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INTERNATIONAL FINANCING REVIEW ROUNDTABLE

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LIFE AFTER LIBOR

FOREWORD

It is now very clear that UK and US regulators want market participants to transition away from Libor by its phase-out at the end of 2021, predominantly because it is a not based on transactions whereas replacements SOFR and Sonia are.

Despite the US being the centre of global finance a surprising amount of action is happening in the UK's Sonia market. It feels somehow appropriate that new issuance of Sonia-linked bonds has set a blistering pace; an endorsement that the sterling market's designated new risk-free rate (RFR) is ready to replace Libor in a couple of years' time.

Not only does London lend its name to the financial benchmark that underpins trillions of dollars of risk but the Bank of England and the UK's Financial Conduct Authority have pushed hardest for this reimagining of this key piece of financial market infrastruture.

Within the primary sphere the sterling market's transition is almost complete, spurred by the FCA's stern urging to banks' chief executives to get on with it.

After the initial steps were made by supranational issuers, UK banks joined the bandwagon and a pattern of steady deliberate progress emerged. Soon there was a clear framwork around how things like coupons are calculated and when payments will be made on plain-vanilla senior unsecured bonds, before the market moved into the covered bond realm and then securitisation.

From a standing start, Sonia-linked paper has boomed within 18 months and accounts for around one-fifth of all sterling issuance this year, compared with around 5% that Libor-linked floating-rate note supply would be in a typical year.

None of the new RFRs have a term structure - something that all users found a highly useful characteristic of Libor products.

Nonetheless the fact that overnight Sonia is a longstanding product in the sterling market has certainly helped its adoption.

The same cannot be said of the US where the RFR is a completely new product, an overnight secured rate, and market participants have jostled one another on methodology for new issuance.

Moreover, sharp volatility seen after summer in SOFR alongside the US repo rate truly rocked confidence.

That said, liquidity is steadily building in SOFR-based futures contracts, and to a lesser extent, Sonia futures. This type of activity suggests that a new ecosystem for price discovery and risk transfer at the short-end is being successfully created.

Legacy positions and contracts still need to be addressed. There has been some very successful liability management exercises that point to an acceptance by some players that this needs to be tackled together.

But market-led solutions might not work in certain circumstances or all jurisdictions - particularly the US.

What this means for end-users is uncertain because it is not clear what happens to Libor, and many users are still holding out for a replacement term rate. This will be forthcoming at some point but regulators seemingly want them used sparingly lest they end up with a similar situation to now - an inverted pyramid of risk atop a little-traded instrument.

All we know is that panel banks will continue to submit until the end of 2021 but after that point everyone is in the dark.

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Head of interest rate products for CME Group in EMEA
Prior to joining CME Group in 2015 Mark Rogerson had more than 20 years of experience trading in fixed income derivatives most recently heading the Scandinavian and Swiss trading desk at Deutsche Bank and previously at JP Morgan. Rogerson's role at CME Group focuses on executing the company's international growth strategy in rates with emphasis on refining and delivering exchange traded and OTC product to the EMEA region. Mark holds a BSc in Economics and Computing from London School of Economics and Political Science.

ISABELLE LAURENT
Deputy treasurer and head of funding at EBRD
Isabelle Laurent spent 13 years in London and Hong Kong in treasury, fixed income origination, and swaps trading and marketing with Swiss Bank Corporation, Nomura and NatWest Markets where she was Director of Debt and Derivatives Marketing. She joined EBRD in 1997 as Deputy Head of the Treasury Funding team, and was promoted to Deputy Treasurer and Head of Funding in 2003. In addition to overseeing EBRD's issuance in the capital markets and investor relations, Isabelle also focuses on capital markets development in EBRD's countries of operations and sustainable finance.

KATIE KELLY
Senior director, ICMA
Katie Kelly advises and represents market practitioners (particularly, issuers) on regulatory issues, market practice and transaction execution in the debt capital markets. Recently, she has been working on the transition from Libor to risk-free rates (RFRs) and is active in the various associated working groups of the Sterling RFR Working Group, with a focus on the adoption of Sonia as the new sterling RFR, and the transition of legacy instruments. Kelly established and continues to nurture the ICMA Women's Network, along with colleagues.

ANTHONY TOBIN
Head of european syndicate at RBC Capital Markets
Anthony Tobin has more than 15 years' experience within European debt capital markets syndicate across a broad range of credit and rates products. Historically a financials specialist, Tobin has expertise in executing a range of currencies, asset classes and transaction structures from ABS and covered bonds through to deeply subordinated bank, insurance and corporate hybrid instruments alongside high-profile liability management trades. Tobin has worked for a number of global banking institutions and joined RBCCM in July 2013

SEAN TAOR

Head of European debt capital markets at Royal Bank of Canada

Sean Taor has more than 30 years of capital markets experience, joining RBC in 2010 as head of public sector DCM and appointed head of European DCM in 2011. Taor's spent 18 years at Barclays and has been involved in the underwriting of more than US$1trn of syndicated fixed income transactions across SSA, corporate and FIG issuance. He represents RBC on several industry market practice committees. He also sits on several RBC operating committees and is executive sponsor of RBC's Employee Resource Group.

ALEX CHAMBERS

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MARTIN MCKINNEY

Senior manager of funding team at Santander UK

Martin McKinney is an experienced funding manager having worked in banking, treasury, structured finance, risk management and derivatives. Santander UK has been at the forefront of Libor transition and was one of the first issuers to access the Sonia covered bond market in 2018. More recently McKinney was a key part of the team that created the groundbreaking consent solicitation process for Santander's residential securitisation platform, Holmes - which is the first step in managing Santander UK's Libor exposure ahead of Libor cessation.

ALEX CHAMBERS, IFR: WELCOME TO THE IFR LIFE AFTER LIBOR ROUNDTABLE. WE ARE GOING TO START OFF WITH AN OVERVIEW OF WHAT IS HAPPENING IN THE SONIA MARKET SINCE IT GOT GOING.

SEAN TAOR, HEAD OF EUROPEAN DEBT CAPITAL MARKETS, ROYAL BANK OF CANADA: There hadn't been a reformed Sonia transaction until June last year, when EIB launched a five-year deal. I think at that time the Sonia market was somewhat sceptical around the ability and the willingness for some market participants to embrace the challenge of transition to Sonia.

That deal went very well and was quickly followed by many others after the summer, including Santander. They did a very successful £1bn three-year. Over the course of last year, £6.9bn Sonia-linked transactions were priced across 12 different trades and 11 bookrunners.

Since then, the adoption from the investment community has been incredibly strong. The first trade from the EIB had roughly 50 investors. The investor base has grown to well over 200. More importantly the acceptance that Libor is likely to be going in 2021 is now very much embedded in the thought process of investors, issuers and intermediaries as well, so it's been super-positive.

So far this year, there have been 61 transactions, £28.5bn, 23 bookrunners, so a sea change in volume. That's roughly 20% of all sterling issuance this year compared with about 4% last year. From the primary side, it's been a real success story.

If you look at the volumes in other markets, in SOFR there's been a lot of volume but I think adoption has been a bit patchier. Across the universe of issuers, investors and others, the willingness and ability to embrace the transition and all the practical steps to get there have been very pleasing.

ALEX CHAMBERS: THINKING ABOUT THE SPEED OF UPTAKE, OBVIOUSLY THE REGULATOR IN THE UK HAS BEEN VERY VOCAL. IS THAT THE LONG AND SHORT OF IT?

SEAN TAOR, RBC: I think the regulator drove the conversation two years ago when they said they would not compel banks to quote Libor. I think since then the regulator, the Bank of England, and many other institutions, have been at the forefront of pushing the agenda, and reiterating that Libor is likely to be disappearing and making all market participants prepare and show that they are prepared for change.

