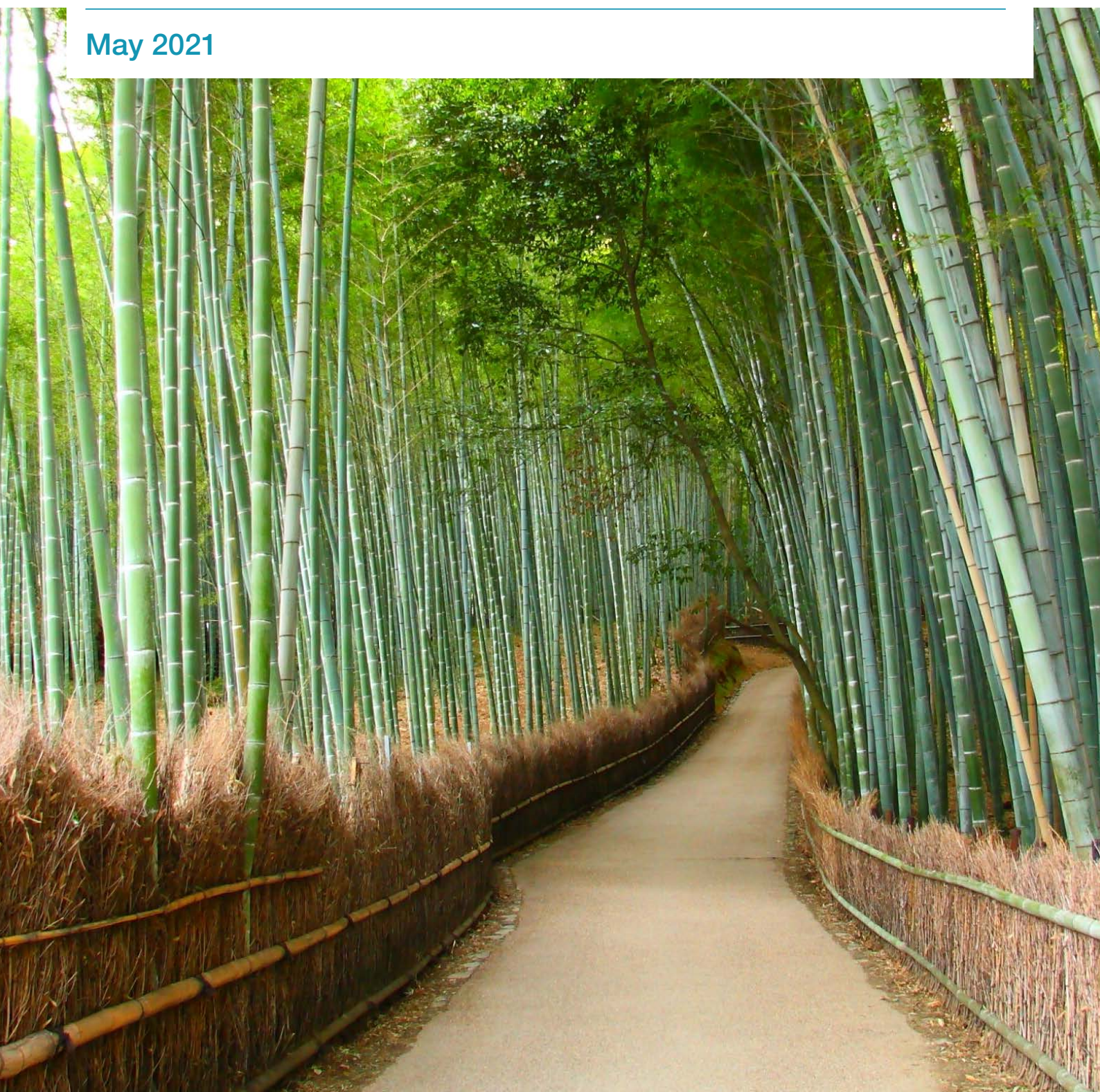


Bloomberg



Guide to Tough Legacy Bonds in Asia-Pacific

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Executive summary

The announcements made by the UK Financial Conduct Authority on future cessation and loss of representativeness of the LIBOR benchmarks on 5 March 2021¹ mark an important final step in the successful transition away from LIBOR, and globally, there is now a better understanding of the end game for LIBOR. And while considerable progress has already been made with the transition to Risk Free Rates (RFRs), and the adoption of RFRs in some markets in new public issues to date, this work needs to accelerate significantly in the remainder of 2021.

Regulatory authorities globally have consistently been stressing the need to move away from LIBOR for some time; that the best way to minimise the LIBOR transition risks is simply not to issue new bonds linked to LIBOR, and to actively transition any instruments that already link to LIBOR and will mature after relevant cessation dates.

In the Asia-Pacific region, a number of new transactions continue to reference LIBOR. And there is a significant number of “tough legacy” bonds, which are generally considered to be bonds which already link to LIBOR of any currency, are due to mature after the cessation of LIBOR in the relevant currency, and have no or inappropriate fallback provisions². According to the data in this report, which has been provided by Bloomberg, the total outstanding issuance of tough legacy bonds globally is over USD 850 billion equivalent across almost 5,000 issuances. Among Asia-Pacific issuers³, the total outstanding tough legacy issuance is USD 190 billion equivalent across 560 issuances.

Of this, the number of bonds which feature fallbacks which are considered to be inadequate, together with the number of bonds which contain no fallbacks at all, is quite significant.

The outcomes for those bonds which have inadequate fallbacks, or no fallbacks at all, could lead to a risk of uncertainty, market disruption and could potentially impact financial market stability.

Therefore, active market-led transition remains of key importance and provides the best route to certainty for parties to contracts referencing LIBOR. But this may be difficult to achieve in practice for tough legacy bonds governed by New York or Japanese law. In the UK and New York, legislative interventions may support the orderly transition from LIBOR in tough legacy bonds, but the precise application of these interventions to tough legacy bonds issued from Asia Pacific under New York, Japanese, and English law is still uncertain.

Mindful of this current landscape, this report is intended primarily for market participants and regulatory authorities across the Asia-Pacific region, and is designed to help identify the critical issues and understand what is needed to drive transition away from LIBOR.

¹ [FCA announcement on future cessation and loss of representativeness of the LIBOR benchmarks](#)

² [Reforming Major Interest Rate Benchmarks: 2020 Progress report \(fsb.org\)](#)

³ Defined by jurisdiction of the issuer's country of risk

Introduction

Global transition efforts

The transition away from LIBOR towards RFRs remains a significant priority for financial markets. While important progress has been made to date, this work needs to accelerate significantly in the remainder of 2021.

Globally, the regulatory authorities are increasing their efforts to engage those within their jurisdictions. In October 2020, the Financial Stability Board (FSB) released a [global transition roadmap](#) setting out the high-level steps that firms will need to take now and over the course of 2021 to complete their transition. In the US, the Alternative Reference rates Committee (ARRC)⁴ has released a [Progress Report](#) on the transition from USD LIBOR, which includes 2021 objectives and priorities, and in the UK, the Sterling Risk-Free Rate Working Group regularly updates its [Priorities and Roadmap](#) for transition (most recently, in April 2021). In Japan, The Cross-Industry Committee on Japanese Yen Interest Rate Benchmarks has updated its [roadmap](#) to prepare for the discontinuation of JPY LIBOR. Regulatory authorities in other Asia-Pacific jurisdictions are also well aware of LIBOR-related risks within their own domestic markets and have actively encouraged firms under their jurisdiction to prepare for the cessation of LIBOR.⁵

Purpose of this report

These official sector initiatives have been crucial to mobilise the overall industry's transition from LIBOR. However, there has been to date relatively little rigorous analysis of the potential disruption in the **Asia-Pacific bond markets** associated with the transition from LIBOR to RFRs. This report aims to provide Asia-Pacific market stakeholders with an overview of the risks (and potential risk mitigants) in the regional bond markets, in particular with respect to so-called "tough legacy" bonds (see *Tough legacy bonds in Asia-Pacific: the current situation*).

This report also takes stock of the current fallbacks in use globally for tough legacy bonds, both from a qualitative perspective (assessing the different forms of fallbacks used in the bond documentation), and from a quantitative point of view (analysing the relative volume outstanding of tough legacy bonds with different kinds of fallback language)⁶.

Finally, this report presents and evaluates various solutions to the regional tough legacy risks. Some of these solutions are contractual, some may be legislative, and all may require changes to internal systems and compliance.

This report is the result of a comprehensive, consistent approach to measuring the outstanding stock of tough legacy bonds across jurisdictions, issuers, currencies and governing laws, all as provided by Bloomberg. Data publicly available so far has been generally based on individual national markets or sub-markets, and difficult to aggregate or reconcile. It is hoped that this analysis will help market participants and supervisory authorities to develop more efficient strategies to address the tough legacy problem in Asia-Pacific.

⁴ The ARRC is a group of private-market participants convened by the Federal Reserve Board and the New York Fed to help ensure a successful transition from USD LIBOR to a more robust reference rate, its recommended alternative, the Secured Overnight Financing Rate (SOFR).

⁵ See, for example: Australian Securities and Investments Commission: Resources on financial benchmarks. Reserve Bank of Australia: Resources and updates on interest rate benchmark reform. People's Bank of China: White Paper on Participating in International Benchmark Interest Rate Reform and Improving China's Benchmark Interest Rate System (August 2020). Hong Kong Monetary Authority (HKMA): Circular regarding preparations for the transition associated with interest rate benchmark reform (March 2019). Singapore Steering Committee for SOR Transition to SORA: SC-STIS End-User Checklist on Benchmark Transition. Bank of Thailand: Thai Reference Rate and LIBOR Transition

⁶ According to data provided by Bloomberg.

Scope and methodology

The focus of this report is tough legacy bonds in the Asia-Pacific region. The main analysis includes corporate and financial issuers of floating rate notes, while excluding government issuance and preferred stock. This report also provides a separate high-level analysis of LIBOR-linked securitisations⁷, which is a largely private market in the Asia-Pacific region.

The universe of tough legacy bonds considered in this report is based on the dates of cessation and loss of representativeness of LIBOR which were announced on 5 March 2021 by the UK Financial Conduct Authority (FCA), as the supervisor of ICE Benchmark Administration (IBA), the administrator of LIBOR. These dates are 31 December 2021, and 30 June 2023 in the case of some USD LIBOR settings (see *Tough legacy bonds in Asia-Pacific: the current situation*).

Overall, the analysis is drawn from Bloomberg's comprehensive database of debt securities, which covers active corporate bonds referencing LIBOR benchmark indexes with a country of risk⁸ in APAC jurisdictions⁹.

⁷ Including collateralised mortgage obligations, collateralised loan obligations, collateralised debt obligations, asset backed securities and mortgage backed securities.

⁸ Bloomberg's country of risk categorisation identifies the country to which the debt resides in, based on several factors including, among others, the nature of the recourse, issuer's location, country of issuer's management and currency of reporting.

