LIBOR - SONIA

NUTS & BOLTS AND SYSTEMS

JULY 2021

Centrus

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LIBOR - SONIA
nuts & bolts and systems

There has been plenty written now on the LIBOR/SONIA transition and the methodology is becoming clear, albeit undoubtedly more complicated than originally envisaged. The purpose of this client briefing note is to offer some comments on calculation methodologies and then to unpick some of the numbers and operational implications.

We also explain how the treasury management system we offer (**titan**treasury) can help from an operational perspective, for those clients where automation may be useful.

This note has been prompted by the passage of time since our last paper on LIBOR (which has more on the historical context) but also by the announcement on 5th March 2021 by the Financial Conduct Authority on "future cessation and loss of representativeness of the LIBOR benchmarks". The operative clause for many readers in the UK will be the statement that:

> "Immediately after 31 December 2021 … 1-month, 3-month and 6-month sterling LIBOR settings will no longer be representative and representativeness will not be restored."

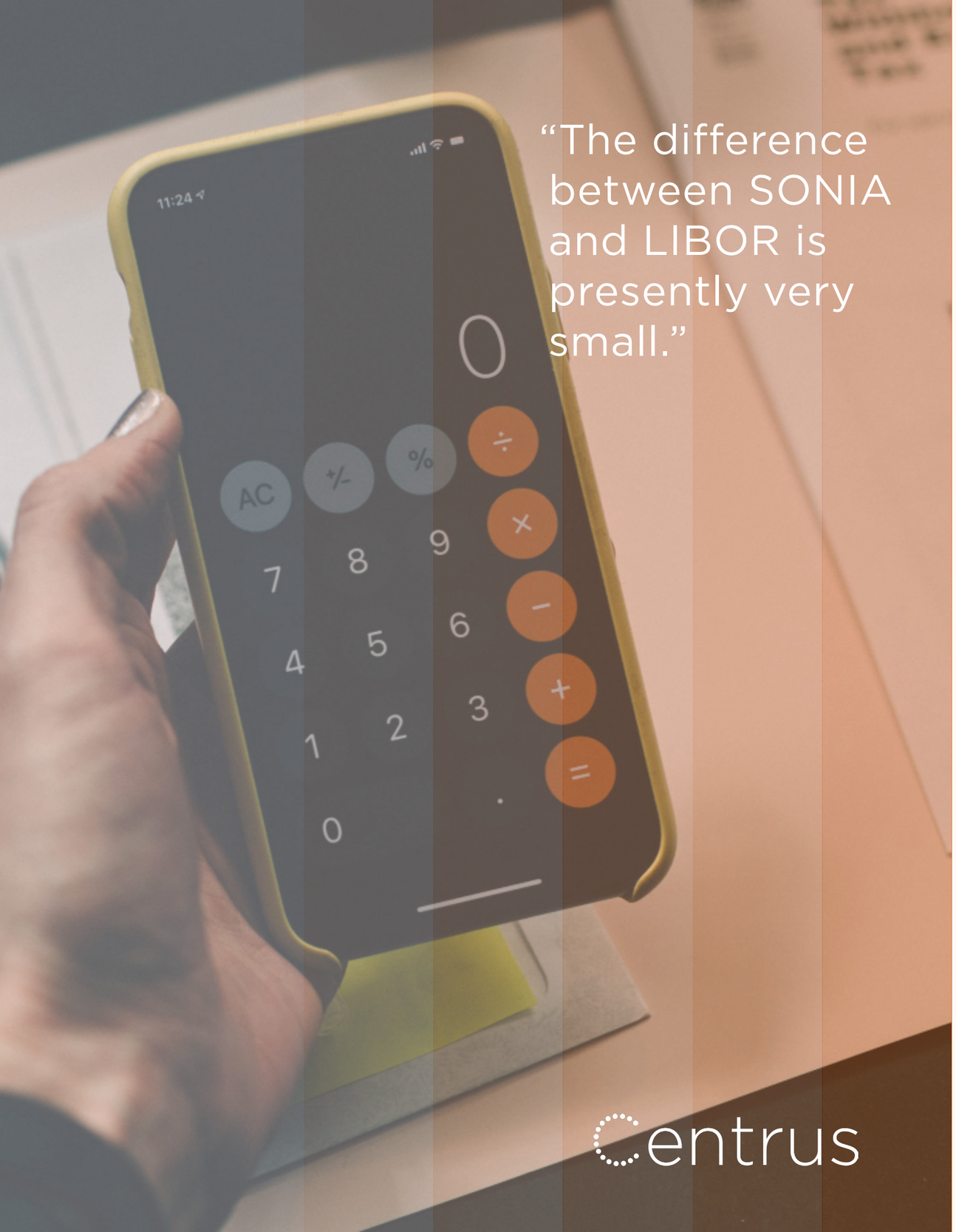
This has two main effects in our view:

1) Confirmation that the policy remains on track. There are exceptions for USD LIBOR and likely to be provision to deal with genuine "tough legacy contracts" but for Sterling loans and derivatives the coffin has one fewer nail left not firmly hammered down.