Compared to some other jurisdictions, I think that message has really fed through, as you would expect it to in the UK, given that Libor was a London quoted product.

ISABELLE LAURENT, DEPUTY TREASURER AND HEAD OF FUNDING AT EBRD: I think there are two other factors. I agree with you that it's the sort of muscular

pushing from the FCA and the Bank of England. But also the fact that Sonia has been in existence for some time, where you haven't seen that in other jurisdictions.

There wasn't a compounded overnight rate, or an overnight linked floating rate that people tended to use in the FRN space. Unlike, say, with the Fed funds, where they had another way of doing it, they weren't compounding, they were averaging. You've ended up with a bifurcated market in the US in a way that we wouldn't see as likely in the UK because there weren't people trying to fit it into their existing systems and their existing types of business.

SEAN TAOR, RBC: I agree. Sonia has been around for 21 years, and SOFR for just over a year, so there is a history. But having said that, if you asked many participants a couple of years ago what they know about Sonia, it wouldn't have been an awful lot. Everything was benched against Libor, whether that's new issues, lending and everything else.

KATIE KELLY, SENIOR DIRECTOR, ICMA: When you say that 20% of all sterling issuance this year has been Sonia-linked, typically, going back a couple of years maybe to 2016 or 2015, what kind of percentage would have been floating linked to Libor sterling?

SEAN TAOR, RBC: Less than 10%, I'd say more like 5%. For the all-sterling league table, including one-year issuance - and more recently we have seen a lot of one-year issuance to Sonia, very much bank-treasury driven - 21% is Sonia-linked, a fifth of every sterling deal across the whole maturity. But even if you take 18 months and on, which is really the league table criteria for issuance, it's still 18.5% compared with 4% last year.

ALEX CHAMBERS, IFR: IS THIS WILLINGNESS TO PRINT FLOATING-RATE NOTES LINKED TO WHERE PEOPLE FEEL INTEREST RATES ARE HEADING?

SEAN TAOR, RBC: I think willingness to print is demand-driven. It's really demand-driven on one side, and to a certain extent issuer-driven as well. But if there is no demand, it doesn't matter what you want to print. You could argue that issuing a floating-rate note from an underwriter is less risky than a conventional bond, but the big take up in volume in Sonia, as Isabelle said - strong arm or transitioned or otherwise - is really the message from the FSA. But also, a big uptake in bank treasuries, who are rebasing their portfolios against Sonia and have natural needs for a hedge against their assets.

ISABELLE LAURENT, EBRD: Sean, you stressed primary market. Do you have a feel for the secondary volumes, and how they would compare with normal Libor floaters? I haven't heard much about that.

SEAN TAOR, RBC: This time last year there was almost no secondary flow, and there was almost no secondary ability to switch because the number of issues that had come to the market this time in 2018 was a handful. There was no real need or willingness for investors to switch out of one Sonia-linked floating-rate note into another. Now there is liquidity because there have been 23 different bookrunners this year issuing Sonia, more than double the whole of last year.

Banks can trade it. Banks can book it. Banks can settle it. If you have a trading desk actively quoting and pricing, you should get more liquidity. I won't say there has been an awful lot of secondary flow but there has been some. Demand has been pretty steady throughout the year. Compared to the fixed-rate market, which is a lot more volatile, a lot more unpredictable, it's been a very steady market on a relative basis, and no real reason to switch.

The majority of issuers, with one exception - BMW, which printed a one-year deal - are high-quality Triple A issuers, whereas perhaps historically the floating-rate note universe has been a combination of bank trades, covered bond, senior, SSA and corporates. There has been a little bit more variety.

ANTHONY TOBIN, HEAD OF EUROPEAN SYNDICATE AT RBC CAPITAL MARKETS: The liquidity in secondary markets is slightly bifurcated between relatively poor liquidity in Libor instruments beyond 2022, whereas actually the 2021 dates are sure to still have relatively reasonable liquidity in whichever asset, in part because they are particularly short-dated, particularly highly rated instruments, which tend to trade perhaps at reasonable volumes relative to those further out on the curve.

There is the willingness of dealers to continue to make markets in Sonia instruments beyond those dates, rather than much more liquid and therefore broader bid offer spreads within, say, Libor products beyond 2022.

We are also seeing meaningful difference now in spread performance between the Libor instruments and the Libor equivalent of Sonia rates, where within some markets that's between sort of 2bp-5bp tied to performance for Sonia assets, even up against an equivalent-date Libor instrument. Or, in other markets an even bigger delta than that in terms of secondary. In the ABS market it's 10bp-15bp, so there is a big difference between the two.

It all comes down to one of the other positives around what the investors are looking for from the Sonia market, whether that is liquidity, confidence in liquidity, particularly given the dominance of the bank treasury, or the HQLA [high-quality liquid assets] or LCR [liquidity coverage ratio] investors who are making up 60%-70% of the majority of the order books.

ALEX CHAMBERS, IFR: WE'VE TOUCHED ON THE SECURITISATION MARKET. THAT HAS SEEN A MASSIVE UPTICK FROM WHERE WE WERE A YEAR AGO. WHAT IS YOUR VIEW ON THE DEVELOPMENT THERE?

MARTIN MCKINNEY, SENIOR MANAGER OF FUNDING TEAM AT SANTANDER UK: The development for us really was the Dear CEO Libor letter [from the Financial Conduct Authority and Prudential Regulation Authority to major UK banks and insurers asking for the

We are also seeing meaningful difference now in spread performance between the Libor instruments and the Libor equivalent of Sonia rates

preparations and actions they are taking to manage transition from Libor to alternative interest rate benchmarks]. That was the focus point. There was the EIB trade and people had been talking about Sonia, but certainly following the Dear CEO letter we were focused as an organisation. Working groups were established, we reviewed all our exposure to Libor etc. Then we did the first covered bond in relatively short order after that Dear CEO letter. We'd obviously worked in the background technology-wise to get ready to do Sonia.

I think the strength of what we have done in the UK is consistency; with Sonia the methodology was already there. From afar when you look into the US, people seem to be trying to do things differently because they are trying to come up with a way [forward].

In the UK it was compounding Sonia with a five-day lag, and that's what we all went and did consistently in the covered bond market, which then gave a platform to adopt that into the RMBS market.

Lloyds then did a retained [RMBS] deal with Sonia that allowed Bloomberg to do some development work, and then with Nationwide to come up with their trade. If we had a funding need we would also have done a Sonia RMBS. There were other RMBS issues that came in September and were all Sonia-based.

It's just consistency. No one is trying to change anything. A lot of people get caught up with the five days [feature]. I can definitely tell you the five days comes from a phone call to a paying agent. "How long do you think we need?" It's five days.

KATIE KELLY, ICMA: The EIB are using the same conventions with the five-day lag in their new ESTR deal as well, so that is likely to set the precedent in the euro market.

MARTIN MCKINNEY, SANTANDER UK: Five days should give us enough time really. Further down the line we could get faster, [when] we can be more certain of systems and execution and calculation.

The strength here is the consistent methodology, which has allowed the different products to develop - covered bonds with RMBS, and then naturally followed through to some corporates as well. If I were to issue a senior deal in floating-rate format I wouldn't be doing anything else apart from Sonia compounding.

ISABELLE LAURENT, EBRD: I think the five-day is also helpful for a tap perspective. We tapped a SOFR bond last week, the first tap that was done not on a coupon date. From that perspective it was great.

It's important to have consistency, but it's early days to assume that we've got everything perfect.