⁹ Including Vietnam or Timor-Leste (East Timor), Thailand, Singapore, Philippines, Myanmar, Malaysia, Lao People's Democratic Republic, Indonesia, Cambodia, Brunei, Sri Lanka, Pakistan, Nepal, Maldives, India, Bhutan, Bangladesh, Afghanistan, Wallis and Futuana, US Minor Outlying Islands, Vanuatu, Tuvalu, Tonga, Tokelau, Solomon Islands, Samoa (West), Pitcairn, Papua New Guinea, Palau, Norfolk Island, Northern Mariana Islands, New Caledonia, Nauru, Micronesia, Marshall Islands, Kiribati, Guam, French Polynesia, Fiji, Cook Islands, American Samoa, Taiwan, South Korea, Mongolia, Japan, Macao, DPR Korea, Hong Kong, Mainland China, Uzbekistan, Turkmenistan, Tajikistan, Kyrgyzstan, Kazakhstan, New Zealand, and Australia.

Tough legacy bonds in Asia-Pacific: the current situation

This section considers the extent of the tough legacy bond situation in Asia-Pacific by reference to a definition of tough legacy based upon the Financial Stability Board’s approach, and attempts to quantify the extent of the problem in the region by reference to LIBOR exposures per jurisdiction, industry, currency, maturity and governing laws.

What is “tough legacy”?

“Tough legacy” bonds are generally considered to be debt securities which:

- are linked to LIBOR of any currency;
- are due to mature after the cessation of LIBOR in the relevant currency; and
- have “*contracts that have no or inappropriate fallbacks, and [which] cannot realistically be renegotiated or amended*”¹⁰.

On 5 March 2021, the FCA announced¹¹ the future cessation of 26 LIBOR benchmark settings currently published by IBA. Publication of all 7 euro LIBOR settings, all 7 Swiss franc LIBOR settings, the Spot Next, 1 week, 2 month and 12 month JPY LIBOR settings, the overnight, 1 week, 2 month, and 12 month GBP LIBOR settings, and the 1 week and 2 month USD LIBOR settings will cease immediately after 31 December 2021. Publication of the overnight and 12-month USD LIBOR settings will cease immediately after 30 June 2023.

The FCA also stated in the announcement on 5 March that it is clear that the remaining 9 LIBOR benchmark settings (1 month, 3 month and 6 month settings in each of GBP, JPY and USD LIBOR) will no longer be representative of the underlying market and economic reality that such settings are intended to measure, and that their representativeness will not be restored. They will therefore consult on:

- requiring IBA to continue to publish the 3 remaining GBP LIBOR settings (1 month, 3 month and 6 month) for a further period after the end of 2021 on a changed methodology (also known as a ‘synthetic’) basis using the new powers granted to them under the Financial Services Act
- requiring IBA also to continue to publish the 1 month, 3 month and 6 month JPY LIBOR settings after the end of 2021 on a synthetic basis, for one additional year. Publication of these settings will consequently cease permanently immediately after a final publication on 30 December 2022.

As the transition away from USD LIBOR progresses, the FCA will continue to consider the case for requiring continued publication on a synthetic basis of the 1 month, 3 month and 6 month USD LIBOR settings for a further period after the end of June 2023, taking into account views and evidence from the US authorities and other stakeholders. However, supervisory guidance from the U.S. authorities states that banks are encouraged to “*cease entering into new contracts that use USD LIBOR as a reference rate as soon as practicable and in any event by December 31, 2021*”, subject to certain exceptions¹².

¹⁰ [Reforming Major Interest Rate Benchmarks: 2020 Progress report \(fsb.org\)](#)

¹¹ [FCA announcement on future cessation and loss of representativeness of the LIBOR benchmarks](#)

¹² [Statement on LIBOR Transition - November 30, 2020 \(federalreserve.gov\)](#)

Exposure to tough legacy bonds in Asia-Pacific

Regional exposure

According to Bloomberg, the total outstanding issuance of tough legacy bonds globally is USD 854 billion equivalent across 4,998 issuances. Among Asia-Pacific issuers¹³, the total outstanding tough legacy issuance is USD 190 billion equivalent across 560 issuances (governing law agnostic)¹⁴.

Figure 1 below gives a more detailed breakdown of those 560 tough legacy issuances, as between USD LIBOR bonds (maturing after 30 June 2023) and non-USD LIBOR-linked bonds (maturing after 31 December 2021), and per jurisdiction.

Figure 1: APAC Libor-Linked Bonds Volume by Jurisdiction (in USD Mn)

	Amount Outstanding for USD Issues: Maturing beyond June 2023	Number of USD Issues	Amount Outstanding for Non-USD Issues: Maturing beyond Dec 2021 USD equivalent	Number of Non-USD Issues	Total Amount Outstanding USD equivalent
JAPAN	30,587,320,000	112	125,500,185,127	241	156,087,505,127
CHINA	13,610,000,000	42	492,152,020	5	14,102,152,020
AUSTRALIA	8,245,000,000	24	1,252,923,567	7	9,497,923,567
SOUTH KOREA	3,745,050,000	53	-	-	3,745,050,000
SINGAPORE	1,095,362,000	10	1,163,428,059	9	2,258,790,059
MALAYSIA	2,506,000,000	23	-	-	2,506,000,000
HONG KONG	1,327,423,000	15	9,931,257	3	1,337,354,257
NEW ZEALAND	70,000,000	5	-	-	70,000,000
INDIA	100,000,000	1	-	-	100,000,000
INDONESIA	126,055,800	3	-	-	126,055,800
KAZAKHASTAN	200,000,000	2	-	-	200,000,000
THAILAND	185,000,000	3	-	-	185,000,000
VIETNAM	80,000,000	1	-	-	80,000,000
GUAM	15,000,000	1	-	-	15,000,000
Total	61,892,210,800	295	128,418,620,030	265	190,310,830,830

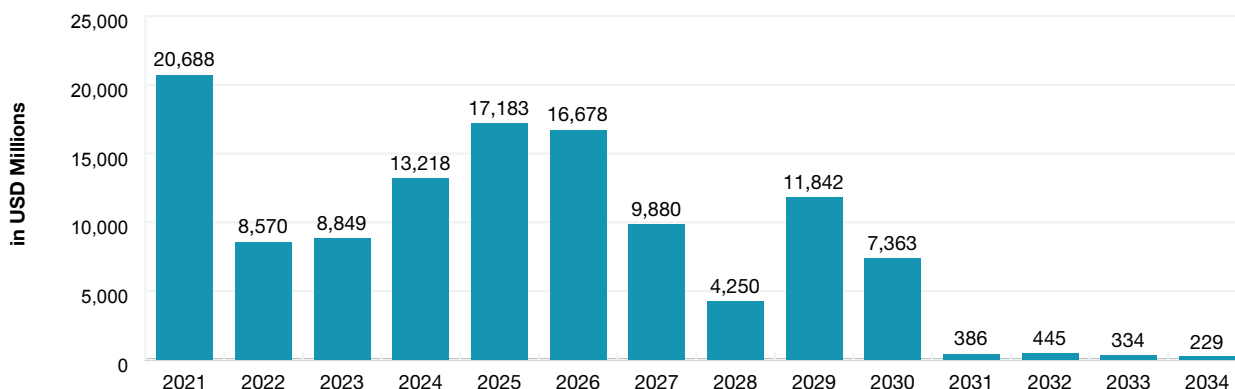
Source: Bloomberg

It is worth noting that of the non-USD LIBOR issuances, around 234 contain a call option feature, of which 200 are fixed rate to floating rate (JPY LIBOR) bonds. Of those fixed rate to floating rate (JPY LIBOR) bonds, only 29 have a call option which is capable of being exercised before the end of 2021. Figure 2 illustrates the profile of the call years of the 200 bonds. However, there is no guarantee that the call options will be exercised at the call date. Therefore, for the purposes of this report, fixed rate to floating rate (JPY LIBOR) bonds and other bonds with call options are treated as maturing at their final 'legal' maturity, and so are not excluded from the overall total of 560 tough legacy issues.

¹³ Defined by jurisdiction of the issuer's country of risk (see further footnote 8)

¹⁴ This includes bonds with type 1, type 2 and type 3 fallbacks. See further *Bond fallbacks in tough legacy transactions*

Figure 2: JPY Issuance (Maturing after December 2021) - Fix-to-Float Bond (Calc Type 1010) by Next Call Year



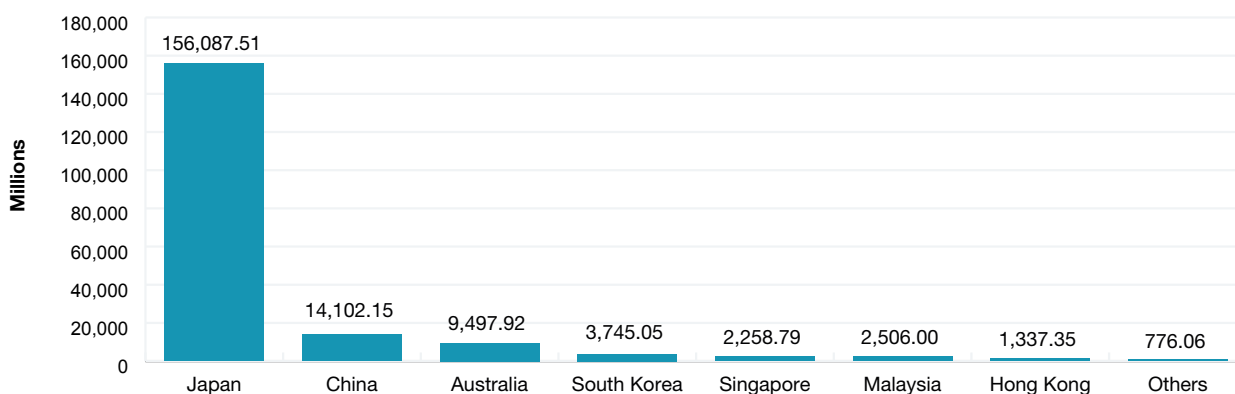
Source: Bloomberg

Jurisdiction of issuance

Figure 3 below illustrates that most of the total of the tough legacy bonds in Asia-Pacific by country of risk are issued by issuers concentrated within Japan, Mainland China and Australia, which together account for approximately 95% (by aggregate notional) of the total volume, while bonds issued by issuers with a country of risk of South Korea, Singapore, Malaysia and Hong Kong together account for approximately 5%.

There is not considered to be a significant tough legacy problem in respect of bonds issued elsewhere in the region, although issuers should still consider amending their bond contracts away from LIBOR and towards RFRs, where they can (see further *Potential solutions for addressing the risks of tough legacy / Consent solicitation*).