2) It aligns with the framework set up by the International Swaps and Derivatives Association ("ISDA") and it triggers the fixing of the Spread Adjustments which will apply for derivatives where parties have adopted the "ISDA Protocol". The Spread Adjustment for 3-month GBP LIBOR (for example) for relevant contracts is now set at 11.93 basis points. Corporates will often not be locked to these spread adjustments, even for derivatives, but they are gaining status as 'benchmarks'.

> The replacement of LIBOR with SONIA will mean a significant overhaul to interest calculation methods.

> This note summarises key issues and we also explain the potential relevance of Treasury Management Systems.



"The difference between SONIA and LIBOR is presently very small."

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Calculation Methods

The calculation methodologies and drafting benefit from more than one read in particular the mechanics of the "non-cumulative compounded rate". Centrus's view is that the drafting is unwieldy, but standardisation is important too so we are advising clients to live with the complexity but seek one version of it.

For practical purposes the details are falling into place and that is positive. We envisage that in due course the small number of banks ploughing their own furrow on some of the nuances will align with others.

We are happy to discuss the details with clients but would also flag a couple of key Bank of England papers as particularly useful. Their website is maintained with new announcements on a regular basis but corporates may find the "best practice guide" published in February 2021, in the second link, particularly useful:

https://www.bankofengland.co.uk/markets/transition-to-sterling-risk-free-rates-from-libor/resources-for-firms-transitioning-from-libor

"We envisage in due course … banks with nuances will align with others."

"The main number remains credit adjustment spread (CAS)."

https://www.bankofengland.co.uk/markets/transition-to-sterling-risk-free-rates-from-libor/working-group-on-sterling-risk-free-reference-rates

"The number" – Credit Adjustment Spread

The main number for commercial discussion remains the credit adjustment spread ("CAS"), a margin supplement given that SONIA is supposedly lower than LIBOR. In ISDA-speak it is the Spread Adjustment.

The difference between SONIA and LIBOR is presently very small. As of 6th July 2021, 1m LIBOR is less than one basis point higher than SONIA; even 12ML is only 17 bps, compared to SONIA at just over 5. For a £100m facility you intend to hang on to with a weighted average life of, say, fifteen years, every basis point is c.£150k. It is reasonable to seek to minimise the CAS.

[1] ISDA have developed a "Protocol" to handle mass transition of trades using their standard documentation and for some borrowers that may be appropriate to sign up to. The Protocol uses the five-year median method albeit not with the same precise calculation methodologies as we are seeing in the loans market.

"The Bank of England proposes... that CAS can be determined in two ways."