It seems quite early days to be saying, "we can't change anything", even though I understand that there are difficulties with trying to make system changes, and that making them and then having to readjust is suboptimal.

MARTIN MCKINNEY, SANTANDER UK: Once you bake it into your documents, like into a covered bond programme or an RMBS programme, when Sonia is defined in that calculation, to go back and open that calculation back up isn't an easy task either, because the trustee may not feel they are qualified enough to make a judgment on that adjustment.

I think the consistency allows for a foundation. It allows for retrospective action on outstanding Libor bonds, because there's a certain methodology. But past 2021, I am sure there will be more innovation. There will be swaps market innovation, different products, maybe different ways of doing things. But I think the consistency has given us the foundation to move forward.

Then we have dealt with the primary side of things, and we are also trying to deal with some of the outstanding Libor exposures we have, and what investors have past 2021, because there is that stable methodology.

SEAN TAOR, RBC: I don't disagree with you Isabelle but I don't think the 70 or so Sonia-linked transactions that have come have had the same calculation. I don't think that precludes anyone else from doing something differently. The market has gone from really nothing just over a year ago to being really embedded across the landscape of issuers and investors. I think having consistency probably helped.

If you look at the SOFR market, there has been US$250bn of SOFR issues this year. I counted seven different calculation methods. That clearly isn't a great way to develop a market, particularly internationally. I'd imagine as an issuer you'd rather see a similar standard across whatever currency you are issuing as opposed to different rules, and different calculations depending on currency.

ISABELLE LAURENT, EBRD: When we did our Sonia we didn't have a particular view about the calculation, so we just used the same [method]. We did look at all the fallback clauses, and there were things that we changed because they just didn't make sense [for us].

In particular, this idea that if during a period you couldn't pick up a rate for any reason, instead of using the previous day's rate for up to a few days, actually you ditch all of it and you use the previous coupon - that just didn't make any sense to us. It also had a provision that if this was the first coupon, you would then work out what the coupon would have been had the bond started three months in advance. None of that made any kind of logical sense to us, but that was easier for us to see.

It was when we were trying to work out what the correct coupon calculation was, and discovered that everybody was doing it slightly differently because systems do it differently. Therefore, you end up having to do it on a spreadsheet. It then became more obvious to us that you were using, say, four Thursdays instead of four Friday rates, just because of the way that the formula was enshrined in the documentation.

SEAN TAOR, RBC: The decimal places would have been different between one issuer and another issuer, and different calculations of agents as well.

ISABELLE LAURENT, EBRD: It's not about the rounding in the documentation. But more the problem that if you've got a system that is pulling up a rate every day for your calculation, the system itself starts saying, "Well, I'll round to 10 decimal places", or 12, or 16, or whatever its internal requirements are.

When you are actually doing the calculations, you need to pick up 92 rates, or 93, or 91, or however many days there are, and pick up those individual rates, and do it that way, and then you only round at the end.

That's the difference, and why we were all getting slightly different calculations. You are not supposed to do your rounding to five or six or four decimal places, or whatever the document says, until after you have done the calculation… We were all ending up with very slightly different numbers.

That problem could be so easily resolved by the Bank of England and the Fed in the US, when they post their Sonia or SOFR rate, saying, "this would be the three-month rate between these days, and this would be the one-month, and this would be the six-month".

It would make it so much easier, because people would just apply a rate. They could just say, "You take the rate on page X at this time, and then multiply it by the day count fraction". That would be very straightforward, and it would stop everybody having to use spreadsheets.

ALEX CHAMBERS, IFR: YOU HAVE TOUCHED THERE ON TERM RATES.

ISABELLE LAURENT, EBRD: It's not really about term rates. It's about the calculation of a compounded overnight rate over a three-month period, which is different. It's a backward-looking calculation.

MARK ROGERSON, HEAD OF INTEREST RATE PRODUCTS FOR CME GROUP IN EMEA: We call that the realised rate. For all these things, the terminology is still evolving. We call it a reference period, and once you have got to the end of a reference period then you have a realised rate.

I look at this more from the derivatives side rather than the primary issuing side. But certainly, as it pertains to SOFR, there has now been an appointed agent for the calculation of realised rates.

On a forward-looking basis, what you are asking for will be available, but there will be participants who will want to do it exactly the way you are doing it now, by going back to the original data. If you are tapping mid-coupon, you still need to make that calculation independently of what the realised rates are.

ISABELLE LAURENT, EBRD: I don't see how one achieves scale unless people can apply a rate; not everybody is going to be able to make system changes in time. The ability to apply a rate the minute it comes out and know quickly what you are due to pay, without having to go to spreadsheets and make the calculation, will be really important.

We need an official world rate with an official page

ALEX CHAMBERS, IFR: DO YOU THINK YOU WOULD BENEFIT FROM A SUPRANATIONAL APPROACH IN THIS RESPECT?

KATIE KELLY, ICMA: I think the Fed are going to be doing something on calculation of compounded rates for SOFR next year. But I understand that it's not something that the Bank of England will do, notwithstanding what the Fed is planning.

SEAN TAOR, RBC: I think they are still in discussion. I think everyone would recognise and agree that it would make an awful lot of sense if it were published. Most people say, "Well, who would you rather it was published by?" The Bank of England as the administrator, effectively the owner of Sonia, it makes sense that they are the official publisher. It might not be in their mandate, but I'd rather rely on their data than a third party or a competitor bank.

ANTHONY TOBIN, RBC CAPITAL MARKETS: This is where you've begun to see some evidence of market-driven solutions by third parties. Publishing those rates implies that there is demand for it. If that's the case, then I'm sure that multiple suppliers will emerge, and perhaps at that stage the Bank of England will recognise that perhaps it is not as onerous as they might understand it to be at present, and feel more comfortable in doing so.

ISABELLE LAURENT, EBRD: I don't think it helps to have multiple owners. We need an official world rate with an official page. It makes it easier for somebody to corroborate what they have got, and what they are due to pay. They are going to definitely require something that's official.

KATIE KELLY, ICMA: Yes, I agree that one standard golden source would be helpful – which could maybe be endorsed by the RFR working group, by the Bank of England - something of that nature.

SEAN TAOR, RBC: Is that a project for you Katie?

KATIE KELLY, ICMA: Not likely…but the regulators are very open to hearing the market's problems. This particular issue has been raised with them many times, and if the same message is amplified enough times. If, maybe it will start to make a difference. So it remains to be seen what happens.

You'll find very few investors who can't buy a Sonia product, or are not embracing transition, partly because the regulator has made it very clear but partly because there has been so much issuance

ISABELLE LAURENT, EBRD: We had not heard of the problem until we had to do a coupon and realised that were getting something different from the swap counterparty. On the page, and Bloomberg and our own systems, they were all very slightly different. Then we were trying to work out what the problem was, and then raising it.

There was, "Yes, happy to discuss it if you haven't sorted it out" as though it was sort of idiosyncratic EBRD problem. I was trying to explain that this was broader and it was not about us. It's a market problem, and that it's going to be really hard when you've got a multiplicity of deals, which is surely what we would hope for, because you can't sit down and do each one with a spreadsheet.

They may have slight differences. One may be London and New York business days, and another just London days, and another something else. You are going to need to take account of all these different things. We do need somebody providing a system for that.

ALEX CHAMBERS, IFR: ARE THERE ANY OTHER AREAS WHERE WE NEED MORE SYNCHRONISATION BETWEEN CASH AND DERIVATIVES?

ISABELLE LAURENT, EBRD: When SOFR got off the ground people were doing averaging because that was how the Fed Funds market worked, and that was very different than the requirement of the swap market. I think that we really have, in Sonia, got sort of greater synchronicity.