Figure 3: APAC Libor-Linked Bonds Volume by Country of Risk (in USD Mn)

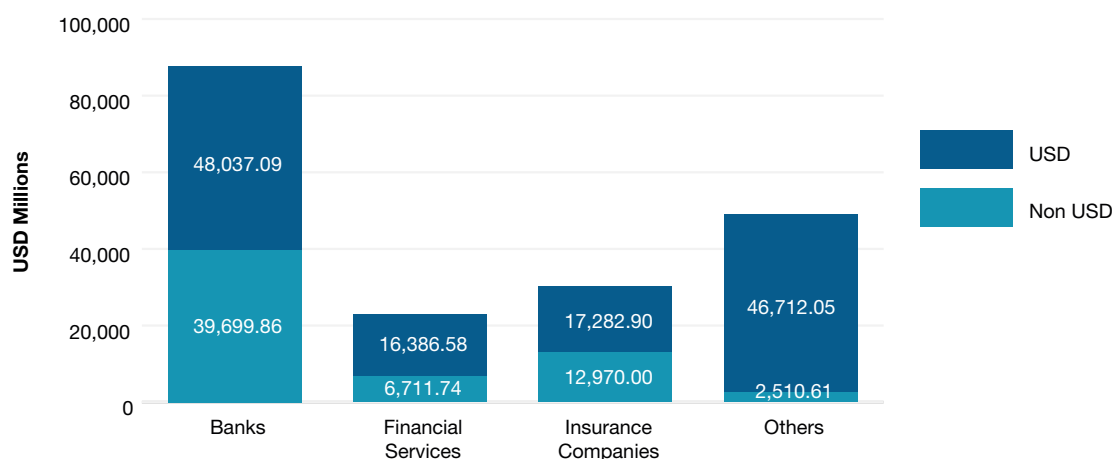


Source: Bloomberg

Issuers' industries

As figure 4 illustrates, volumes are primarily concentrated among financial issuers¹⁵, amounting to 74% of total volume or USD 141 billion equivalent across 444 issues.

Figure 4: APAC Libor-linked Bonds Volume in USD Mn (Financial Issuers vs Others)

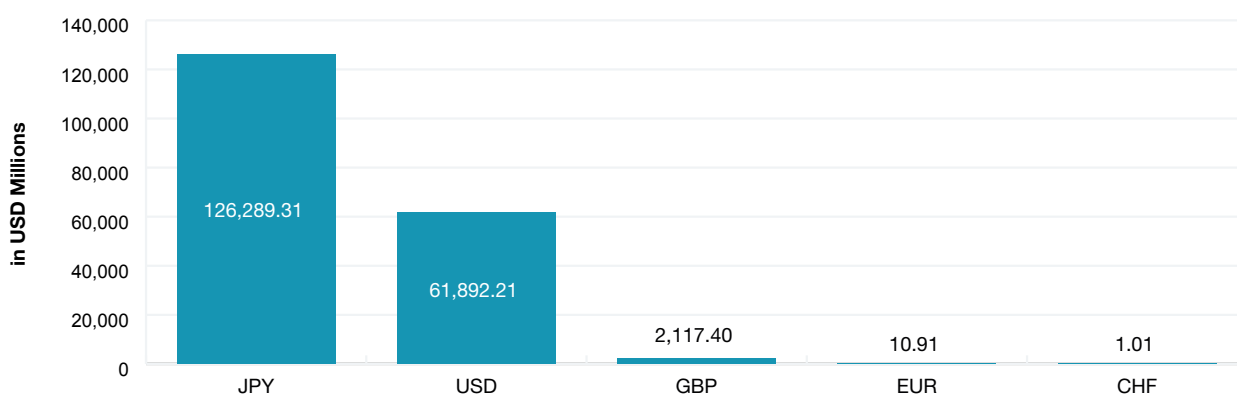


Source: Bloomberg

Currency and maturity

As indicated in figure 5 below and figure 1 above, most of the tough legacy LIBOR-linked issuance in the region in terms of volume is denominated in JPY. A significant proportion of USD LIBOR-linked issuance will mature by 30 June 2023, so will not form part of 'tough legacy' (and is therefore not reflected in this data). And assuming that new USD LIBOR issuance ceases to occur after 31 December 2021 in line with supervisory guidance¹⁶, the tough legacy exposure for USD LIBOR should be capped. But as figure 6 below shows, most JPY LIBOR-linked bonds have a maturity after 2028, or are perpetual in terms of maturity.

Figure 5: APAC Libor-Linked Bonds Volume by Currency (in USD Mn)

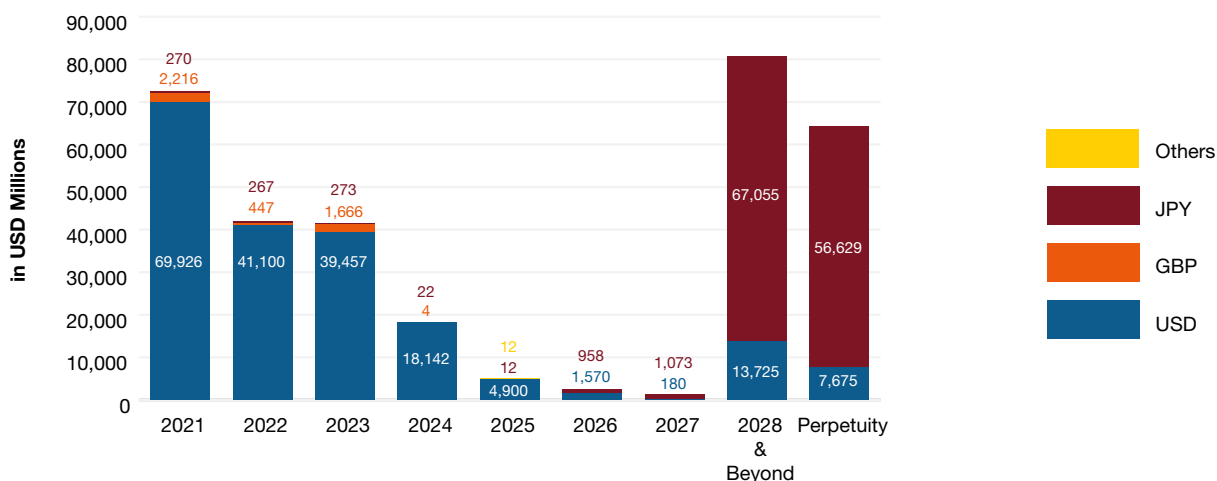


Source: Bloomberg

¹⁵ Financial issuers include those in the categories of Banks, Financial Services, Life Insurance, Property & Casualty Insurance.

¹⁶ [Statement on LIBOR Transition - November 30, 2020 \(federalreserve.gov\)](#)

Figure 6: APAC Libor-Linked Bonds Volume by Maturity (in USD Mn) by Currency



Source: Bloomberg

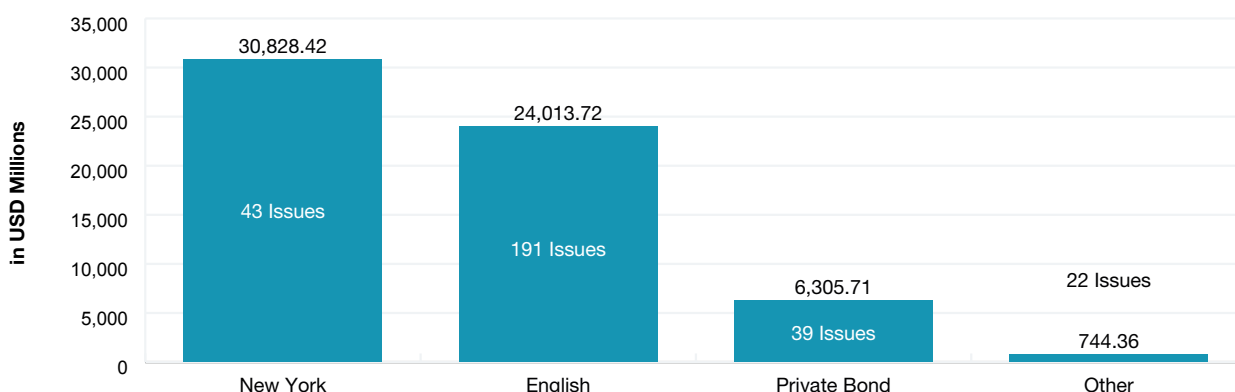
Governing law

Figure 7 below shows that the governing law of almost all of the USD issuance is New York law (50%) or English law (39%), which is consistent with general practice in the international bond market. The remainder is governed by the laws of Hong Kong, Taiwan, Thailand, Singapore, Switzerland or elsewhere.

Figure 8 shows that almost all of the non-USD issuance is governed by Japanese law. The remainder is governed by Cayman Islands or Singapore law.

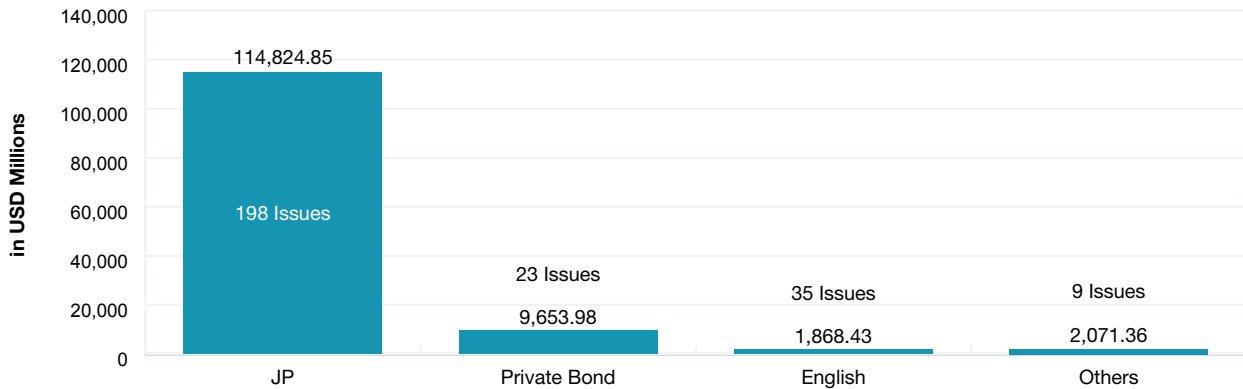
The governing law of tough legacy bonds becomes significant when it comes to the consideration of any proposed tough legacy solutions (see further *Potential solutions for addressing the risks of tough legacy / Consent solicitation*).

