FOR JAMAICA

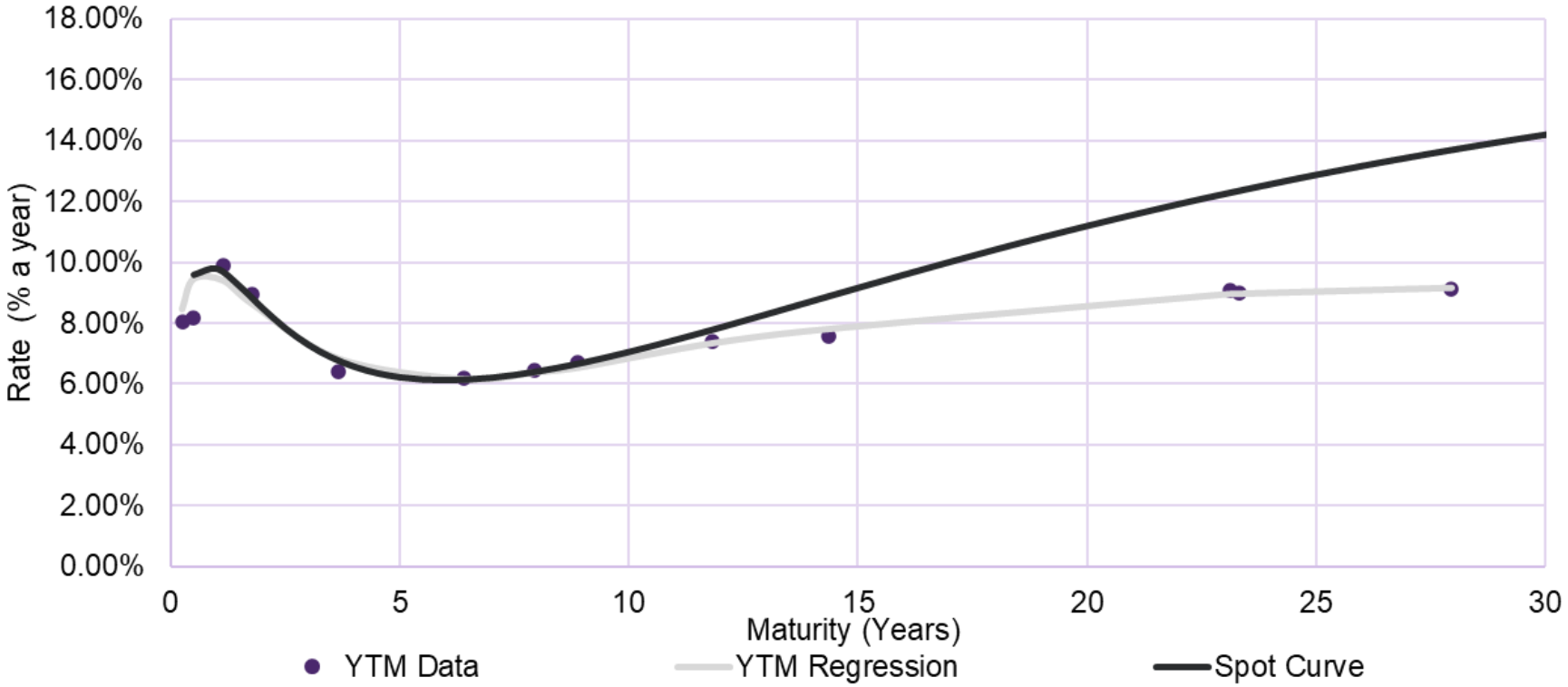
Simone Balkissoon

IFRS 17 Standards

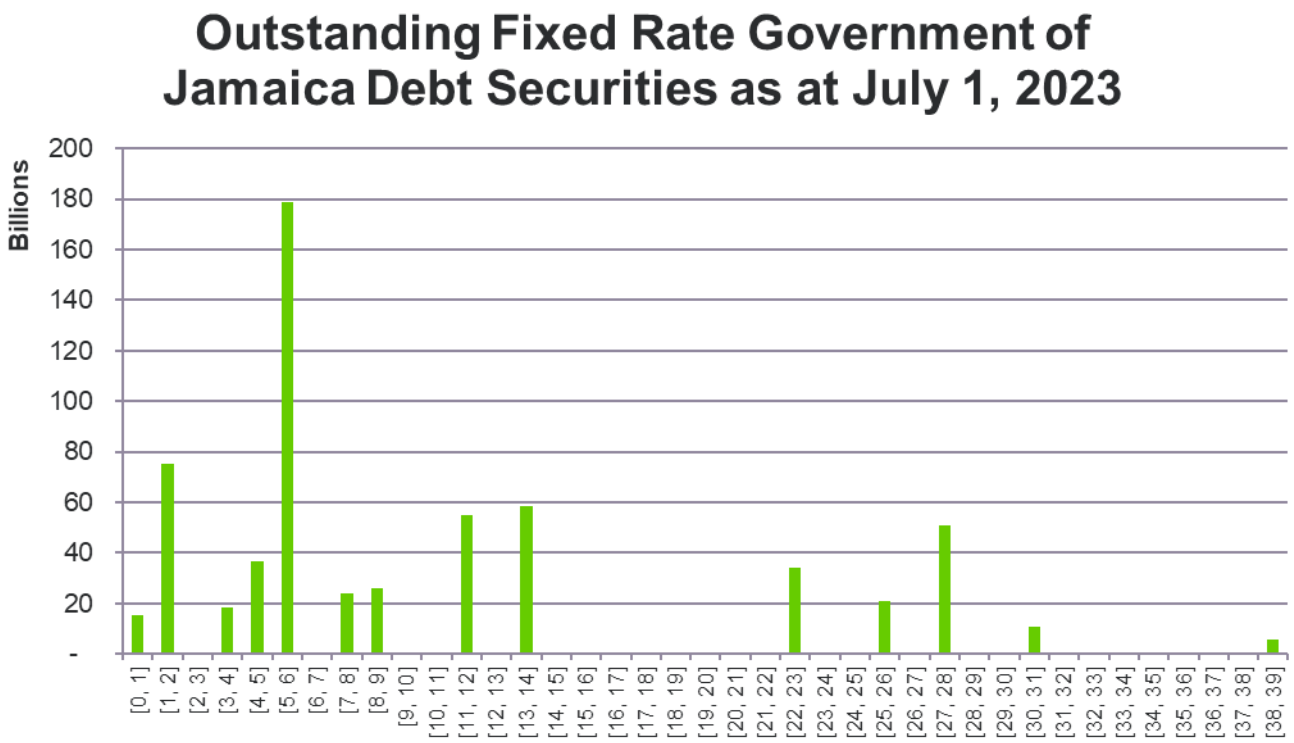
- Discount rates shall be consistent with observable current market prices
- Exclude the effect of factors that influence such observable market prices but do not affect future insurance cash flows
- Where rates are not observable, an entity shall estimate the rates. This process will entail judgement
- The discount rate should reflect the yield curve in the appropriate currency for instruments that expose the holder to no or negligible credit risk, adjusted to reflect the liquidity characteristics of the insurance contracts


December 31, 2022 Bond Universe
Yield to Maturity (% a year)
14%
12%
10%
8%
6%
4%
2%
0%
0
5
10
15
20
25
30
35
40
45
Maturity (Years)

Fit Spot Curve using parametric model



Last Observable Point



Term	% of outstanding bonds
< 30	97%
< 25	86%
< 20	80%

20 years selected as curve is highly dependent on a handful of data points beyond 20 years and so can be volatile over time between the 20 and 30 year tenors.

Sovereign Credit Risk Adjustment

Credit risk adjustment calculated as:

Expected Credit Loss (ECL) + Unexpected Credit Loss (UCL)

Expected credit loss(t) = (1- (1-cumulative PD(t))^(1/t)) * LGD

PD = probability of default

Based on S&P's 2022 Annual Global Sovereign Default and Rating Transition Study of local currency defaults for B rated sovereigns