SEAN TAOR, RBC: It aligns more with the swap market. In the US they are pushing that methodology, but it's not a massive difference. Again, things will change going forward. There will be differences, but there are differences in fixed income today between semi-annual coupons and annual coupons and different day counts. There are always going to be differences.

While we are discussing a lot about the hurdles, the positives are pretty clear. We have gone from a market where most of the participants were sceptical a year and a half ago. Most wouldn't have thought Libor was going anywhere, and now you find very few people would say that. You'll find very few investors who can't buy a Sonia product, or are not embracing transition, partly because the regulator has made it very clear but partly because there has been so much issuance. If you are not trading it, if you are not involved in it, you are not really servicing your investors or servicing your issuers.

ALEX CHAMBERS, IFR: ON POSITIVE MARKET DEVELOPMENTS, THE FUTURES MARKET'S BEEN PICKING UP IN THE SOFR SPACE?

MARK ROGERSON, CME GROUP: CME has got futures in both the Sonia space and the SOFR space, and SOFR was clearly our first major foray into OIS-style futures. CME's existing futures franchises are generically dollar based. We started there, and we complemented that with Sonia.

Talking about SOFR, we launched that in May of last year, and the reference rate only began being published in April, so a month after the reference rate was published by the Fed.

We are now coming up on 50,000 contracts a day, and it's growing. Last month it was 40,000. It's between 50,000 and 60,000 this month. It has been particularly busy in the last week.

The repo market was very busy for specific reasons last week but what is really interesting is that the futures market happened to be busy at the same time, demonstrating it's not a side issue. Participants were going to the futures market to use it to hedge what was going on in the cash markets already evolved to being complementary and supportive of the overall ecosystem.

When you see very new futures, when they are very new often on a busy day they do less volume because people concentrate on the core. When you see a day where those new contracts are doing more, because of what is going on externally, we now know that is has matured into a product that more and more people are using.

We have got now over 200 participants in our market globally. It's one of those things where a very large proportion, or an increasingly larger proportion of professional users are using it in some way, and becoming more familiar with the underlying index.

ALEX CHAMBERS, IFR: DO THEY LOOK SIMILAR TO THE LIBOR EQUIVALENT?

MARK ROGERSON, CME GROUP: I think they are. We have got a one-month series and a three-month series. The three-month series are very similar to the OIS market, in as much as the futures, settle to a compounded average, very much like the OIS swap. The one-month series look a little bit more like a Fed Fund. They settle to a simple daily average, like the Fed Funds futures.

Both are familiar to people who have traded in OIS. They are familiar to people who have traded Fed Funds, and also they are familiar to people who trade Libor markets. SOFR futures are like a building block of that yield curve, in exactly the same way that Eurodollars are a building block to the Libor curve.

When we asked 300 or so different participants in 2017 how we should do this, they said, "Make them familiar to us so our systems can handle them, and make them building blocks for the yield curve so that they are useful for price discovery". Those were probably the two largest components of the design process that feedback told us to bring to the table. That's what we did. That's why they look like they do.

ALEX CHAMBERS, IFR: HOW HAS THAT EXPERIENCE, IN TERMS OF THE SONIA MARKET BEING ESTABLISHED, WORKED FOR THE DEVELOPMENT OF SOFR?

MARK ROGERSON, CME GROUP: The Sonia market is different. Sonia is a benchmark that has existed for over 20 years. I think it first started trading just before the turn of the century. There is pre-existing risk to

Sonia. There is quite a lot of experience, particularly within the derivatives market of trading Sonia-based products.

There is a fairly well-established interdealer or interbank market for Sonia-based derivatives, and that's over-the-counter derivatives that offset risks between banks and between banks and their customers. That's pretty well established and it's been established without there being any central limit orderbook for futures in Sonia or any other OIS products. There hasn't really been much of a market for other Sonia-oriented futures at any time.

As we've evolved into looking at Sonia as an alternate reference rate, as an alternative to Libor, then I think there is a greater need for that central limit order book. But because you've already got a system that works in an interdealer market, then the adoption of futures has been a little bit slower.

Contrast that with what's going on in the dollar world, where there is no, or was no, pre-existing risk to SOFR. It's a brand new benchmark, and actually the futures market in that build-out was the central source of price discovery, and then it becomes the venue for hedging.

In dollars, SOFR futures are the largest source of risk exchange. There are some swaps, OTC, OIS swaps in SOFR space, but the vast majority of risk exchange in SOFR is in futures.

I think the other derivatives and then the cash products are building on the core, which is the futures, whereas in Sonia the futures are trying to come in through the back door and provide that central limit order book, which may become necessary over time. We are seeing more participants in that ecosystem, but there is an existing alternative already there. There is a nuanced difference there.

ISABELLE LAURENT, EBRD: I wonder about this idea that there's an existing alternative. The existing alternative has mostly been basis swapped rather than anything else.

MARK ROGERSON, CME GROUP: This is why I said the alternative is in Sonia, specifically.

ISABELLE LAURENT, EBRD: Yes, but if we take Sonia, is it not that people are managing basis risk, doing fixed Libor, and then Libor [to] Sonia, rather than if you take out the Libor, is there really an alternative that has existed? I'm not sure that the Sonia derivatives market actually exists in any real sense apart from working through the basis. I wouldn't have thought it was any worse a candidate for having a futures market.

MARK ROGERSON, CME GROUP: I agree to some extent. You are absolutely right that the basis market is the mechanism by which people trade Sonia in the post-two-years part of the yield curve. But I think Sonia is quite an active standalone market shorter than two years. That shorter-than-two-years (maturity) happens to coincide exactly with where futures are most active.

I don't think that the prospects for the futures (contract) are necessarily bad. I just think we haven't got to the point where there are enough people to

> There are some swaps, OTC, OIS swaps in SOFR space, but the vast majority of risk exchange in SOFR is in futures

demand it right now, in Sonia. We are increasing the number of participants in our Sonia futures but not at the same pace. In SOFR almost of the action is in the futures market. In Sonia, we are coming into something that's established. It's just taken a little bit longer to germinate.

But I agree, futures are a necessary complement to what is already there. I also agree that the majority of the market trades on basis. But I think the point is that the only way we get full adoption of Sonia is when the primary interest rate curve is Sonia, and Libor trades as a basis, rather than the other way around.

For me, that comes from when the treasury desks account for everything in Sonia. That comes from when the corporate treasurers account for everything in terms of, "What's my funding to Sonia?" rather than, "What's my funding to Libor?". I think that is a little bit further down the tracks.

I think this is relevant for dollars but there might be a quick way of doing it. We have talked a lot about FRN issuers. I think the big bang is when you get fixed issuance swapped into SOFR, or fixed issuance swapped into Sonia. That's when you get the big bang change.

Certainly in dollars, that's predominantly priced against Treasuries. Actually, the only change you really need is Treasuries to get priced against SOFR. Once you have done that you are done. I know that seems like a small item but because risk exchange in US dollars is done by Treasuries, all you have got to do is start trading the swap spread against SOFR instead of Libor, and everything else falls down. I think it's a little bit more complicated in sterling, because risk exchange is typically done in the swap market rather than in the Gilt market.

ANTHONY TOBIN, RBC CAPITAL MARKETS: I think you've begun to see the first steps of that development with some UK banks taking the plunge and having predominantly Sonia-driven balance sheets from a treasury perspective. I think that still has question marks around how you then make that transfer into the real world; we are some way away from having Sonia-driven mortgage lending or commercial lending. But again, there have been baby steps taken.