Figure 7: APAC Libor-Linked Bonds Volume by Governing Law for USD Bonds (in USD Mn) - Maturing after June 2023



Source: Bloomberg

Figure 8: APAC Libor-Linked Bonds Volume by Governing Law for Non-USD Bonds (in USD Mn) - Maturing after Dec 2021



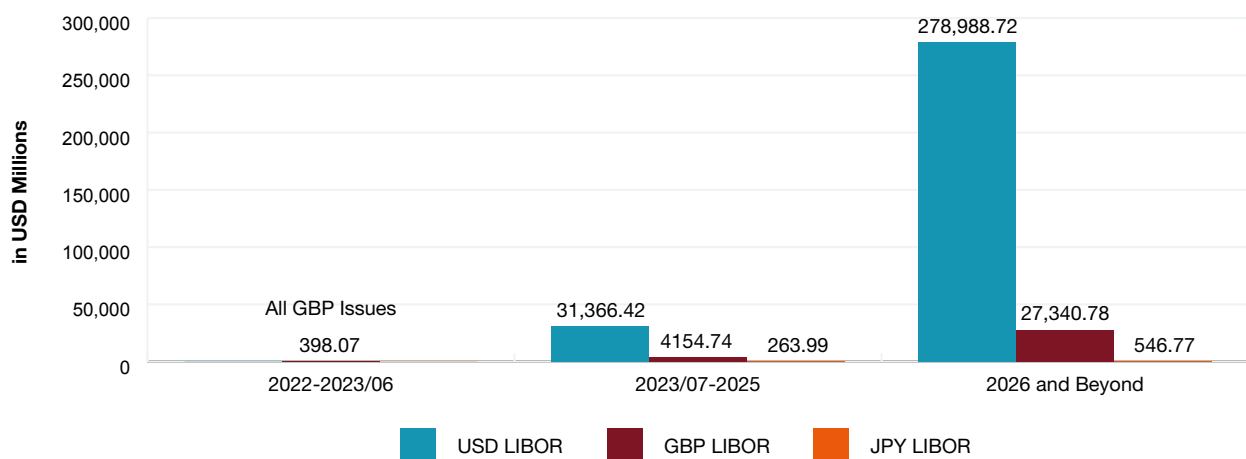
Source: Bloomberg

Securitisations

Securitisations are not included in the analysis above, but figure 9 below sets out the position on securitisations issued in Asia-Pacific¹⁷ and linked to USD LIBOR¹⁸. They are significant in terms of volume—more than USD 330 billion in aggregate maturing after 30 June 2023, comprising approximately 700 transactions.

However, securitisations issued by Asia-Pacific issuers account for only a small proportion – 1% - of total LIBOR-linked securitisations globally across currencies.

Figure 9: Libor-linked Securitisation in USD Mn by Maturity



Source: Bloomberg

¹⁷ This includes all LIBOR-linked securitisations for which the issuer is incorporated in the Asia-Pacific region.

¹⁸ Most non-USD securitisations linked to non-USD LIBOR (such as JPY or GBP) are issued from entities incorporated outside Asia-Pacific.

Conclusion

The different, regional characteristics of the tough legacy bonds are interesting, but what is more significant to note is the universe of the total outstanding issuance figures for bonds: USD 190 billion equivalent across 560 issuances (governing law agnostic), and for securitisations: USD 330 billion across approximately 700 issuances.

It may be that the terms and conditions of these bonds already contain adequate fallbacks which will operate such that they will transition away from LIBOR to an RFR upon the occurrence of particular trigger events. But some may not have adequate fallbacks, and some may have no fallbacks at all. In these cases, such bonds may be capable of being amended by way of agreement between the issuer and the bondholders, or there may be a legislative proposal which anticipates a solution, either for the short- or slightly longer-term.

In any case, the regulatory messaging has been clear; for instance, according to the FSB, *“market participants should continue to progress their transition efforts and plans proactively, particularly through active conversion and the insertion of robust and workable fallbacks where feasible.”*¹⁹

¹⁹ [Reforming Major Interest Rate Benchmarks: 2020 Progress report \(fsb.org\)](#)

Risk free rates and the need for transition

LIBOR is based on submissions of inter-bank lending from a panel of banks. But due to limited activity in the inter-bank lending market which it purports to measure, it became clear that submissions were excessively based on expert judgement of the panel banks, rather than actual transactions²⁰. For this reason, regulatory authorities globally have consistently been stressing the need to move away from LIBOR for some time, and that the best way to minimise the LIBOR transition risks is simply not to issue new bonds linked to LIBOR, and to actively transition any instruments that already link to LIBOR and will mature after relevant cessation dates²¹.

As explained in *Tough legacy bonds in Asia-Pacific: the current situation / What is “tough legacy”?*, the FCA has announced the future cessation or loss of representativeness of the 35 LIBOR benchmark settings currently published by IBA.

For USD LIBOR:

The 1 week and 2 month USD LIBOR settings will cease immediately after 31 December 2021. The overnight and 12 month USD LIBOR settings will cease immediately after 30 June 2023. 1 month, 3 month and 6 month USD LIBOR settings will no longer be representative after the end of June 2023, and their representativeness will not be restored. So the FCA will continue to consider the case for requiring continued publication on a synthetic basis of 1 month, 3 month and 6 month USD LIBOR for a further period after the end of June 2023. However, supervisory guidance from the U.S. authorities states that there should be no new USD LIBOR exposures after the end of 2021²².

For JPY LIBOR:

The Spot Next, 1 week, 2 month and 12 month JPY LIBOR settings will cease immediately after 31 December 2021. 1 month, 3 month and 6 month JPY LIBOR settings will no longer be representative after the end of 2021, and their representativeness will not be restored. So the FCA has said that it will consult on requiring IBA to continue to publish the 1 month, 3 month and 6 month JPY LIBOR after the end of 2021 on a synthetic basis for one additional year.²³ The FCA has said that publication of these settings will consequently cease permanently immediately after a final publication on 30 December 2022.

For GBP LIBOR:

Overnight, 1 week, 2 month, and 12 month GBP LIBOR settings will cease immediately after 31 December 2021. 1 month, 3 month and 6 month GBP LIBOR settings will no longer be representative after the end of 2021, and their representativeness will not be restored. So the FCA has said that it will consult on requiring IBA to continue to publish 1 month, 3 month and 6 month GBP LIBOR for a further period after the end of 2021 on a synthetic basis.²⁴

²⁰ Andrew Bailey, Chief Executive of the FCA: [The Future of LIBOR](#), July 2017

²¹ See, for example, [Reforming Major Interest Rate Benchmarks](#), FSB 2014; Andrew Bailey, Chief Executive of the FCA: [The Future of LIBOR](#), July 2017 and [LIBOR: preparing for the end](#), July 2019 and John C. Williams, President and Chief Executive Officer of the Federal Reserve Bank of New York: [901 days](#), July 2019.




²² [Statement on LIBOR Transition - November 30, 2020 \(federalreserve.gov\)](#)

²³ [FCA announcement on future cessation and loss of representativeness of the LIBOR benchmarks](#)

²⁴ [FCA announcement on future cessation and loss of representativeness of the LIBOR benchmarks](#)

Alternative risk free rates

Official sector sponsored working groups have recommended robust, alternative RFRs for all LIBOR currencies, as summarised below.

Currency	Working Group	Alternative RFR	Administrator	Description
USD 	Alternative Reference Rates Committee	SOFR (Secured Overnight Financing Rate)	Federal Reserve Bank of New York	SOFR is a broad measure of the cost of borrowing cash overnight collateralised by U.S. Treasury securities in the repurchase agreement (repo) market.
JPY 	Cross Industry Committee on Japanese Yen Interest Rate Benchmarks	TONA (Tokyo Overnight Average Rate)	Bank of Japan	TONA is a transaction-based uncollateralised overnight call rate.
GBP 	Working Group on Sterling Risk-Free Reference Rates	SONIA (Reformed Sterling Overnight Index Average)	Bank of England	SONIA is based on actual transactions and reflects the average of the interest rates that banks pay to borrow sterling overnight from other financial institutions.

The differences between LIBORs and RFRs

There are two key differences between LIBOR and RFRs: 'term' and 'credit'.

Term:

LIBOR is a forward-looking or 'term' rate quoted for five currencies (USD, JPY, GBP, EUR and CHF) and seven tenors (overnight/spot next, 1 week, 1 month, 2 months, 3 months, 6 months and 12 months). In the bond market, the most commonly used tenors are 3 months and 6 months. Importantly, the LIBOR-linked interest rate payable is known at the start of the relevant interest period. All the alternative RFRs identified by the relevant currency working groups are overnight rates. This means that determination of a 3 month or 6 month rate based on the alternative RFRs requires significantly different mechanics to those used for determination of a 3 month or 6 month rate based on LIBOR.

Credit:

The LIBOR methodology is designed to produce an average rate that is representative of the rates at which large, leading internationally active banks with access to the wholesale, unsecured funding market could fund themselves in such market in particular currencies for certain tenors. It therefore incorporates a bank credit risk element. This additional, subjective credit risk element, is not observable in the alternative RFRs.

RFR methodologies

Interest on bonds is typically payable periodically. But as RFRs are overnight rates, they must be aggregated in some way over the relevant period to determine the interest amount for the period. For this purpose, they can be constructed for use in bonds in different ways: they can be averaged, compounded in arrears, compounded in advance or used as a component of a term rate. The following paragraphs describe the most common methodologies which, although have been used in some markets for some time, may necessitate an upgrade of underlying systems and infrastructure.

Compounded in advance

In the US, the convention used to aggregate SOFR has been mixed, with transactions using a combination of simple averaging²⁵, compounded in arrears and compounded in advance, although there has generally been a trend in some asset classes towards particular methodologies.

The ARRC's Securitisation Working Group in the US has released a [white paper](#) which describes one option for how new issuances of ABS products could use 30-day Average SOFR, with a monthly reset, set *in advance of the interest accrual period*. This methodology uses published 30-day Average SOFR which uses the actual SOFR rates from the 30-day period before the applicable reset date.

Compounded in arrears

In the SONIA-referencing bond market, the consistently-used convention has been to aggregate the daily SONIA rates on a compounded in arrears basis, which requires observing SONIA on a daily basis over a period corresponding to an interest period, and compounding it over that period. This is the rate which has been used in all the SONIA-linked bonds and securitisations issued in the GBP market.

SONIA compounded in arrears aligns with the conventions already used in the SONIA swap market, and with the fallback rate for derivatives included in the [ISDA Fallbacks Protocol](#) and [ISDA Fallbacks Supplement](#). Consistency between the existing SONIA-linked bond market and the derivatives market is considered desirable and should give rise to fewer instances in which instruments used to hedge cash products need to be amended or excluded from the ISDA Fallbacks Protocol.

It is worth noting that compounding in arrears is also the convention used elsewhere, such as in the €STR market, the TLREF market, the AONIA market, the CORRA market, and is the recommended convention for EURIBOR²⁶ fallbacks in floating rates notes.

Given the lack of public issuances of TONA-linked bonds to date, it is not yet clear what methodologies will be used in Japan to support the TONA rate. However, in accordance with the Cross-Industry Committee on Japanese Yen Interest Rate Benchmarks latest [roadmap](#) to prepare for the discontinuation of JPY LIBOR, firms have been expected to develop systems and operations for calculating TONA Compounding (Fixing in arrears) by the first quarter of 2021.

²⁵ See [ARRC's Guide to Published SOFR Averages](#), which provides key information on how SOFR averages can be used.

²⁶ €STR is the Euro Short Term Rate, TLREF is the Turkish Lira Overnight Reference Rate, AONIA is the Reserve Bank of Australia Interbank Overnight Cash Rate, CORRA is the Canadian Overnight Repo Rate Average and EURIBOR is the Euro Interbank Offered Rate.

Conventions

In the SONIA market, the conventions used involve referencing SONIA compounded in arrears over an interest period, with a margin added, and a “lag” (or “lookback”, as it is commonly referred to in the US) in respect of each interest period, so that the SONIA rate used to calculate a rate for each day in an interest period is based on the SONIA rate for a prior day (typically, five days prior).