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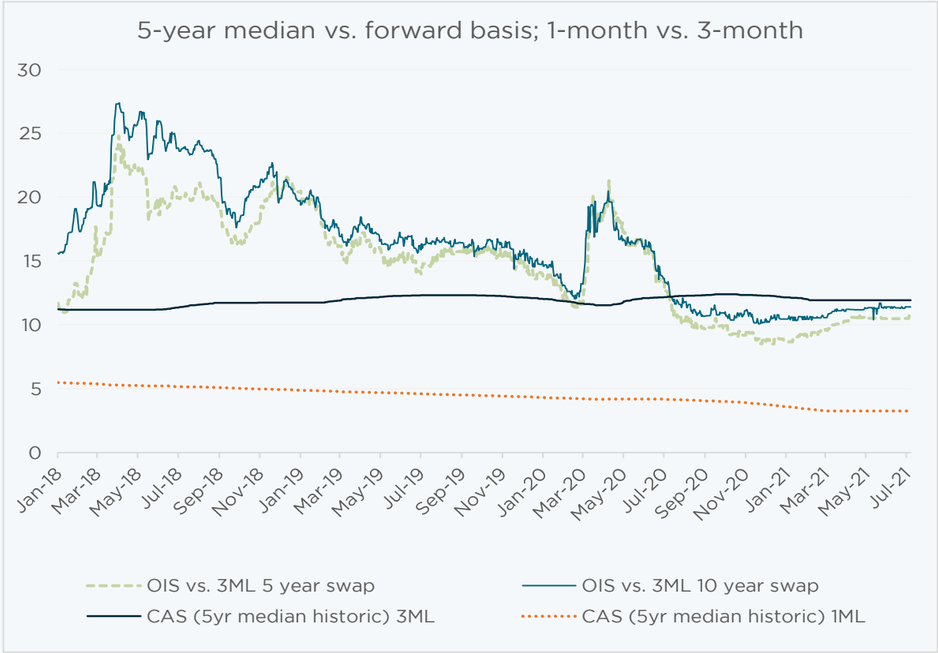
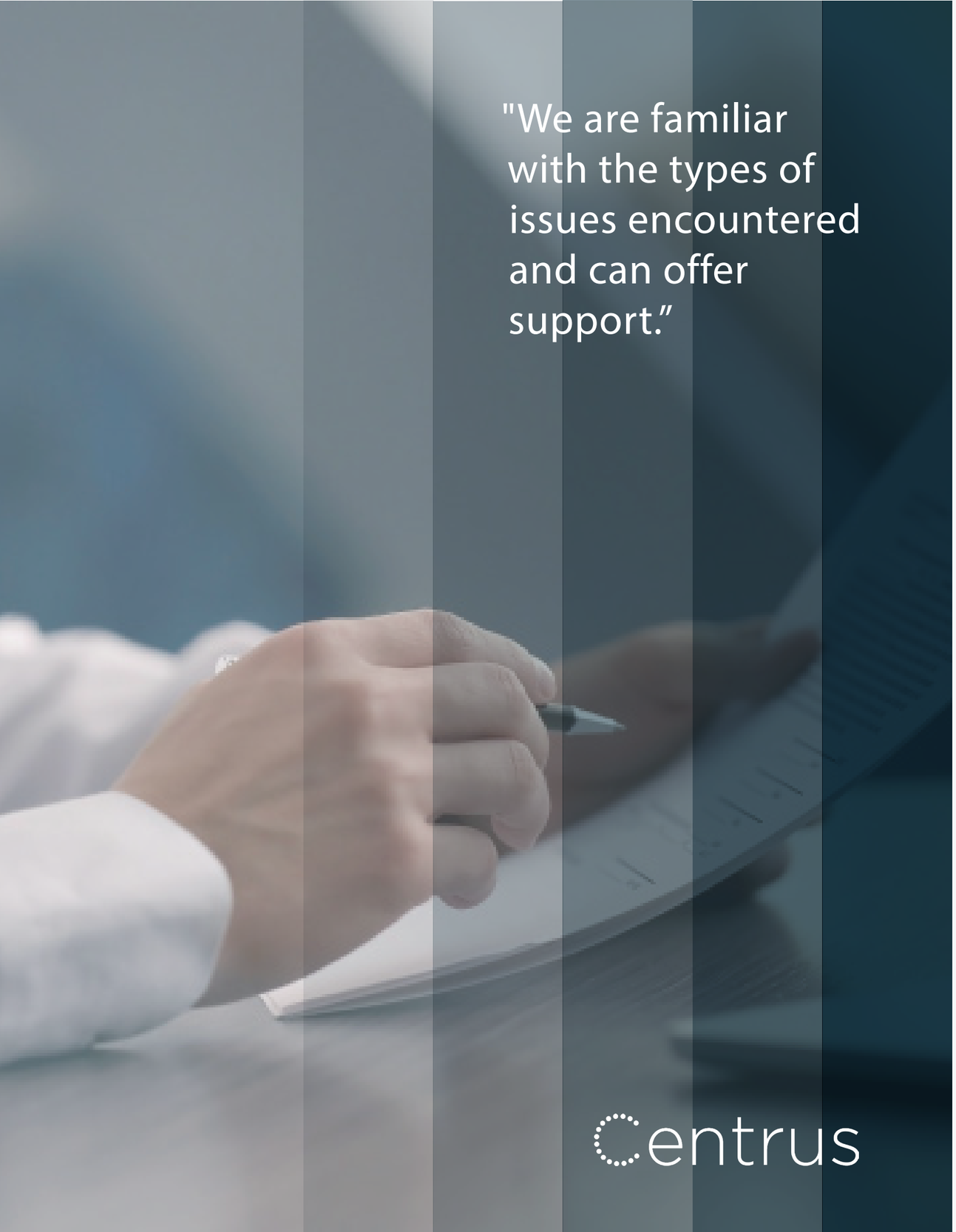
The Bank of England proposes that the CAS for "active transition" of loans can be determined in two ways. One is the five-year historic median difference and the other is the CAS implied from the swap markets on any given day, given that there are LIBOR and OIS (SONIA) swaps as well as basis swaps between the two. The banks are rightly cautious around being seen to offer advice in this area, which can create something of a chicken-and-egg scenario for corporates looking to make implementation decisions.