The notion that Sonia is the base around which the rest of the balance sheet from a treasury perspective is built has been positively encouraged by the same dynamic around regulatory pressure. I think the UK is leading the way there relative to counterparts in other geographies.

ALEX CHAMBERS, IFR: HOW CLOSE ARE SANTANDER TO MOVING TO A SONIA-BASED BALANCE SHEET MARTIN?

I think Sonia suits us perfectly, because our liabilities, we think about it as your base rate and your assets

MARTIN MCKINNEY, SANTANDER UK: I am not involved too much in the transfer pricing side of things and the treasury budget, but we are looking at moving everything from a transfer pricing perspective to a Sonia basis by the end of this year.

That has been in the pipeline since the start of the year. We've been working through the desk, going through different things. In terms of a bank treasury, I think Sonia suits us perfectly, because our liabilities, we think about it as your base rate and your assets. We are always trying to get back to the base rate.

The need to do more hedging is taken away, so it's more cost effective for us to issue and buy Sonia-based assets and liabilities. That's why in the covered bond space, before when it was Libor, typically a three-year term is the longest floating rate in sterling.

MARTIN MCKINNEY, SANTANDER UK: You can get fixed five-year, fixed seven-year in Sonia. Because bank treasuries are buying it, we are happy to go with Sonia based. We do not need to do anything with it, just a natural hedge on the balance sheet. You buy three or buy five, and I don't think seven is that long away for Sonia as well.

ALEX CHAMBERS, IFR: WHAT DOES THE PANEL THINK ABOUT THE BIG BANG, THE SUGGESTION THAT WE NEED FIXED-RATE SWAPS TO NEW RISK-FREE RATES?

SEAN TAOR, RBC: It's more a continued evolution of what's happening. Even at the start in the UK, we have seen more and more fixed-rate bonds switch back to Sonia, and that universe is growing. As we've seen more discussion, more pressure from the regulator, we'll just see the world embrace (it).

If you are looking at what is a risk for your rate, and looked what happened in the US last week, you might question, "Is that a risky rate we are benching everything against?" I think that's a valid question. It wasn't December 31. I think that's caused a few concerns.

ALEX CHAMBERS, IFR: THAT WAS A RELATIVELY BIG JUMP, WASN'T IT? THIS WEEK, OR LAST WEEK, THE SOFR RATE SPIKED 300BP IN ONE DAY. DOES THAT MAKE THE WHOLE DISCUSSION ABOUT NEW PRODUCTS, TERM RATES BECOME MORE LIVE?

SEAN TAOR, RBC: I don't think it is going to change the direction of travel, but it's going to require some thought around what happened. I'm not entirely sure I know all the ins and outs of what happened. But you're right, the rate jumped by 300bp. It wasn't quarter or year-end, and it wasn't expected. We can expect liquidity issues at year-end and occasionally at quarter-end, but not mid-September.

The Fed stepped in. Arguably I think they'll have to learn the lesson to try and make sure if that situation happened again they would be more prepared, or the market would be more prepared to prevent a spike, because obviously if you look at the future, if you have all your assets and liabilities pinned against that one rate, you don't want that rate to be anything like as volatile, because it doesn't look risk-free if it more than doubles in one day, or for one day.

MARTIN MCKINNEY, SANTANDER UK: A US bank sent us a piece to try to put it into context, because it was quite a sensational jump.

The guy said, "If you do a three-month compound basis, it was a 2bp movement, whereas over the same period Libor's volatility was 4bp." Using the compounded in that spike obviously wasn't expected, and I think it took people aback, and people accused them of not being able to control things.

SEAN TAOR, RBC: Over the compound period, I completely agree. But the high lows of that period is multiples of what Sonia has ever been, and I think that was the issue. It wasn't the averaging. It was what happened on that day, and again, it was just a regular day in mid-September. It wasn't something you could have anticipated.

ANTHONY TOBIN, RBC CAPITAL MARKETS: One of the benefits of the development of the daily compounding has been to shine a light that actually Libor was really just a series of three-month, one-month fixed rates over the course of that period, and that was actually what one was purchasing thinking we were actually purchasing a 30-day instrument. I think it's shed more light upon what was the exposure that clients in that space really wanted.

ISABELLE LAURENT, EBRD: There is a problem in that you end up losing some days and getting some days, all of that makes it much more complicated, and then some will get the return on that immediately, and some won't get it for another period. Even if they have got a coupon intervening, and some will never get it, that makes it all the more concerning. It's not like Libor, really every day of the period would be accounted for in some way, and the rate you would get was something that had a degree of continuity where it is smoothed out in that sense.

MARK ROGERSON, CME GROUP: The point that Libor moved by more last week than the compounded SOFR is an interesting point. You had this huge one-day spike and a couple of days around it where a little bit higher than ordinarily. The effect on three-month Libor was a movement of 4bp. The effect on the three-month compounded SOFR, including the spike, was actually around 3bp. It absolutely matters if you have got a deal that either includes or neglects that particular spike rate.

SEAN TAOR, RBC: It really does matter.

MARK ROGERSON, CME GROUP: I would also make the observation that 2bp-3bp for a lot of people is actually quite a lot. You know, 2bp is not insignificant, but if you consider it in terms of acceptability to a broader investor base, I think you start to get the argument under control. Yes, there is variability, but SOFR is not designed to be used in one-day products.

SEAN TAOR, RBC: I agree, but it is designed to be a risk-free rate, and it's odd to see a risk-free rate go from 2.5% to 5.5%, or whatever the numbers were, in one day, and then come back down again. That doesn't look like a risk-free rate.

The criticism of Libor has always been that it is not robust. It doesn't look quite so robust seeing it (SOFR) spike like that. I'm not saying it will happen again, and I'm not saying no one has really looked at the consequences in all that time, but I agree that over compounded three-month periods it's not actually a big deal.

If we are trying to convince and transition the world towards risk-free rates, those rates have got to look robust as well as be robust. That was the question most people asked, because they didn't really see it coming. They didn't necessarily understand on the day what was happening, and they certainly couldn't have predicted that it might be a bit challenging at that time of year. But I think in the US they will certainly learn some lessons from it.

MARTIN MCKINNEY, SANTANDER UK: It seemed to be a perfect storm. The banks' reviews and analysis of it, [suggest] three things [were] happening at the same time: it's a perfect storm that caught everyone out. It's only been here for a year. There are lessons to be learned. The Fed doesn't want to get caught like that again.

ISABELLE LAURENT, EBRD: If you are trying to transition people, I mean if you try to transition say the corporate sector, for whom it's already quite problematic making a change, actually they often have in their loan documents short stump periods in a way that generally if you are operating in the swaps market you tend to do something much more, or in the bond market. A stump period is just going to be even more problematic. It's really trying to take account of all these different factors that make it much harder to encourage people to transition.

MARK ROGERSON, CME GROUP: From that perspective it is maybe not that helpful. I think that while people may not have seen this coming last week, if you now look at the post mortem, people would see it the next time it might occur, because they would be looking for a tax day that aligned with a treasury settlement day that aligned with payment of mortgage bonds.

There was already some monthly seasonality around mortgage receipts and mortgage bond payments within the SOFR curve, and this added a very large movement. The market will learn from last week.

ISABELLE LAURENT, EBRD: And the Fed will learn.

MARK ROGERSON, CME GROUP: And the [Alternative Reference Rates Committee] ARRC has done a paper that talks about why these things occurred. I think the point of trying to create an environment where adoption is encouraged, I don't think there is any real need to overplay that incident. Yes, we should absolutely recognise it occurred, and there are reasons behind it, but typically the second time you know those reasons then the impact will be significantly less.