However, a “shift” approach can also be used. This is similar to the “lag” approach described above, but the compounding formula in the “shift” approach weights the SONIA rate to account for calendar days when the SONIA rate is not published according to the number of days that apply in the observation period, whereas the “lag” approach weights the SONIA rate according to the number of days that apply in the interest period.

Issuers can issue using either the “lag” approach or the “shift” approach²⁷.

In the SOFR market, no particular market convention has emerged as a clear standard; as more fully described in the ARRC’s [SOFR FRNs Comparison Chart](#), some have used a “lockout” mechanism (where one of the daily SOFR rates is “suspended” meaning that it is repeated for several days, typically at the end of an interest period), some have used the “lag/lookback” approach, the “shift” approach and others have used a payment delay mechanism (where payment dates may be delayed for several days after an interest period concludes).

RFR indices and conventions

In the US, the Federal Reserve Bank of New York (the Federal Reserve) publishes a SOFR compounded index and SOFR averages derived from daily compounded SOFR for 30 days, 90 days, and 180 days²⁸.

In Japan, QUICK Corp. has announced²⁹ that it will publish a TONA compounded index and TONA averages derived from daily compounded TONA for 30 days, 90 days, and 180 days. This paves the way for TONA to be used in the bond market, should it be required.

In the UK, each of the Bank of England³⁰ and IBA³¹ publish a daily SONIA compound index.

In practical terms, use of the Federal Reserve and the Bank of England indices are generally compatible with any financial product that uses a ‘shift’ mechanism.

It is worth noting that compounded and/or averaged indices have also been developed in the €STR market, the TLREF market, the CORRA market, the SORA market and the SARON³² market, and more such indices are likely to emerge elsewhere.

Term RFRs

LIBOR is a forward-looking or “term” rate, where the LIBOR-linked term interest rate payable is known at the start of the relevant interest period.

In the US, the ARRC has stated that it will not be in a position to recommend a forward-looking SOFR term rate by mid-2021, and cannot guarantee that it will be in a position to recommend an administrator that can produce a robust forward-looking term rate by the end of 2021³³, although it has set out key principles³⁴ and the market indicators that it will consider in recommending a forward-looking term rate³⁵. The ARRC has urged market participants not to wait for a

27 [statement-on-bond-market-conventions.pdf \(bankofengland.co.uk\)](#)

28 [SOFR Averages and Index Data - FEDERAL RESERVE BANK of NEW YORK \(newyorkfed.org\)](#)

29 [Calculation and Publication of TONA Compounded Benchmarks from 15 March – 株式会社QUICK: Our Knowledge, Your Value.](#)

30 [SONIA interest rate benchmark | Bank of England](#)

31 [IBA | SONIA Indexes \(theice.com\)](#)

32 SORA is the Singapore Overnight rate Average and SARON is the Swiss Average Rate Overnight.

33 [arcc-press-release-term-rate-for-publication \(newyorkfed.org\)](#)

34 [20210420-term-rate-key-principles \(newyorkfed.org\)](#)

35 [20210506-term-rate-indicators-press-release \(newyorkfed.org\)](#)

forward-looking term rate for new contracts, but to instead be prepared to use the tools available now, such as [SOFR averages and index data](#) that can be applied in advance or in arrears, as described in the [User's Guide to SOFR \(see further *Bond fallbacks in tough legacy transactions / Fallback successor rates, adjustment spreads and conventions*\)](#).

In the case of JPY LIBOR, QUICK Benchmarks Inc. has begun publishing production rates for the Tokyo Term Risk Free Rate (TORF)³⁶. With regard to the use of TORF, it was reported in the minutes for the Cross-Industry Committee on Japanese Yen Interest Rate Benchmarks Meeting on 26 March 2021³⁷, that *“In the United Kingdom and the United States, various discussions had been held with regard to the importance of improving the robustness of term risk-free rates and to use cases of these rates. In order to provide a background for future discussions in Japan, we would like to suggest the Committee consider organizing and reporting on the major issues discussed overseas”*.

In the SONIA-referencing bond market, SONIA term rates have been developed³⁸. However, the Sterling Risk-Free Rate Working Group has concluded that, although *“bond issuance, including securitisation, was initially seen as a potential use case for a [term SONIA reference rate] ... this market had demonstrably adopted overnight SONIA, compounded in arrears for all new GBP issuance”*.³⁹

Conclusion

Now that an end date is in sight for the cessation of LIBOR, activity is stepping up globally in the transition to RFRs, with prolific use of the relevant RFRs in both the USD and GBP markets (*New bond issuances and fallbacks for new LIBOR-linked bond issuances*). And although not yet fixed in certain parts of the market and across jurisdictions, the conventions which accompany the RFRs are following suit and are generally consistently applied within asset classes. The publication of the RFR indices is expected to make it even easier for market participants to use the various RFR compounding methodologies, but for those cases where a term RFR is considered necessary, the market infrastructure is keeping pace with the development of term rates for the relevant RFRs. It is however important to note that the fundamental differences between LIBORs and RFRs (see *The differences between LIBORs and RFRs / Term*) may necessitate an upgrade of underlying systems and infrastructure.

But while this all these developments in market infrastructure signal excellent progress in the transition to RFRs in new bond issuances, there still remain pockets of the market which are over-reliant on LIBOR.

³⁶ [東京ターム物リスク・フリー・レート \(TORF\) | QUICKグループの株式会社QUICKベンチマークス LIBOR代替指標を算出 \(moneyworld.jp\)](#)

³⁷ [cml210416b.pdf \(boj.or.jp\)](#)

³⁸ [Term SONIA Reference Rates | Refinitly, ICE Benchmark Administration | Risk Free Rates \(theice.com\)](#), and [Indicative TSRR | FTSE Russell](#)

³⁹ [use-cases-of-benchmark-rates-compounded-in-arrears-term-rate-and-further-alternatives.pdf \(bankofengland.co.uk\)](#)

New bond issuances and fallbacks for new LIBOR-linked bond issuances

Substantial progress has been made in using RFRs in wholesale markets internationally, including in the USD (SOFR)⁴⁰ and GBP (SONIA)⁴¹ bond market and the derivatives market.

TONA, which is an overnight call rate, is largely used in the Japanese market for interbank overnight lending or interest rate swaps⁴². There is no data available on public issuances of TONA-linked bonds, and it may be that participants in the Japanese market will use either TONA or TORF.

Globally, the authorities have continually stressed that the issuance of LIBOR-linked bonds should cease. As mentioned above, parts of the international bond markets have responded to the need to transition away from LIBOR by referencing the identified alternative RFRs, rather than LIBOR, in new issues of bonds and securitisations. But if the issuance of LIBOR-linked bonds is unavoidable, then issuers are strongly recommended to use robust fallbacks to RFRs. For instance, for Japanese Yen, the Cross-Industry Committee on Japanese Yen Interest Rate Benchmarks considers that “market participants should actively transition legacy contracts and instruments through either an active conversion or an insertion of robust fallback languages before the end of 2021, when JPY LIBOR based on panel bank submissions will likely cease.”⁴³ And to further support the need for robust fallbacks, some regulators and central banks now require adequate fallback provisions in IBOR-referencing contracts in order for them to qualify as eligible collateral for repo facilities⁴⁴.

In the US, some transactions are still being issued linked to USD LIBOR, although this is diminishing⁴⁵. The ARRC published recommended fallback language in April 2019 for USD LIBOR-linked floating rate notes, which sets out a waterfall of fallback options linked to SOFR. But the US authorities have also said that as good as the fallback language may be, simply relying on fallback language to transition still gives rise to a number of operational risks and economic risks, and so market participants should be moving to referencing alternative rates such as SOFR⁴⁶.

In the GBP bond market, new issuance has been referencing SONIA compounded in arrears for some time and new issuance referencing LIBOR has all but ceased.

But in Asia-Pacific, issuance of new LIBOR-linked bonds has continued throughout 2019, 2020, and the start of 2021. Figure 10 below reflects new Asia-Pacific-issued LIBOR-linked issuance through to 31 March 2021 (and further shows that a material proportion of it contains no fallbacks at all).

40 As at the date of this report, at least 1,908 SOFR-linked corporate bonds have been issued, of which at least 822 remain outstanding. Source: Bloomberg

41 As at the date of this report, at least 210 SONIA-linked corporate bonds have been issued, of which at least 129 remain outstanding. Source: Bloomberg

42 In Japan, the Sub-Group for the Development of Term Reference Rates (convened by the Bank of Japan) stated in March 2021 that TONA would be the main alternative benchmark for the JPY interest rate swaps market https://www.boj.or.jp/en/paym/market/jpy_cmtle/cmt210326c.pdf

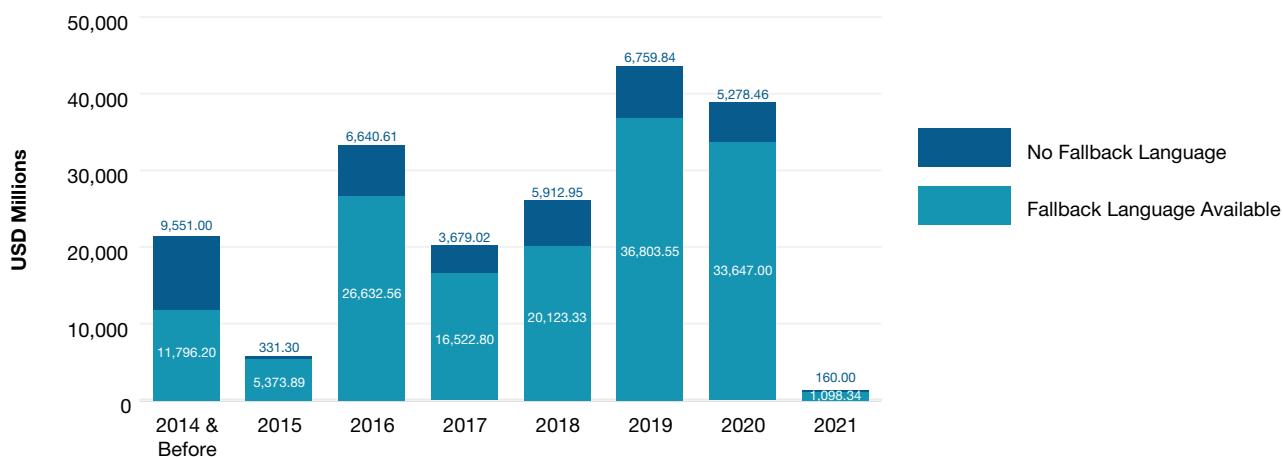
43 Cross-industry committee on Japanese Yen interest rate benchmarks

44 For instance, in [The Bank's risk management approach to collateral referencing LIBOR for use in the Sterling Monetary Framework - Market Notice 24 March 2021 | Bank of England](#), the Bank of England will apply a haircut add-on to all LIBOR linked collateral, from between 10 to 100% unless it is satisfied that LIBOR-linked collateral benefits from a robust fallback.