The key questions boil down to:

- Should borrowers switch to SONIA now, or introduce fall-back language which picks up SONIA from 31st December, or stick with "do nothing" for now?
- What is the "correct" CAS?
- Should borrowers take a different stance in relation to derivatives (where they are more commonly receivers of LIBOR)? Should they sign up to the ISDA Protocol to effect transition or is it better to take an active stance, maybe to align with loans?

The **below chart** shows the CAS worked out on the basis of the five-year median difference for 1-month and three-month LIBOR, which has been fairly level over this time-frame but has generally trended down since 2012, along with the forward-basis-difference-inspired CAS for three-month LIBOR on the premise of a remaining loan weighted average life of five or ten years. The movement in the forward market has been more volatile but less so recently.





Which CAS is right?

As can be seen, the forward-derived CAS is similar to the five-year median, but slightly tighter. It seems likely to remain close. Our general advice on the practicalities around setting the CAS is as follows:

- Avoid unrealistic timing expectations as not all the banks are ready.
- If you are choosing the CAS today, you may seek to favour the lower number or there may not be a material difference.
- While the forward CAS is presently smaller than the conventional historic basis, depending on which bank is involved there may be a quid pro quo in that it may start sooner (e.g. next roll date rather than 1st January). In addition, some lenders are proposing to defer the actual setting of the figure until just before the first actual SONIA roll period starts. This is a slightly unhelpful further nuance to that approach and arguably introduces a little bit of uncertainty that isn't needed as the forward-derived CAS can be set up front using appropriate market data.
- If you aren't ready to fix the CAS but want to nail down the methodology, there is more of an argument for selecting the historic median. It is less likely to change materially and in practical terms this likely means landing on the 5th March numbers as above.
- There is a rational argument that if you have a number of roll period options the CAS should be set with reference to the shortest, regardless of what roll periods you actually use. If you have one-month rolls now you may want to hang on to that ability. This is similar to the treatment of 0% floors where if you don't have that feature now LIBOR transition is not a reason to offer that, and if you do then the application should be as close as possible equivalent to the operation under LIBOR (for example, the floor should be applied to SONIA + CAS and ideally over the full roll period rather than daily).

The application of these timing considerations to derivatives, under which the borrower may receive floating rather than pay it, is more complicated. We flag the following additional key points in relation to derivatives:

- Many corporates have not adopted the Protocol, partly because their bank counter-parties have not engaged on the topic but also because the Protocol uses different calculation mechanics to the five-day lag which is becoming standard in the loans context.
- In principle one might sign up to the Protocol and still negotiate changes bilaterally, but it may be simpler to transact over to SONIA bilaterally and align precisely with hedged loans; any such trade will be priced against the market as it is now i.e. using the forward curve.

- We struggle to see the nuances as material from a hedge accounting perspective and there is guidance to that general effect. But auditors rightly see hedge accounting as a relatively risky area of financial reporting, in terms of the quality of compliance by some reporting entities. Any change risks cutting across the point of principle that hedge documentation should not be messed around with post-designation and many corporates are overlaying these changes on top of documentation which is historic for other reasons as well as LIBOR transition. In our view, a good audit discussion is an early audit discussion and we would apply that to these changes also. We are familiar with the types of issues encountered and can offer support.

So derivatives are as one might anticipate more complicated … but in a nutshell, if you have standalone hedges there is more of an argument for some bespoke analysis of timing and reporting options and perhaps a review of hedge accounting reporting more generally.

"The application of daily calculations and the nuances around payment lags point towards a level of automation useful to avoid operational errors."

Operational implications

It is possible to manage all of these nuances with spreadsheets and appropriate data sources. Once the CAS is set that calculation, at least, will not need to be repeated. Commercial data-providers have been closely engaged in the process.

However, the day-by-day calculations required with SONIA-based loans do lead to additional detail in the calculations and provide in our view a reason to consider the adoption of a Treasury Management System ("TMS") if one is not already used. The application of daily calculations and the nuances around payment lags point towards a level of automation as being useful to avoid operational errors.