> If we are trying to convince and transition the world towards risk-free rates, those rates have got to look robust as well as be robust

SEAN TAOR, RBC: I don't think it will slow down the rate of adoption. I just think the market will learn. Better to learn that lesson now when there are other options and the market is transitioning than if it happened down the road when the market has already transitioned.

MARK ROGERSON, CME GROUP: The way I look at it, it's a hiccup not a car crash that can't be overcome.

ISABELLE LAURENT, EBRD: I am one of the people that keeps advocating forward term rates, because for corporates and the real economy and for retail products it's very difficult to move people.

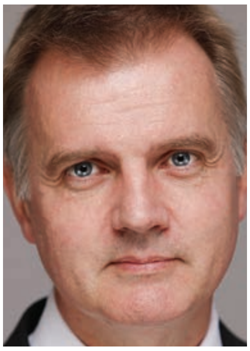
I think many corporates don't even use three or six-month Libor. They often use one-year Libor. Many of my MDB [multilateral development bank] peers are focused with all their loans around six months and found that when they asked their borrowers to transition to three months, they were told, "No, that would be too tight a timeframe for them". We use three months, and I think it is very awkward telling people just a couple of days before what they need to pay.

One of the things that people were saying is, "Well, you know, rates are so stable, so actually you could really organise that you use the previous six months to earn before the period started, and then they pay out in six months' time". You can use that, and it would just be straightforward.

When you get spikes, that's obviously not going to be as easy, added to which it doesn't deal with things to do with convexity and other aspects. I still believe that forward-looking term rates are going to be appropriate for quite a lot of the real economy.

ALEX CHAMBERS, IFR: HOW LIKELY OR REALISTIC IS IT, EVEN THOUGH IT WOULD BE HELPFUL?

KATIE KELLY, ICMA: Work has been going on for quite a while, and continues to go on. There is going to be a term rate - all official statements have referred to the fact that there will be a term rate, but it might not be available maybe until the end of 2020, to allow the banks to stream prices and after a test period. There may be a number of different providers but I think



I can't see how a Sonia term rate will be more robust than Libor

the market will start to coalesce around one of the rates, and that will become the term rate. I expect it will be caveated with a warning about intended limited use, and possibly about the integrity of the rate being based on submission of quotes, etc. But there can't not be a term rate.

The US have said they are providing a term rate in 2020.

SEAN TAOR, RBC: I think there will be a term rate, and the regulator is looking at a term rate. My issue with terms rates is that we have a term rate: It's Libor. The regulator has said it is not robust. I can't see how a Sonia term rate will be more robust than Libor.

MARTIN MCKINNEY, SANTANDER UK: Part of the consent solicitation we launched maybe three months ago, where some investors through the process came back to us and said, "What about a term Sonia?" I was in that camp as well. My life would be so much easier, operationally, running secure programmes, covered bonds, RMBS with a forward-looking rate, because operationally I've certainty three months ahead. I can calculate my payment, book it into the payment system, and there are just so many things you don't think about. That's why I wasn't as motivated.

But when you hear the regulator speak about the timeline of these things, maybe the end of 2020, maybe the middle of 2021, no one is committing in the UK to doing it. I could never understand this comment that was always tagged on that it will be for a restricted audience, this term rate. How can a public rate be restricted from me?

ISABELLE LAURENT, EBRD: Well, I think [it could be] by your regulator.

MARTIN MCKINNEY, SANTANDER UK: By the time it comes in, will there be a swaps market for it? I think that is another point someone has made to me. It will take time to build up, so when you come to Libor cessation, you technically won't be able to use it anyway, even if it is there. It just means that we have done so much issuance and compounded Sonia in the bond market that am I going to do another consent solicitation to then say, "I've got the term rate now I am going to move my RMBS programme [onto it]".

KATIE KELLY, ICMA: Also for the loan market the LMA has now built in compounded in arrear infrastructure into exposure drafts of loan market documentation, so I think they are anticipating that compounded loans will be available.

ISABELLE LAURENT, EBRD: I was at the Loan Market Association conference where we were discussing this. The universal view is that corporates are not ready to do compounded overnight, and that it would be very difficult for them to adjust.

KATIE KELLY, ICMA: Isn't that where the bond market was 18 months ago? As Sean said, it had to start somewhere. There was a lot of resistance to it in the first place.

ISABELLE LAURENT, EBRD: But there's difference between banks and multinational development banks that are able to do something, and especially banks with a very robust regulator, being able to shift, because they've always been able to price all sorts of different things.

If you are a sweet maker or an agro business or a retailer, your expertise is not about managing these risks. Their point was that, "You can tell me that Libor was not perfectly accurate, but actually it worked fine for us. Maybe it was fractionally off, but it worked fine for us. We are happy with that as a system".

MARTIN MCKINNEY, SANTANDER UK: Big large multinational corporates should be able to adopt compounded Sonia. They have enough money and resources to put in the systems, the work, etc. But when you get down to low end commercial, which I've worked in as part of banking, I couldn't imagine me going to the chap in Glasgow and saying, "This is your new methodology of calculating your loan to the butcher, your facility".

I think there is a lot of sensitivity when you get to retail, because it's hard to explain to them. There are some mortgage products in the UK, not mainstream banking, but some mortgage products that are linked to Libor. There are very few assets on a bank balance sheet retail-wise linked to Libor, apart from business lending.

The easiest one you move to is the base rate, because that level of customer understands what the Bank of England base rate is at least, so they understand that when that moves, that's your margin, and it's baked in, and it can be a tracker, just like a tracker mortgage.

In the UK, the retail solution will be difficult, because of all the sensitivity about treating the customer fairly. That's the big worry rather than what's the solution in the UK.

In the US and Europe, they have got much bigger problems, because there's much longer retail mortgages. In Spain it's 30 years linked to Euribor. There is no way you can get rid of Euribor, because you would always worry about that retrospective action that you didn't do something fairly. It's exactly the same in the US as well. They have got the same issues around the mortgage product as well. It's not as easy for them.

ISABELLE LAURENT, EBRD: We have a forward-looking index that people use, ie, Libor. And reformed Libor and reformed Euribor are not going to look vastly different. It's easy to say the concern that the regulators have is about the trillions of things that are priced off Libor. Most of that is going to be interbank activity and derivatives activity.

If we took out the derivatives activity that's not specifically hedging corporate or retail, and we took out interbank activity, actually how much would we be left with? It would be terrible if somebody couldn't get a hedge for their transaction that was looking at a term forward-looking rate, if they were required to adopt something that was not Libor, and then they couldn't hedge that.

MARTIN MCKINNEY, SANTANDER UK: In a passing conversation with someone that works in derivatives at another bank, that was what people were saying. Even if it came out by 2021, his point was there is no swap market for that term rate at that time, so then you end up past 2021.

MARK ROGERSON, CME GROUP: The point is that the regulators would like to see the movement to OIS rates, because OIS rates are steeped in transactions on a daily basis to create those benchmarks, whereas term rates are not. If you allow people to create and use term rates based on their expectation of realised SOFR or Sonia, if you allow people to use term rates early, then you get an inverted pyramid where people simply move from Libor to the term rates, and no one would use daily overnight rates. Then you end up with a kind of Catch-22, that without the daily overnight you can't have the term, and without the term you have got nowhere to go.

You need the overnight rate to be absolutely core, which is why the regulators are talking about restricted access; only if you really need a term rate should you use it. Everyone who can move to an OIS, move to an OIS; and while you could actually deliver a term rate tomorrow, the regulators may be keen to see providers to hold off a bit.

What might be useful is to show a proof of concept that a term rate can be developed without necessarily making it available as a benchmark today.