45 [USD-LIBOR-transition-progress-report-mar-21.pdf \(newyorkfed.org\)](#): “Over the course of 2019, SOFR issuance was nascent and LIBOR issuance continued to dominate the market, but more SOFR debt was issued than LIBOR over the last year, and maturities increased”. And see further Figure 5 in that report.

46 [The next stage in LIBOR transition](#), Randal K. Quarles: “make no mistake—as good as the fallback language may be, simply relying on fallback language to transition brings a number of operational risks and economic risks. Firms should be incorporating these factors into their projected cost of continuing to use LIBOR, and investors and borrowers should consider them when they are offered LIBOR instruments. If you do consider these factors, then I believe you will see that it is in your interest to move away from LIBOR”.

Figure 10: APAC Libor-Linked Bonds Volume by Fallback Indicator Availability



Source: Bloomberg

So in order to cater for the issuance of JPY LIBOR-linked bonds, the Cross-Industry Committee on Japanese Yen Interest Rate Benchmarks in its [Final Report on the Results of the Second Public Consultation on the Appropriate Choice and Usage of Japanese Yen Interest Rate Benchmarks](#) has recommended a waterfall of fallbacks to JPY LIBOR-linked bonds, with a term reference rate (TORF) at the top of the waterfall, followed by the overnight RFR compounded in arrears (TONA), followed by a rate recommended by the authority-related committee, followed by the ISDA Fallback Rate and finally a rate selected by the issuer. This report also recommended that the credit adjustment spread to be applied is the historical median approach over a five-year lookback period.

Conclusion

It is important to ensure that LIBOR-linked bonds – if they must be issued – contain the robust fallbacks to RFRs that have been recommended by the relevant working groups. But as is clear from figure 9, this is not always the case in Asia-Pacific. So on the permanent cessation of JPY LIBOR, it is not clear what will happen to those bonds which do not have any fallbacks at all, or those which have inadequate fallbacks.

Bond fallbacks in tough legacy transactions

A qualitative assessment

English law documentation

Most English law-governed bond documentation⁴⁷ referencing LIBOR contains fallbacks which typically fall into one of three broad categories (which are used by ICMA for convenience purposes only):⁴⁸

Type 1 fallbacks

“Type 1” fallbacks, in the event of the non-availability of LIBOR (as would be the case if it permanently ceases), fall back to the rate in effect for the last preceding interest period, essentially changing the bonds into fixed rate bonds for life.

Type 2 fallbacks

“Type 2” fallbacks, *on the permanent cessation of LIBOR or certain other trigger events such as a prohibition on use of the rate*, typically envisage the issuer appointing an independent adviser to select (or to advise the issuer in the selection of) a successor rate and adjustment spread to be applied to such rate, in each case, on the basis of (a) any recommendations made by relevant nominating bodies or (b) if no such recommendations have been made, customary market practice.

Type 3 fallbacks

“Type 3” fallbacks operate in a similar way to the Type 2 fallbacks, but have an additional trigger event of an announcement of “*non-representativeness*” of LIBOR by the supervisor of the administrator of the benchmark.

In the case of Type 2 and Type 3 fallbacks, the Sterling Risk-Free Rate Working Group, in its capacity as a relevant nominating body, has recommended a successor rate⁴⁹ and a credit adjustment spread⁵⁰, in each case following a consultation process. The successor rate recommendation concluded that any further detail on the conventions to be used to accompany the successor rate, such as use of observation shift or lag, should be left to the issuer to agree on a case-by-case basis.

New York law documentation

Many fallbacks to LIBOR in New York law-governed documentation are typically similar to English law documentation, described above. However, as explained in *New bond issuances and fallbacks for new LIBOR-linked bond issuances*, in the US some transactions are still being issued linked to USD LIBOR, but it is likely that more recent transactions (from April 2019 onwards) will contain the ARRC [recommended fallbacks](#).

The first of the ARRC recommended fallbacks is to a term SOFR rate plus a spread adjustment, but as set out in *RFR methodologies / Term RFRs*, there is as yet no term SOFR rate. The second of the ARRC recommended fallbacks is to a compounded SOFR rate plus a spread adjustment. A spread adjustment has been recommended⁵¹ following a consultation process.

The ARRC recommended fallbacks are silent on the conventions to be applied to the recommended fallback rate. The emergence of consistently applied conventions for use with RFRs would be helpful when determining which conventions to use (see *RFR methodologies* and *Trading and systems risk considerations*).

⁴⁷ Including FRNs, securitisations, covered bonds, capital securities and structured products.

⁴⁸ And see further [Fallbacks-for-LIBOR-floating-rate-notes-Q32019.pdf \(icmagroup.org\)](#)

⁴⁹ [The Working Group on Sterling Risk-Free Reference Rates statement \(bankofengland.co.uk\)](#)

⁵⁰ [Statement on behalf of the Working Group on Sterling Risk-Free Reference Rates – Recommendation of Credit Adjustment Spread Methodology for fallbacks in cash market products referencing GBP LIBOR \(bankofengland.co.uk\)](#)

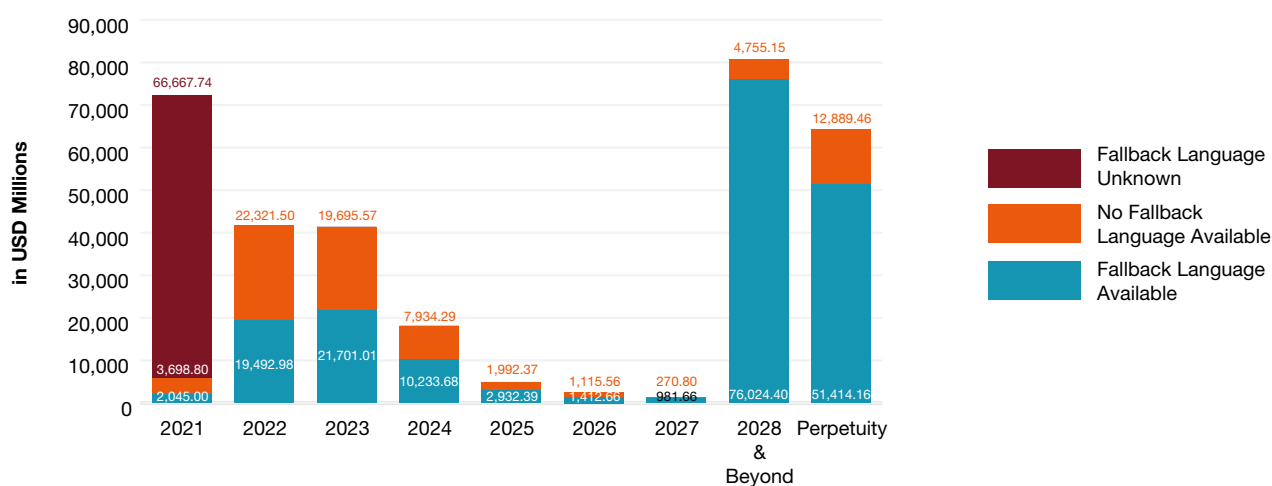
⁵¹ [20210317-press-release-Spread-Adjustment-Vendor-Refinitiv.pdf \(newyorkfed.org\)](#)

A quantitative analysis

As mentioned in *Exposure to tough legacy bonds in Asia-Pacific*, the total outstanding tough legacy in Asia-Pacific⁵² is USD 190 billion equivalent across 560 issuances (governing law agnostic). According to analysis carried out by Bloomberg, as at 1 February 2021, 309 of those bonds (55% of issuances) have fallback language in place, amounting to USD 152 billion (or 80% of the total volume of tough legacy bonds). An approximation of how those fallbacks are expected to operate and their outcomes is set out below in *Further analysis of fallbacks* and *Outcomes of operation of fallbacks*, respectively.

Another 251 bonds (45% of issuances), amounting to USD 38 billion (or 20% of the total volume of tough legacy bonds), do not have any fallback language at all, meaning there is no default position on the permanent cessation of LIBOR.

Figure 11: APAC Libor-Linked Bonds Volume by Maturity (in USD Mn) - Fallback Indicator



Source: Bloomberg

Further analysis of fallbacks

For those 309 bonds that have fallbacks in place, Bloomberg have analysed both the fallback trigger (the event that would cause the benchmark to change under the bond terms) and the fallback recourse (how the replacement benchmark would be determined).

Bloomberg's methodology for categorising fallbacks differs to that of ICMA, with the latter being based on English law bond documentation. But for the purposes of the Bloomberg quantitative analysis:

Market disruption events:

Generally, a 'market disruption event' trigger would likely anticipate the temporary non-availability of the rate, but would not anticipate the permanent cessation, or unrepresentativeness, of LIBOR. This roughly correlates to the trigger events in Type 1 fallbacks described above.

Permanent cessation events:

Generally, a 'permanent cessation event' trigger would anticipate the permanent cessation of LIBOR. This roughly correlates to the trigger events in Type 2 fallbacks described above.

Pre-cessation events:

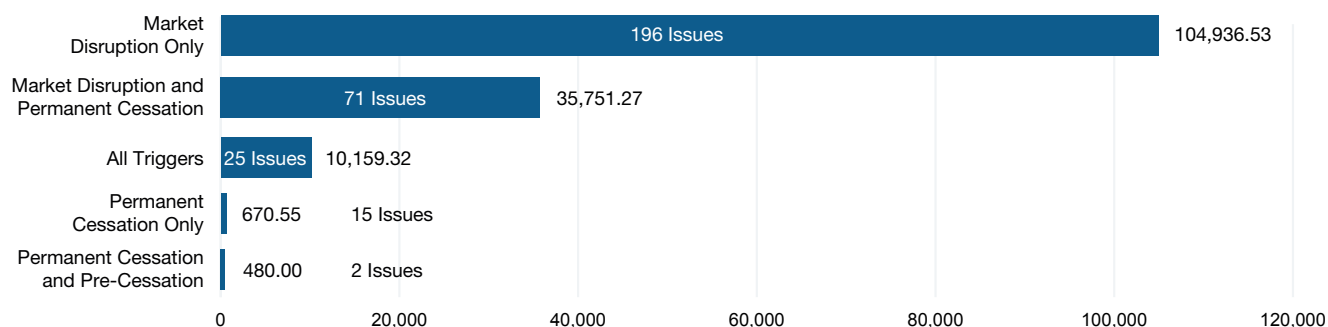
Generally, a 'pre-cessation event' trigger would anticipate the announcement of "non-representativeness" of the LIBOR

⁵² Not including securitisations

by the supervisor of the administrator of the benchmark. This roughly correlates to the trigger events in Type 3 fallbacks described above.

Figure 12 below illustrates the range of different fallbacks which feature in the 309 bonds that contain some kind of fallback language.