Whether or not a TMS is used, the replacement of LIBOR with SONIA is a useful point at which to review and update written treasury procedures and review arrangements on payment calculation checks. For example, corporates should have a clear policy on what checks on payments are to be made, to what level of accuracy, and what data sources used. It may also be worthwhile reviewing procedures dealing with the timing of payments authorisations and instructions given that figures will be known only in the last few days of floating-rate interest periods going forward.

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titantreasury & SONIA

titantreasury is an expert Treasury Management System (TMS) that offers financial departments and treasurers the best functionalities for monitoring and controlling operational market risk (rate, foreign exchange, commodities), credit and liquidity risks.

titantreasury is capable of handling SONIA transactions as standard or with complex nuances to the loan agreement. The below section explains how SONIA data is managed within the platform.

1. Data snapped from Refinitiv*

- Snapped everyday at 5.45pm
- Centrus receives swap rates including OIS (overnight index swap) rates

2. Data storage

- The market data is collected, transformed and loaded into Centrus' server database

3. Data upload

- Data is then converted into a Titan compatible format
- Data is then uploaded by Centrus into Titan

4. Manual SONIA curve set up

- There is a first-time, one-off manual set up of the SONIA curve in
  then automated going forward
- Tutorial on the next pages

5. Once this process is done, all the curves will be automatically generated overnight

*Formerly Thomson Reuters.

Once the above process is complete, users will have access to the fixing rates loaded in **titan**treasury.

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How to model a SONIA loan in titantreasury

There is much more drafting in loan agreements, and more iterative calculations, for a SONIA loan than the LIBOR loan it will have replaced (and the same goes for floating-rate payments on derivatives). There are also more input parameters. **titan**treasury provides a flexible system and can cater for the following key parameters:

SONIA input parameters	Available in **titan**treasury
"Shifts" i.e. business day weighting on the basis of when the reference-period day falls	Yes
"Lags" i.e. business day weighting on the basis of when the interest rate-period day falls	Yes
0% floors i.e. treat negative SONIA as 0%	Yes
0% floors i.e. treat negative (SONIA + CAS) as 0%	Yes
Inclusion of Credit Adjustment Spread when calculating payments	Yes

The key stages in booking a SONIA loan in titantreasury:

1. Select the SONIA OIS floating rate index.
2. Add your Credit Adjustment Spread and your Margin.
3. The number of days lag has its own input as shown. **titan**treasury can also deal with shifts but we're seeing nearly all lenders use the lag concept in preference to shifts.

It is also possible to apply a floor to the compounded SONIA rate + credit adjustment spread if the rates were to be negative.

Once the information has been correctly entered in the Front tab of a deal ticket, **titan**treasury will automatically calculate the fixings for all the periods on the deal.

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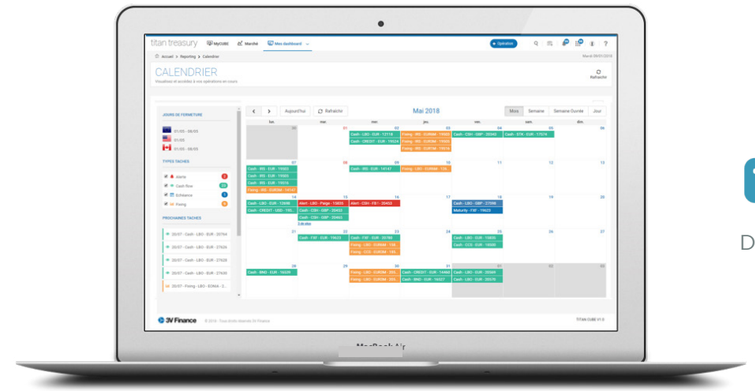
To learn more book an online demonstration of **titan**treasury, whether it's specifically for your LIBOR to SONIA transition or more generally for your operational or reporting needs. For any other enquiries, please do not hesitate to get in touch with your usual point of contact or using the contact details below.



titantreasury
Delivered by Centrus

titantreasury is provided by 3V Finance, a software developer and specialist in treasury management operations and supported and delivered by Centrus experts.

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SYSTEMS

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About Centrus

Centrus is an independent financial services group that believes in finance with purpose.

We specialise in corporate finance, analytics and investment management and are united by a culture that values imagination, energy and purpose.

We believe this can unlock significant value for our clients and their communities. Above all, we're working towards a more modern financial landscape.

It is a simpler and more responsible way of doing business by delivering real money and tangible benefits to the real economy.

Centrus

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