To that end, what we are producing on our website is something called CME strip rates, which essentially uses a term rate model that has been developed by the Fed. The inputs to that model are futures prices, and the futures prices are passed into a model that creates an expectation of SOFR for everyday in the yield curve, and then turns that into a forward-looking rate. It's a kind of black box that does that.

We publish that once a day as a strip rate based on our settlement values. That is evidence of proof of concept that a term rate could be produced but it doesn't mean that that is something we can use as a benchmark today. Potentially it is something we could use as a benchmark in future.

Something similar is happening in Sonia in sterling, potentially also including the OIS market as well as the futures market. Those things are developing, but I do understand why the regulators have a reluctance for them to be front and centre early in the transition process.

ISABELLE LAURENT, EBRD: I also understand the need to ensure that those that can transition do the kinds of contracts that they can, the interbank activity and so on. But one of the difficulties in holding off is when you think of hundreds, thousands, millions of contracts that will need to be rewritten with lawyers and banks and whatever, with their corporate clients.

There is a profound difference between a compounded overnight and the dates and all the different conventions, and how you would do it, and when you can get started in transitioning people when you don't have something that you can

> OIS rates are steeped in transactions on a daily basis to create those benchmarks, whereas term rates are not

transition them to. One of the great difficulties is how you do that.

If you delay too long, then people are going to have to have Libor for longer, because you simply would not have the number of lawyers and support staff to change all your contracts. It's so much easier changing contracts for a forward-looking term rate. It should be very easy to make an adoption between one thing and another. But it's far more elaborate if you have got to transition to an overnight index rate.

I think it's going to be very difficult for people to adopt that. The LMA is going for consultation in different aspects of it, but the question is whether or not you get the sort of groundswell of people it affects able to comment on it, because I think most people don't really understand why it's having to change, and what it's got to do with them.

ALEX CHAMBERS, IFR: WOULD IT MAKE SENSE FOR THE REGULATOR, OR FOR THERE TO BE A LEGAL SOLUTION TO SAY, "THIS IS WHAT WE ARE GOING TO MOVE TO"?

ISABELLE LAURENT, EBRD: Not if it is something that people can't adopt. It has to be something that reflects the needs of the real economy that is already burdened with Brexit and other things, and trying to get on with their businesses dealing with all of that. Then they have to try and factor in something they simply don't understand and will find it very difficult to deal with, not knowing what payments they are due to make in a couple of days, and all their contracts have to change.

Many of them have multicurrency ones, and there would be a slight difference between one thing and the other. Then you know if some of their multicurrency were euro-based that that one doesn't have to change, so why do other ones have to change? It's very problematic.

ALEX CHAMBERS, IFR: I WANTED TO TOUCH QUICKLY ON EUROPE A BIT MORE.

SEAN TAOR, RBC: L-Bank issued the first ESTR note last week, which settles four days after the ESTR gets published. It has a four-day backward-looking observation period. The EIB announced a mandate that's likely to have very similar language as they have in SOFR and as they have in Sonia with the five-day observation period, and they are hoping that will standardise and move the market forward for other issuers in Europe, and obviously to get the investor universe on board as well. They spent a lot of time with test trades as they started with other currencies. We'll see.

In the bond market, we have something like €865bn-equivalent outstanding globally, of which 9% is in sterling

The adoption of ESTR, we'll see how it goes. There are a lot of investors and issuers looking at ESTR. I think the one big difference between the floating-note market in Europe and in the UK is you have such negative rates in Europe, and L-Bank's transaction was ESTR plus 200bp, with a cash price at reoffer of 104. It's a different universe. That has other challenges around the swap and everything else.

But I think ESTR has been a long time coming in terms of publishing. The ECB are somewhat behind Sonia and obviously SOFR. We'll see how it goes. I can't comment on the deal as we're a bookrunner. They had an investor call this week to give some more details on it but other than that there is nothing public.

ISABELLE LAURENT, EBRD: How much do you think the fact that Euribor is still going to exist changes the likely course of how ESTR is taken up?

SEAN TAOR, RBC: I would like to think the market will transition towards ESTR, with both existing. I think the regulatory noise around risk-free rates hasn't gone, it's been maintained. That's what we'll have to see. I think good for L-Bank, good for the EIB to be leading the charge. As I said, the biggest hurdle in Europe around floating-rate notes is the underlying fixed market and where yields are.

ANTHONY TOBIN, RBC CAPITAL MARKETS: There is still that sense that some of the framework that has been successful in the UK has been rolled out in Europe. There have been Dear CEO letters from European regulators as well. There has been good participation from the European bank trader communities in SOFR or Sonia transactions. I think familiarity with that methodology is certainly there.

There may be a little less feet-to-the-fire, if there is still going to be some form of Euribor in the future. We are hopeful that the publication of a rate on October 1 is going to make a meaningful difference of tangibility around the problem.

ALEX CHAMBERS, IFR: WHAT IS THE MOST PRESSING ISSUE AROUND LEGACY?

KATIE KELLY, ICMA: There are a number of them. In the bond market, we have something like €865bn-equivalent outstanding globally, of which 9% is in sterling. That could equate to potentially an awful lot of individual bonds that will remain outstanding after 2021, which will continue to reference Libor, and which will need to reference Sonia in some way.

The market-based solution of consent solicitation is helpful, of which there are four now: Santander being one, ABP and two Lloyds. Three are in progress, and one is already done. But that's four out of a pool of many that might need to be amended by way of consent solicitation, or which could be bought back, or made subject to an exchange, and not all of them will be capable of being amended. If that market solution doesn't work for all, which it is unlikely to, then we could be looking for some kind of intervention from regulators, be that allowing Libor to continue to be used in an unrepresentative state for a period of time, to allow some contracts to roll off, or to possibly intervene with legislation.

But that is a very big ask, which is not within the gift of the regulators, and is fraught with many inherent difficulties on the legal side, so it is definitely not forming part of the solution. [FCA chief executive] Andrew Bailey has said that legislation is not a magic wand, but it would be prudent to consider the pros and cons of it. That is quite an undertaking even to scope the legislative exercise out.

There is a big impetus from the regulators to push consent solicitation as much as possible, so we'll just have to see how that pans out.

But of course consent solicitation is not without considerations. I know some transactions have amended the interest rate from Libor to Sonia. But some may decide to amend the fallbacks in their bond documentation, so that they fall back to an alternative risk-free rate when there is a cessation event, or on a declaration of Libor being not representative. And of course there is a very emotive issue around the spread that you apply to Sonia to replicate the credit element of Libor, which is certainly far from clear-cut.

MARTIN MCKINNEY, SANTANDER UK: The way we ran our process was going to the working groups after ABP's transaction, from which there were a lot of positives to take away, but there was still a lot of debate around that methodology and how to use it. We thought we could not just throw in a consent solicitation, but maybe try and help develop that conversation. We mandated NatWest Markets, who have been doing a lot of work in the Sonia front, to go around on a no-names (basis), general RMBS and ask for feedback, on the methodology and any other concerns that people had.

It allowed for a lot of debate away from us, just with NatWest. Then we put the (regulated news service) RNS out to let people know it was Holmes and give people the chance to give us feedback directly.

The general feedback is, "Okay. I understand what you are doing. It's not perfect but nothing will be perfect".

I think as we move along with ISDA refining to 10-year, five- year, if you run those calculations and then you run the following one just now, it is very close. It might be better for you to do it now, because that basis might trend past that 2021 end point, where people are saying, "It's not really a swap because there's Libor".

Because of the basis, is it a swap? I think some people point out, "Let's not try and get into is it a swap–is it not a swap". That's (effectively) the basis, it's almost been fixed.