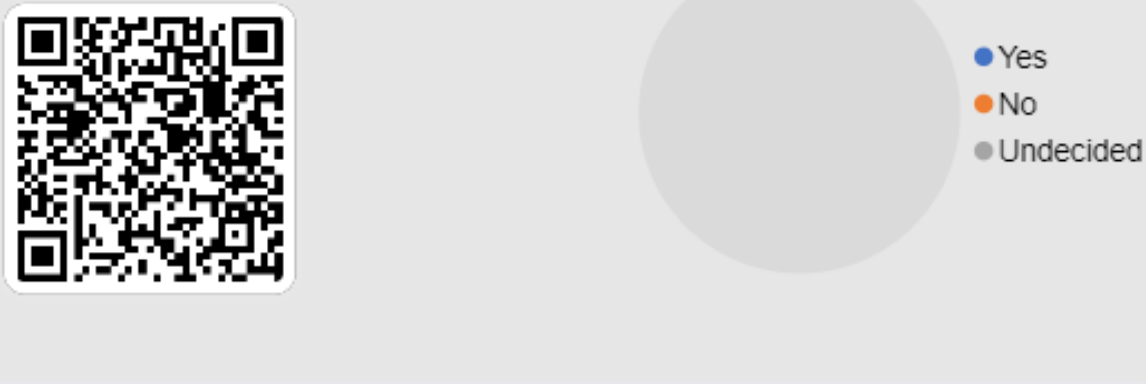
LGD = loss given default

36%

Based on the average LGD for countries in the Caribbean region from Moody's study Sovereign default and recovery rates 1983 – 2022.

Join at menti.com | use code 5316 3245

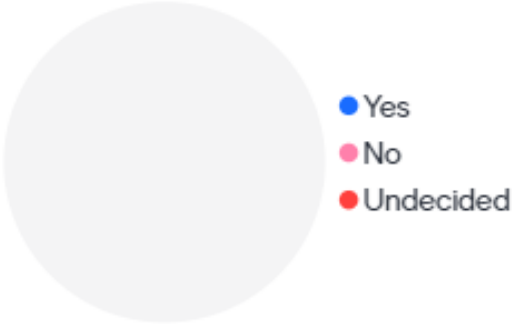
Are you including a deduction for sovereign risk in determining your IFRS 17 discount rates?



Join at menti.com | use code 5316 3245

Mentimeter

Are you including a deduction for sovereign risk in determining your IFRS 17 discount rates?



Sovereign Credit Risk Adjustment

Year/ Rating	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
BB	0.16%	0.21%	0.17%	0.15%	0.16%	0.19%	0.19%	0.22%	0.24%	0.24%	0.25%	0.26%	0.27%	0.28%	0.28%
BB-	0.28%	0.32%	0.30%	0.28%	0.28%	0.29%	0.30%	0.31%	0.32%	0.33%	0.33%	0.33%	0.34%	0.35%	0.35%
B+	0.40%	0.43%	0.43%	0.40%	0.40%	0.40%	0.40%	0.41%	0.41%	0.41%	0.41%	0.41%	0.41%	0.42%	0.42%
B	0.52%	0.54%	0.56%	0.53%	0.52%	0.51%	0.50%	0.51%	0.49%	0.50%	0.50%	0.49%	0.48%	0.48%	0.49%

Adjustment for unexpected credit loss is based on judgement

Unexpected credit loss(t) = 100% of the expected credit loss(t)

Total adjustment for credit risk:

- A flat 0.89% adjustment at all durations is proposed as at December 2022
- Calculated as 0.445% ECL + 0.445% UCL

Ultimate Risk-Free Rate

Selected approach: use of historical GDP growth and target inflation

		Source
Historical GDP Growth	1.42%	Based on all years Historical real GDP Growth (World Bank data)
Inflation Target	5.0%	Bank of Jamaica target 4% - 6%
URFR	6.42%	

- Blended approach: happy medium stability plus relevance to forward looking expectations

- Limit of +/- 0.25% on how much the Ultimate Risk-Free Rate can change from year to year.

Illiquidity Premium

IFRS 18 B79

For cash flows of insurance contracts that do not vary based on the returns on underlying items, the discount rate reflects the yield curve in the appropriate currency for instruments that expose the holder to no or negligible credit risk, adjusted to reflect the liquidity characteristics of the group of insurance contracts. That adjustment shall reflect the difference between the liquidity characteristics of the group of insurance contracts and the liquidity characteristics of the assets used to determine the yield curve.

IFRS 17 does not require a particular technique for determining the illiquidity premium however in keeping with IFRS 17 principles, any chosen method should maximize the use of observable inputs and reflect current market conditions.

Join at menti.com | use code 5316 3245

Mentimeter

Which method are you using to determine the Illiquidity premium?