Figure 12: APAC Libor-Linked Bonds Volume By Fallback Trigger in USD Mn



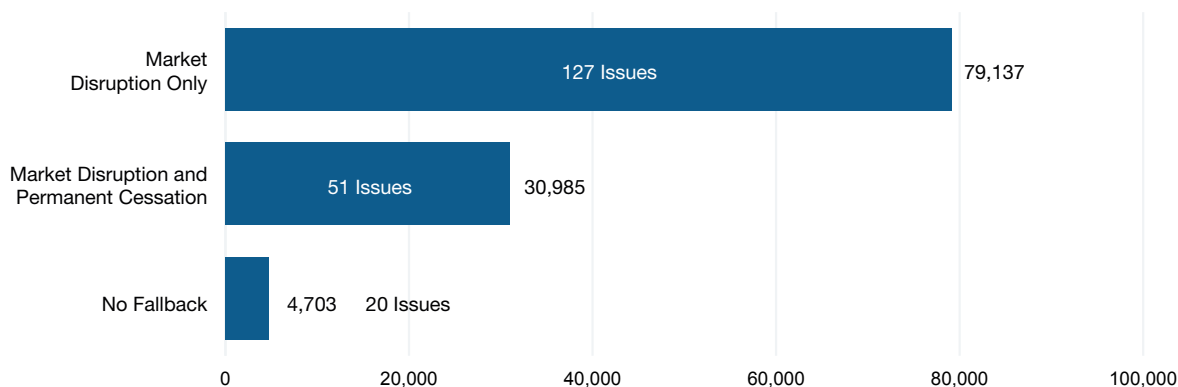
Source: Bloomberg

As demonstrated, what is significant is that 196 bonds (accounting for 35% of the total (560) of tough legacy bonds by number of issuances) have only a market disruption event/Type 1 as a trigger (which would likely anticipate the *temporary non-availability of the rate*, but would not anticipate the permanent cessation, or unrepresentativeness, of LIBOR). And 113 bonds (accounting for 20% of the total (560) of tough legacy bonds by number of issuances) have either permanent cessation event/Type 2 or pre-cessation event/Type 3 as a trigger which are *likely* to fall back to an RFR (but for the purposes of this report, are included in the overall pool of 560 tough legacy bonds).

Japanese law

Of the total 560 tough legacy issuances, 198 are under Japanese law (see figure 8). Figure 13 below illustrates that of those, 127 have a market disruption event/Type 1 fallback, and 20 have no fallback at all. This represents 74% of the total (198) of tough legacy bonds by number of issuances *under Japanese law*, or 26% of the total (560) of tough legacy bonds by number of issuances, governing law agnostic. This level of detail of fallbacks under Japanese law takes on significance when considering potential solutions for addressing the risks of tough legacy (see further *Potential solutions for addressing the risks of tough legacy / Consent solicitation / JPY market, Japanese law*).

Figure 13: APAC Libor-Linked Bonds Volume (Maturing after Dec 2021) By Fallback Trigger in USD Mn - JP LAW Bonds only



Source: Bloomberg

Outcomes of operation of fallbacks

Market disruption event/Type 1 fallbacks

Depending on the precise drafting, it is *likely* that those 196 bonds which have market disruption event/Type 1 fallbacks anticipate using the rate in effect for the last preceding interest period, essentially changing the bonds into fixed rate bonds for life. This outcome is likely to be commercially unacceptable for both the issuer and bondholders, and could mean that bonds with market disruption event/Type 1 fallbacks would cease to perform the economic function for which they were originally intended.

Permanent cessation/Type 2 or pre-cessation/Type 3 fallbacks

Again, depending on the precise drafting, those 113 bonds which have permanent cessation/Type 2 or pre-cessation/Type 3 fallbacks may anticipate falling back to a 'successor rate plus adjustment spread', each of which may be capable of being recommended by a central bank, or regulatory authority, or other nominated working group or committee such as has been recommended by the Sterling Risk-Free Rate Working Group and the ARRC. Others may have fallbacks to 'agent determination', whereby an agent may have the ability in the documentation to determine a successor rate, being one which is "customarily applied for the purposes of determining rates of interest". For the purposes of this report, these are included in the overall pool of 560 tough legacy bonds.

Summary

By way of summary:

- the total number of tough legacy issuances in Asia Pacific is 560 issuances, governing law agnostic
- of these, 196 have market disruption event/Type 1 fallbacks, 113 have permanent cessation/Type 2 or pre-cessation/Type 3 fallbacks and 251 have no fallbacks at all.

In addition:

- the total number of tough legacy issuances in Asia Pacific under Japanese law is 198 issuances
- of these, 127 have market disruption event/Type 1 fallbacks and 20 have no fallbacks at all.

Conclusion

The number of bonds which feature only market disruption event/Type 1 fallbacks (196) and the number of bonds which contain no fallbacks at all (251), taken together, becomes quite significant in the context of the total tough legacy bonds by number of issuances, governing law agnostic, at 447 of 560, or 80%.

The number of bonds under Japanese law which feature only market disruption event/Type 1 fallbacks (127) and the number of bonds which contain no fallbacks at all (20), taken together, also becomes quite significant in the context of the total tough legacy bonds by number of issuances under Japanese law, at 147 of 198, or 74%. And of the total tough legacy bonds by number of issuance (560), this is 26%.

In the case of the market disruption event/Type 1 fallbacks, changing the bonds into fixed rate bonds for life is likely to be commercially unacceptable. And in the case of those bonds which contain no fallbacks at all, there are no contractual provisions for what should happen on the permanent cessation of LIBOR.

Each of these outcomes could lead to a risk of uncertainty, market disruption and could potentially impact financial market stability. It is therefore imperative that issuers review their documentation to assess what kind of fallbacks they contain, if any, and consider what, if any, actions need to be taken, taking into account considerations relating to the governing law of the tough legacy bonds.

Potential solutions for addressing the risks of tough legacy

While considerable progress has already been made with the adoption of RFRs in some markets in new public issues, there are a number of transactions in Asia-Pacific that continue to reference LIBOR (see *New bond issuances and fallbacks for new LIBOR-linked bond issuances*).

And as described in *Bond fallbacks in tough legacy transactions / A qualitative assessment*, many bonds have fallbacks which essentially change the bonds into fixed rate bonds for life, or have no fallbacks in place at all. It is therefore very important to consider the potential solutions available for these bonds.

Consent solicitation

A bond is a contract between an issuer and bondholders (and the Trustee for the bond, where relevant), which can only be amended with consent of the parties, in accordance with the bond's terms and conditions⁵³. In many cases, this can be achieved by way of consent solicitation: a market-based process which enables an issuer to amend bond conditions by way of bondholder consent.

Consent solicitation operates such that an issuer can initiate a proposal of certain amendments to the terms and conditions of a bond. If the necessary quorum and/or consent thresholds set out in the terms and conditions are reached, then the proposed amendments will be made to the terms and conditions of the bond and will bind all holders of the bonds, irrespective of whether they voted in favour of the amendments or not, or of whether they purchased bonds subsequent to the date such amendments are made.

USD market, New York law

There are a significant number of USD-denominated bonds governed by US securities laws which reference USD LIBOR, and which are due to mature beyond the end of June 2023. But under New York law, amendments to interest rate provisions in bond terms and conditions typically require the consent of 100% of holders of the outstanding principal amount of bonds, so the consent solicitation process is uncommon and relatively impractical in bonds governed by New York state law.

GBP market, English law

Under English law, amendments to interest rate provisions in bond terms and conditions typically require a quorum of two-thirds or 75% of holders of the outstanding principal amount of bonds, of which 75% have to vote in favour of the extraordinary resolution⁵⁴.

In the GBP market, around 60 GBP LIBOR-linked legacy bonds⁵⁵ have already been the subject of successful consent solicitation processes undertaken in order to transition from LIBOR to SONIA (plus a spread adjustment). However, some consent solicitations undertaken to convert LIBOR to SONIA have not been successful.

JPY market, Japanese law

According to local lawyers in the Asia-Pacific region, amendments to bond terms and conditions under Japanese law are subject to the requirements of the Companies Act of Japan (Law No. 86 of 2005), as amended (the Companies Act). The process requires the convening of bondholders' meetings, for which no quorum is required, but the majority of holders

⁵³ Bonds cannot be amended wholesale by way of an amending protocol, such as is used in the derivatives market.

⁵⁴ For an adjourned meeting, a quorum of one-third or 25% of holders of the outstanding principal amount of bonds is required (if the first meeting was adjourned for want of quorum), of which 75% have to vote in favour of the extraordinary resolution to amend the relevant terms and conditions.

⁵⁵ Of an estimated 490, according to data compiled by ICMA using a combination of data provided by Bloomberg, Dealogic and ICMA members' proprietary sources.

of voting rights present at the meeting have to vote in favour of the resolution proposing the amendment. It is generally understood that an extraordinary resolution is not necessary for amending interest rate-related conditions. If approved at a bondholder meeting, the resolution approving the amendment must then be further approved by a court in order for it to become binding on all other bondholders who did not vote. The requirement for a bondholders' meeting and the subsequent approval by a court may be dispensed with if written consent to the amendment from all bondholders can be provided. However, bondholders' meetings rarely take place in Japan, and therefore convening a meeting for the purposes of transitioning LIBOR-referencing bonds is not likely to be familiar to many Japanese market participants.

Feasibility of more consent solicitations

In Japan, a [“Dear CEO” letter](#) in June 2020 set out a series of actions required of financial institutions, including *“Transition to alternative rates or introduction of robust fallback provisions should be made as soon as possible in existing contracts and products referencing LIBOR with a maturity beyond the end of 2021.”*

In the UK, the authorities generally consider that the best and smoothest transition from LIBOR will be one in which contracts that reference LIBOR are replaced or amended before the fallback provisions are triggered⁵⁶. And in the Sterling Risk-Free Rate Working Group's most recent [Priorities and Roadmap for transition by end-2021](#), one of the key milestones is to *“Accelerate active conversion where viable (eg consent solicitation mechanisms) to reduce legacy volume, and complete active conversion where viable by the end of the third quarter [2021]”*.

But added to the fact that consent solicitation is not commonly undertaken under New York or Japanese law, there are a number of other important factors to be taken into account when considering whether there is potential for more consent solicitations to take place *at the rate required to convert all LIBOR bonds in the time given*, or whether they will be successful. These factors include (but are not limited to):

Consent solicitation requirements

The quorum and voting thresholds can be difficult to achieve, including in Japan where quorum and voting thresholds are not so strict under Japanese law. This is particularly the case if the bond being transitioned is widely held by a large number of investors, not all of whom can be located, or are prepared to engage with the process. If large volumes of consent solicitations are taking place at the same time, the quorum and threshold requirements may pose a significant logistical challenge.

Time required

Typically, under English law, a consent solicitation takes at least 2 months from start to finish⁵⁷. The timings of certain requirements with respect to, for instance, meetings (such as notices of meetings and the delay between first meetings and adjourned meetings) and court approval (in Japan), are enshrined in bond documentation and the Companies Act (in Japan) and may not be circumvented, and a lot of discussion is required in advance of launch of a consent solicitation on the rationale for the transition and conditions thereof, and respective expectations with respect to the outcome.

Cost

It can be costly to undertake a consent solicitation, and the cost is usually borne by the issuer. Issuers will therefore want to ensure that, before incurring such costs, the consent solicitation will be successful. But there is no guarantee of this.