In Europe they did it between Eonia and ESTR up front. It's 8.5bp. Someone told me a few months ago that while Europe from the outside didn't look as if it was moving, in the background people were re-hedging back into Eonia to then stick to ESTR because they know exactly what's going to happen in terms of the consultation paper that was out, in terms of the 8.5bp.

I think we won't have a locked in spread, but people have started figuring out it's either going to be that 10 mean, 5 median or the way around in terms of the mean medium. That's why the basis past 2021 will start to converge and stabilise.

That's what has already started happening from when the first consultation paper came out. There is a history, and then someone has obviously looked into the fact, the five [year] is there avoid the financial crisis, but actually if you use a 10 into 2021, it's going to avoid the financial crisis anyway, because it's more than 10 years behind it. Whatever comes out of that consultation, it helps move the consultation forward.

It's no secret that the regulator, FCA, and the Bank of England, are encouraging people to not wait, and try and be proactive. That's why it helps. I'm not doing my covered bonds because I think there are more complications with the covered bond because of European investors. I need to change my swaps. There is a whole load of other things to think about there before I do that.

With RMBS I thought it was a good idea to use a longer process and just go and speak to people because sometimes in these working groups you can't get into the detail. One concern was that we are not setting a precedent. I'm not trying to set a precedent here. I'm trying to embed and give more credit to the APB methodology by having more debate around it.

If we were successful with this consent [solicitation], if a different type of RMBS issuer, a pass-through issuer comes, then they have got the problem with CPR. How do you determine that weighted average life to interpolate the basis change? Do you use 5%, 10%, 20%? We are trying, as one of the larger issuers, to move one step forward, and then let the market people try and deal with the next step, which is probably more complicated than the type of bonds I issue in these programmes, or Lloyds issue in their programmes. There is a degree of certainty in the weighted average life of these things. But there are more issues to go through. As you say, it is not perfect.

ISABELLE LAURENT, EBRD: What is your threshold for consent?

MARTIN MCKINNEY, SANTANDER UK: We are running full consent language, 75% turnout, 75% in favour, which I think is a soft point, but I feel it is better for the investor as well. You turn up and say, "Yes, I agree to this." Rather than, if we do negative consent, maybe people aren't as engaged or, "We seem to have missed it." I mean it's a big event, isn't it?

Is it fair on one bond to do full consent and the other one to do negative consent? Some of the investors might be the same, but they might not be. There were many factors that led to us deciding to do full consent for both tranches.

I thought it was better for engagement. Although we did a lot of (investor) engagement beforehand, when the consent comes out that's when they have pencils up and start checking, as they would for any consent process.

> Andrew Bailey has said that legislation is not a magic wand

There may be a lot of theory and chat before it, and being able to say, "I'm comfortable with this methodology. I wouldn't be adverse to coming to this". But I think it focuses the mind when you bring the consents out. I'm sure a lot of people will have done a lot more thorough thinking about it and reflecting on the methodology.

ISABELLE LAURENT, EBRD: Did you find that when you went for the sort of discussion before in your consultation that everybody is currently able to take Sonia?

MARTIN MCKINNEY, SANTANDER UK: Most of the RMBS and covered bond investors can. When these chaps come and say, "Who can and can't buy Sonia?", there are always three names that come up. One of the larger ones has just confirmed they are now ready in covered bonds, not ABS, so the list is down to two. It's been the same people that are taking longer to adapt systems internally, and have the governance to move to be able to buy Sonia bonds.

But in my universe with my order books, [and] we have people on the Continent as well, no one has said they can't do it. But that's why I wanted to do it, because if someone says they can't do it, then I want to be able to offer them a solution.

I think for asset managers it's slightly different; they don't seem to have the same issues. They are happy to hold a bond until cessation, or even just slightly past it. They can get comfortable with that. It was just a journey to launching the process, where it feels as if there is motivation around forums to say, "Yes, okay. Not perfect. We have understood it a bit better now, what APB did. We've got through some of our concerns around that".

ISABELLE LAURENT, EBRD: Although they didn't. I mean they had next to no investors in that thing, so that makes it much easier, and they didn't try and change any fallback clauses, so it didn't really matter, because they had only about one coupon. That would have been caught if Libor ends at the end of 2021. It wasn't that much of a big deal for them. I think it's rather different when you've got multiple investors in lots of jurisdictions.

MARTIN MCKINNEY, SANTANDER UK: Maybe what we are doing, what Lloyds are doing, moves it one step forward, and then there are still many steps afterwards. Now let's move on to the next issue.

KATIE KELLY, ICMA: There are difficulties with different types of instruments as well, such as regulatory

The number of people that can take SOFR at the moment seems to be vastly different than the number that can take Sonia

capital which benefits from certain capital treatment and which might be affected. Then there are the multijurisdictional issuers for whom different approaches may be applied in different jurisdictions – for instance, in the US consent solicitation is not a solution because amendments require unanimity. But it's baby steps, I guess.

ISABELLE LAURENT, EBRD: The number of people that can take SOFR at the moment seems to be vastly different than the number that can take Sonia. When we did our dollar SOFR bond, I was expecting so many more to be able to take it, and repeatedly very large institutions were not yet set up for it.

SEAN TAOR, RBC: That's the problem. The volumes of SOFR look like huge adoption across the US, but actual reality is far different.

MARTIN MCKINNEY, SANTANDER UK: I think the [US] fallback language compared to our fallback language is much better. But I think looking ahead into next year, as an issuer I don't want to issue a bond into a methodology that might change, and it becomes way off price, way offside.

Looking forward to next year, my concern is what format do I issue floating-note dollars? I raised that in senior. I raised that in RMBS. What do I do? Because the regulator is always looking at what you are doing you say, "This fallback language is pretty solid, this note has certainty". People know what happens at the end.

Whereas with our fallback language, maybe it is better to start preparing and with the ISDA consultation maybe in the end, do you consent to that? Maybe that's what will happen next, because it's a certainty event. You know what's going to happen. There is no negotiation between investors. It's just, "That's the spread". You move to it.

KATIE KELLY, ICMA: But that's very much at odds with the regulatory messaging, which is, "Don't rely on the fallbacks. Transition everything you can now, and don't wait".

MARTIN MCKINNEY, SANTANDER UK: I think it's the same in the US. There is one big investor on the RMBS side that is putting out messages to issuers like us saying, "We will only buy SOFR". My issue with that is what SOFR methodology do I give you? If I give you one and it goes offside, I'll probably try and stay away. The same with ESTR. I need European issuers, maybe others, to issue a few, to show a stable methodology, and then I can stick to them and start issuing in floating-note format again, or compounded format.

SEAN TAOR, RBC: Consent solicitation as a product works in the UK, is less likely to work in the US... There is going to be an issue, because if the bonds end up being fixed, there will be a transfer of value somewhere.

KATIE KELLY, ICMA: Yes, but ultimately, you could take the view that the contracts say what the contracts say. If the bond goes back to a fixed rate, that's what the contract says. Caveat emptor. And the fewer options you have, the less chance there is that you can make the wrong decision.

SEAN TAOR, RBC: Compared to the US, [where] the talk is of statutory relief.

KATIE KELLY, ICMA: I would exercise a large degree of caution when thinking in those terms, because they are at such an early, exploratory stage. I think it's so fraught with difficulties that they are certainly not rolling that out as a solution.

SEAN TAOR, RBC: I'm not saying it is, but some people have adopted, or are down the path of adoption, because they see it as a solution, whether it is or not.

ALEX CHAMBERS, IFR: THANK YOU ALL FOR PARTICIPATING. ●