Join at menti.com | use code 5316 3245

Mentimeter

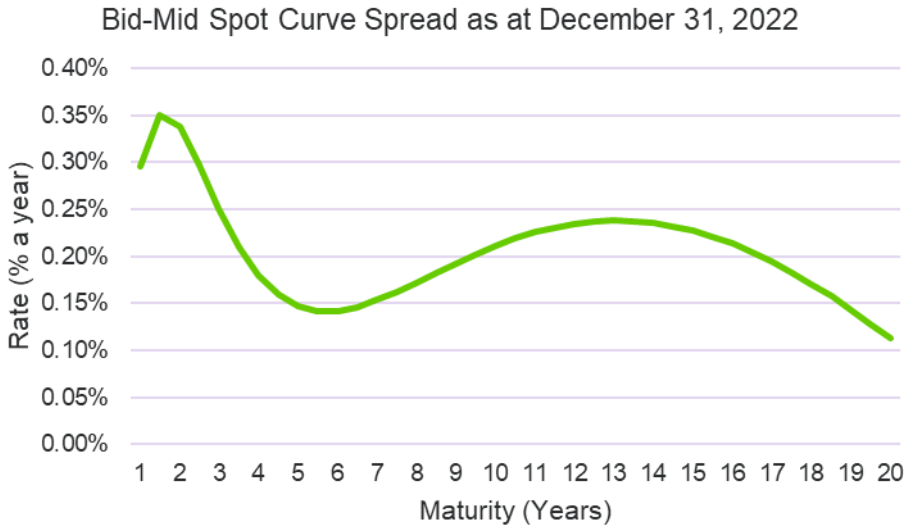
Which method are you using to determine the Illiquidity premium?

Illiquidity Premium - Liquid Insurance Contracts

Chosen Approach: Use the difference between bid and mid prices on Government of Jamaica bonds to set the adjustment for liquid insurance contracts

Separate spot curves were fit using the Government of Jamaica Jamaican $ bonds bid prices and mid prices.

Recommend using the spot curve based on bid yields as the risk-free curve for **liquid** insurance contracts, which includes a modest amount of illiquidity relative to the mid spot curves as illustrated by the chart.



Illiquidity Premium - Illiquid Insurance Contracts

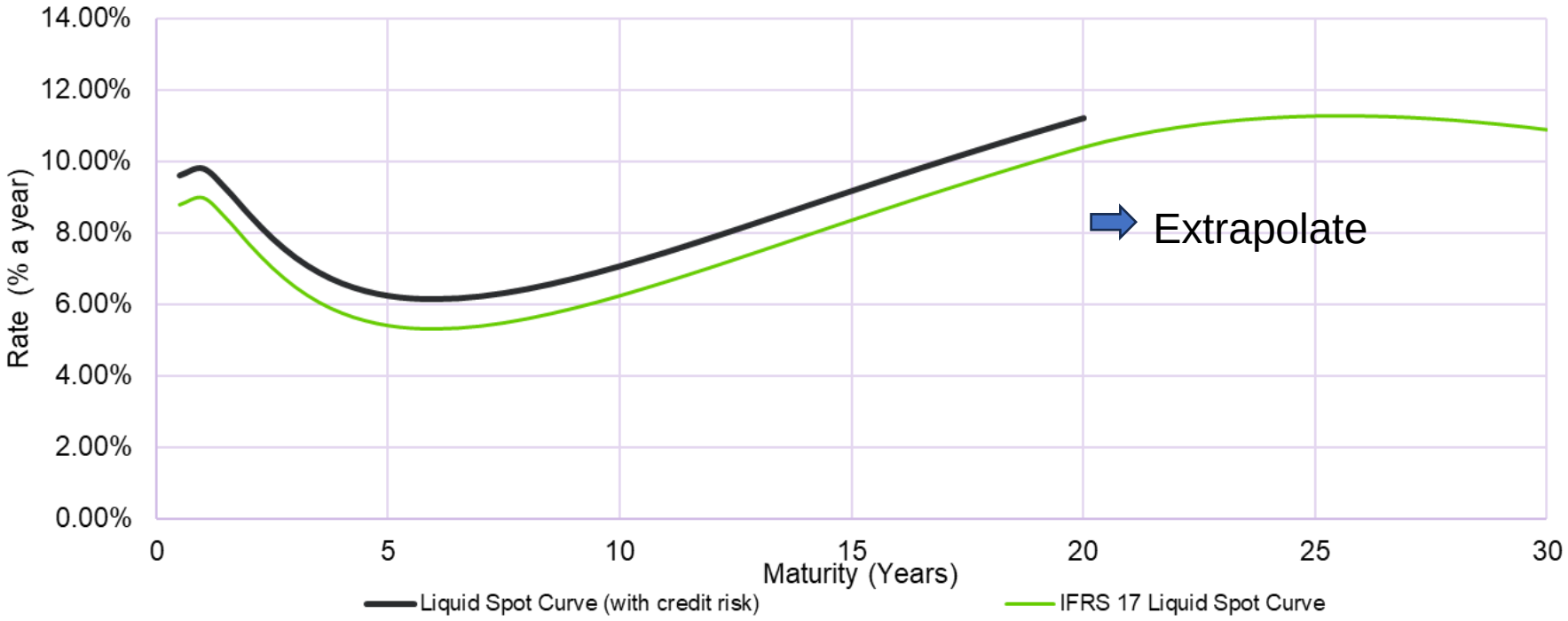
Chosen Approach: Consideration of illiquidity premiums in other jurisdictions to set the adjustment for illiquid insurance contracts