Process

Some inefficiencies have been highlighted in the consent solicitation process, such as difficulties in the location of bondholders and the requisite cascade of information and communications between the parties, which can be compounded if there are different ownership structures in place. Much of the operations process is conducted manually, which would become exacerbated if large volumes of consent solicitations were to be undertaken within a relatively short time frame.

⁵⁶ For instance, Edwin Schooling Letter, Director of Markets and Wholesale Policy, FCA: [LIBOR transition and contractual fallbacks](#).

⁵⁷ See the typical consent solicitation overview timeline in [ICMSA Bulletin 200610/50 \(English law\)](#).

Transaction-specific challenges

The success of a consent solicitation can depend on transaction-specific challenges, such as investors holding out in the hope of a more favourable outcome, and the migration of holdings in transactions to different jurisdictions, rendering their holders ineligible to vote in a consent solicitation.

Securitisation-specific issues

For securitisations, there is a need to ensure that the various different instruments which together make up the securitisation (swaps, liquidity facilities and other credit enhancement arrangements) all transition at the same time and in line with the bond itself, and that there is no impact on the rating of the bonds issued as part of the securitisation.

Potential legislative intervention

UK legislation - GBP and JPY LIBOR⁵⁸

In the UK, the [Financial Services Act](#) amends the provisions of the UK Benchmarks Regulation by clarifying and extending the FCA's powers to manage an orderly wind-down of a critical benchmark, such as LIBOR.

The FCA has the power in certain circumstances to direct the administrator of a critical benchmark (eg GBP and JPY LIBOR) to change the way in which the benchmark is determined (to so-called "synthetic LIBOR"), such as where the FCA has found that the benchmark's representativeness will not be restored and where action is necessary to protect consumers and/or to ensure market integrity.

The default position is that UK supervised entities will not be permitted to use synthetic LIBOR, unless they are permitted to do so by the FCA. It is not yet clear whether the FCA will permit UK supervised entities to use synthetic LIBOR in any legacy contract, bond or instrument referencing GBP or JPY LIBOR, or only a sub-set of such legacy contracts, bonds or instruments. The FCA is expected to consult on this shortly⁵⁹.

In the case of JPY LIBOR, the FCA has announced that it will consult on requiring IBA to continue to publish a synthetic version of JPY LIBOR after the end of 2021 for one additional year⁶⁰. Publication of this will cease permanently immediately after its final publication on 30 December 2022.

In the case of GBP LIBOR, the FCA has announced that it will consult upon requiring IBA to continue to publish a synthetic version of GBP LIBOR for a further period after the end of 2021 (up to 10 years)⁶¹.

The FCA has indicated that the methodology for calculating synthetic LIBOR will be term RFR plus a fixed credit adjustment spread. The FCA is expected to consult upon this shortly.⁶²

New York legislation

In the US, the New York State Senate & Assembly passed [NY State Senate Bill S297](#) relating to LIBOR discontinuation, which has been signed by the Governor and has become law.

Broadly speaking, this new law prohibits parties from refusing to perform contractual obligations or declaring a breach of contract as a result of the discontinuance of LIBOR or the use of a replacement; establishes that the replacement is a commercially reasonable substitute for and a commercially substantial equivalent to LIBOR; and provides a safe harbour from litigation for the use of the recommended benchmark replacement.⁶³

⁵⁸ It is possible that the UK legislation could be used to provide a "synthetic LIBOR" solution for USD LIBOR in due course (and indeed other critical benchmarks), but this has not been confirmed.

⁵⁹ [Benchmarks Regulation: our new powers, policy and decision-making | FCA](#)

⁶⁰ [FCA announcement on future cessation and loss of representativeness of the LIBOR benchmarks](#)

⁶¹ [FCA announcement on future cessation and loss of representativeness of the LIBOR benchmarks](#)

⁶² [Consultation on proposed policy with respect to the exercise of the FCA's powers under new Article 23D](#)

⁶³ [NY State Senate Bill S297 \(nysenate.gov\)](#)

EU legislation

In the EU, the EU Benchmarks Regulation has been amended⁶⁴ in order to cater for an orderly wind-down of LIBOR. The amendments empower the European Commission to designate a replacement benchmark that covers all references to a widely used reference rate that is phased out, such as LIBOR, when this is necessary to avoid disruption of the financial markets in the EU⁶⁵. These new provisions are stated to apply to: (a) any contract, or any financial instrument as defined in Directive 2014/65/EU, that references a benchmark and is subject to the law of one of the Member States; and (b) any contract, the parties to which are all established in the Union, that references a benchmark and that is subject to the law of a third country and where that law does not provide for the orderly wind-down of a benchmark. For the bond market, the EU legislation will primarily be relevant for bonds governed by a law of the EU and so this is unlikely to be relevant for tough legacy in Asia-Pacific.

Conclusion

The introduction of legislation in the UK, New York and the EU to support the orderly wind-down of LIBOR is welcome. However, much of the detail is not yet clear, including the extent to which the different legislative initiatives will result in a consistent commercial outcome for market participants. In the case of JPY LIBOR, synthetic LIBOR is likely to be available for only one year, after which it will cease permanently. Preparations to transition away from LIBOR should therefore be made as soon as possible, without awaiting the outcome of legislation.

⁶⁴ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021R0168&from=EN>

⁶⁵ [The EU prepares for the end of LIBOR \(europa.eu\)](#)

Trading and systems risk considerations

Conventions

As described in *Bond fallbacks in legacy transactions*, the Sterling Risk-Free Rate Working Group's successor rate recommendation concluded that any further detail on the conventions to be used to accompany the successor rate should be left to the issuer to agree on a case-by-case basis. But the conventions used to date in the SONIA market have involved either the "lag" approach, or the "shift" approach, and issuers can use either approach⁶⁶.

The ARRC recommended fallbacks are silent on the conventions to be applied to the recommended fallback rate (including as to rate rounding, lookback periods, lock-out, etc.), and in the SOFR market, no particular market convention has emerged as a clear standard which would help to direct this determination. And given the lack of public issuances of TONA-linked bonds to date, it is not yet clear what conventions will be used in Japan to support the TONA rate.

So although consistently applied conventions for use with RFRs may emerge over time, the choice of conventions may be left to the discretion of the issuer or its agent, placing a reliance on those parties to make those determinations.

Fallbacks

As explained in *New bond issuances and fallbacks for new LIBOR-linked bond issuances*, issuers are strongly recommended to use robust fallbacks to RFRs, and some regulators and central banks now require adequate fallback provisions in IBOR-referencing contracts in order for them to qualify as eligible collateral for repo facilities⁶⁷. This all amplifies the importance of ensuring that LIBOR-linked bonds – if they must be issued – contain robust fallbacks to RFRs.

Systems

It is therefore essential that market participants have adequate systems in place to manage the transition from LIBOR. This will be necessary both for managing tough legacy bonds themselves, and also for new issuance and investments linked to RFRs.

These systems should ideally be able to:

- identify and track RFR issuance
- model new RFR calculation methods
- review post-trade data on RFR-linked bonds and RFR derivatives and
- track consent solicitations and other amendments to LIBOR-linked securities.

In addition, it is important for issuers and investors to incorporate new calculation models to support all relevant RFR methodologies including compounding in arrears, compound in advance, daily simple average, and index-linked. Market participants should ensure that their systems support all relevant features including lookbacks, lockouts, payment delays, and observation period shifts. Bloomberg, with the support of ISDA, has also published adjusted RFRs and accompanying benchmark spread adjustments for the ISDA fallback rates for major currencies and tenors. See further [LIBOR Transition | Bloomberg Professional Services](#).

⁶⁶ [statement-on-bond-market-conventions.pdf \(bankofengland.co.uk\)](#)

⁶⁷ For instance, in [The Bank's risk management approach to collateral referencing LIBOR for use in the Sterling Monetary Framework - Market Notice 24 March 2021 | Bank of England](#), the Bank of England will apply a haircut add-on to all LIBOR linked collateral, from between 10 to 100% unless it is satisfied that LIBOR-linked collateral benefits from a robust fallback..

Conclusion – Preparation for the cessation of LIBOR

The transition away from LIBOR towards RFRs remains a significant priority for financial markets. While important progress has been made to date, this work needs to accelerate significantly in the remainder of 2021. Regulatory authorities globally have consistently stressed the need to actively transition any instruments that already link to LIBOR and will mature after relevant cessation dates, and to not issue new bonds linked to LIBOR, but to ensure that any such bonds contain robust fallbacks.

Tough legacy in Asia-Pacific

The tough legacy problem in Asia-Pacific is not insignificant, and the proportion of tough legacy bonds with inadequate fallbacks, or with no fallbacks at all (together, 447, or 80% of the total tough legacy bonds by number of issuances, governing law agnostic), is a concern.

The proportion of tough legacy bonds with inadequate fallbacks, or with no fallbacks at all under Japanese law (147, or 74% of the total tough legacy bonds by number of issuances under Japanese law, or 26% of the total tough legacy bonds by number of issuances, governing law agnostic), is also concerning.

The outcomes for these tough legacy bonds on the future cessation or loss of unrepresentativeness of LIBOR could lead to a risk of uncertainty, market disruption and could potentially impact financial market stability. And although some LIBOR settings may have a temporary reprieve due to proposed legislative interventions, the legislation might not address all issues or be practicable in all circumstances, and might not be available for long. Market participants should therefore determine their tough legacy exposure, and establish plans to address it.

Active market-led transition remains of key importance and provides the best route to certainty for parties to contracts referencing LIBOR, although active transition by way of consent solicitation may not be easy to achieve in many circumstances. But issuers should nonetheless review their documentation to assess what kind of fallbacks they contain, if any, and consider what, if any, actions need to be taken. Where active transition is not feasible, and where legislative intervention is not helpful, the implications of cessation or lack of representativeness of LIBOR should be considered and discussed between the parties, and steps taken to prepare for this outcome as needed.

New issues

The best way to minimise the LIBOR transition risks is simply not to issue new bonds linked to LIBOR. As noted in this report, there are key differences between LIBOR and RFRs. And while the market infrastructure exists in order to facilitate the use of the RFRs for new issues, and issuers and bondholders have largely adapted to the new rates in some markets, it is essential that market participants have adequate systems in place to manage the transition to RFRs, for instance to accommodate their backward-looking methodologies and associated conventions. And in the event that a forward-looking term rate is required, it may be available, albeit for certain limited use cases.

LIBOR-linked bonds – if they must be issued – should contain the robust fallbacks to RFRs that have been recommended by the relevant working groups to ensure that, on the permanent cessation of the LIBOR rate or if the legislative intervention is not – or is no longer – available, those bonds will fall back to an appropriate RFR.

In all cases, all business-critical systems and processes should either be conducted without reliance on LIBOR or be capable of being changed to run on an alternative basis at limited notice.

The timetable is short. From an international bond market perspective, it is important for both issuers and investors to remain focused on identifying and mitigating the risks of LIBOR transition as much as possible.

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