The results of a 2019 Moody's Analytics study "Illiquidity and Credit Premia for IFRS 17 at End December 2018" showed illiquidity premiums on investment grade corporate bonds ranging from 40bps - 70bps at the short end to 80bps - 160bps for bonds over 10 years.

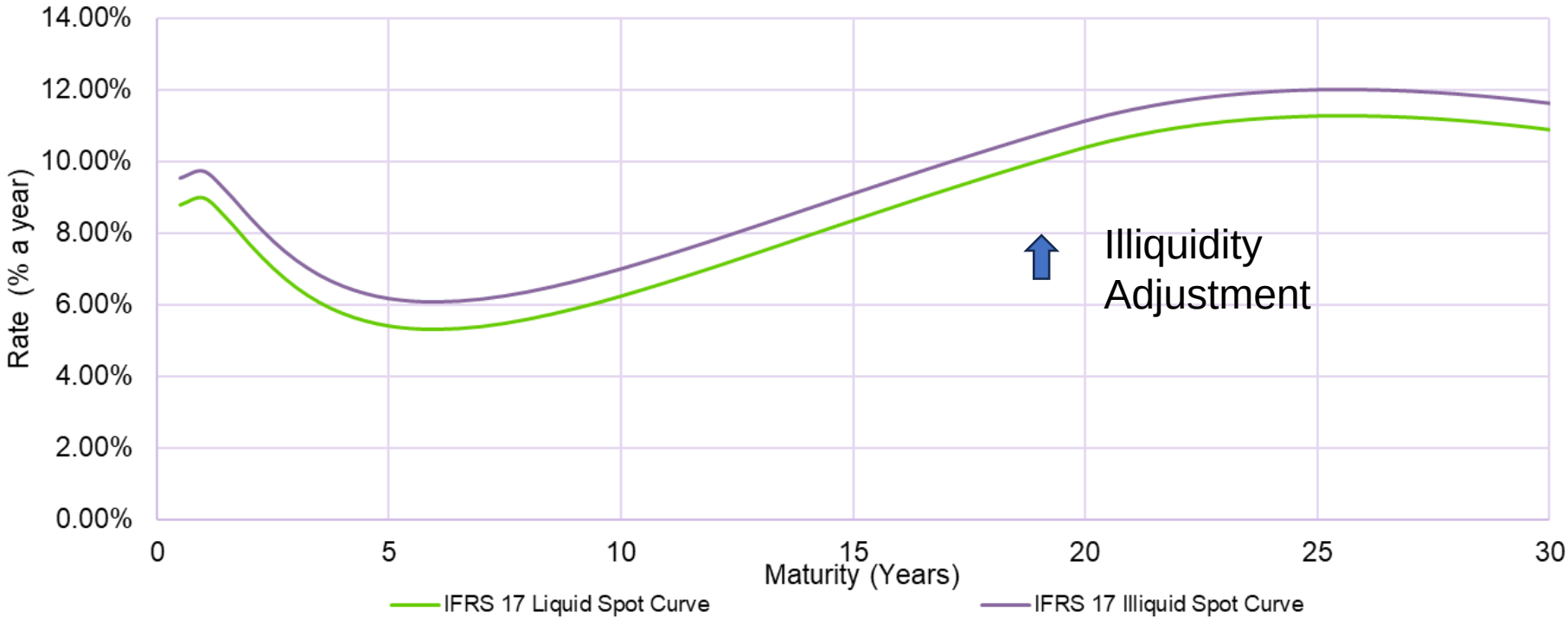
Maturity / Jurisdiction	1-3	3-5	5-10	10+
EUR	41	46	67	81
GBP	65	75	96	100
USD	54	75	91	115
CAD	69	91	120	164

A flat adjustment of 75bps over the curve used for liquid contracts.

Extrapolate using Ultimate Risk-Free Forward Rate to get IFRS 17 Liquid Spot Curve



Add illiquidity premium to get IFRS 17 Illiquid Spot Curve



THANK YOU!