

Briefing

# LIBOR transition: it's time to act

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The PRA and FCA have recently reiterated the intention that sterling LIBOR will cease to exist after the end of 2021. LIBOR transition is a process that the market and individual firms will need to follow. It involves the move away from using LIBOR as the core benchmark for sterling denominated short-term interest rates (and for derivatives referencing such rates). The replacement benchmark selected for sterling is SONIA. Insurers that hold financial instruments such as swaps that depend explicitly on LIBOR will often be doing so for hedging purposes and need to consider the timing of their transition.

In current market conditions, LIBOR (the London Interbank Offered Rate) transition may, in due course, imply a fall in the EIOPA (European Insurance and Occupational Pensions Authority) yield curve. This is the curve used by insurers to discount their (sterling denominated) liability cash flows.

: This could then lead to an increase in their technical provisions, although at an insurance industry wide level, this transitional effect will be dampened in the UK by a tendency for writers of longer dated policy types to use matching adjustment portfolios.

## LIBOR phase out

Progress in the market to phase out LIBOR benchmarked instruments is happening, but arguably not as quickly as the PRA (Prudential Regulation Authority) and FCA (Financial Conduct Authority) would have liked. For example, there is little evidence yet that sterling LIBOR swaps trading is declining, not even for swaps with maturities of greater than two years; i.e. for swaps that would presumably otherwise live on after the current assumed end of LIBOR.

The PRA and FCA provided additional guidance to banks and insurers on 16 January 2020, indicating what sorts of planning and action they are expecting from such firms in relation

to LIBOR transition. We would expect the principal focus of the PRA and FCA in this area to be on banks (and investment firms).

Banks will typically be more operationally impacted by LIBOR transition than end investors such as insurers. However, insurers can advance loans to customers or others, invest in or issue floating rate paper and use swaps or other derivatives to manage interest rate risk (or other risks). They may also be impacted by LIBOR transition in other ways.

Insurers, particularly larger ones, need to be making preparations so that they can respond with appropriate vigour to increasingly strident calls from regulators on LIBOR transition. They may also expect greater regulatory intrusion if their planning in this area is viewed by regulators as deficient.

## 1. A brief background to LIBOR transition

LIBOR and other 'IBOR' rates are currently the world's most widely used benchmarks for short-term interest rates and for derivatives referencing such rates. Some \$200 - \$300 trillion in mortgages, consumer loans, corporate debt, derivatives and other financial instruments reference LIBOR, according to Morgan Stanley.

However, this is set to change as regulators in most jurisdictions are committed to phase out use of LIBOR, typically by the end of 2021.

LIBOR was reputedly initiated in c. 1969 when a Greek banker arranged a syndicated loan linked to the reported funding costs of banks. However, it wasn't formalised until the British Bankers' Association began overseeing the collection and governance of this data nearly two decades later. Each day a group of large banks, known as panel banks, report their funding rates to the Intercontinental Exchange Benchmark Administration (IBA), which took over administering LIBOR in 2014. The rates are averaged, adjusted and released at approximately 11.45 am London time, each business day.

Weaknesses in this framework were highlighted during the 2008 Financial Crisis. Since then, fewer panel banks have been reporting and those that do are reporting fewer transactions. LIBOR has increasingly relied on what the IBA calls "market and transaction data-based expert judgement," despite its outsized role in global financial markets, hence the need for change.

One perceived weakness of LIBOR is this reliance on "expert judgment." There is near universal agreement that whatever replaces LIBOR should focus on data derived from actual market transactions.

The other main perceived weakness of LIBOR is the extent to which it is not risk-free. LIBOR represents an 'unsecured' rate. It is the rate that a panel bank would offer to pay on a deposit for a set period. For example, this could be one month, three months or six months.

During the financial crisis of 2007-08 depositors became more focused on banks' ability to repay deposits over short time periods (e.g. a week or less).

Two ways investors can mitigate this risk involve:

1. Placing money only overnight with banks, moving the money to a new bank if the creditworthiness of the old one is considered to be impaired, even over a short time horizon
2. Lending money to banks only in a 'secured' manner; e.g. via repo transactions

Whilst 'term' repo transactions are possible, most repo transactions are overnight. So either of these approaches in practice involves focusing on overnight rates, rather than the 3 month or 6 month LIBOR rates that have typically been focused on in the past.

In this context, overnight rates are often referred to as 'risk-free rates' even though some residual risks remain if the overnight lending is unsecured and, to a lesser extent, if the lending is secured.

Regulatory texts, such as Bank of England (2017), tend instead to refer to 'near risk-free' and may also be inexact about how secured or unsecured transactions need to be to contribute to the benchmark.

For example, the UK plans to switch from LIBOR to the SONIA (Sterling Overnight Index Rate). SONIA is administered by the Bank of England. (See the regulatory text referred to above.) Its definition has two elements. These are a 'statement of underlying interest' and a 'statement of methodology.'

The statement of underlying interest indicates that SONIA is "a measure of the rate at which interest is paid on sterling short-term wholesale funds in circumstances where credit, liquidity and other risks are minimal." Currently, its calculation refers to unsecured overnight lending to banks for sums exceeding £25m.

However, the Bank of England has retained the power to change this methodology if this is needed for SONIA to continue to adhere to its statement of underlying interest. For example, this could be by introducing a methodology that “has reference to other actively-traded money market instruments, for example UK gilt collateralised repurchase agreements, or to the Bank of England official interest rates, so long as the administrator considered that they provide an appropriate measure of the underlying interest.” Proposals being explored in a range of jurisdictions are summarised in Table 1.

**TABLE 1: LIBOR TRANSITION PROPOSALS IN DIFFERENT JURISDICTIONS**

Country	LIBOR Rate	New (Near) ‘Risk-Free’ Rate	Transition Committee
United Kingdom	GBP LIBOR	SONIA	Sterling Working Group on Risk-Free Rates
Europe (Eurozone)	EURIBOR and EUR LIBOR	€STR	European Money Markets Institute (EMMI) and Euro RFR Working Group
United States	USD LIBOR	SOFR	Alternative Reference Rates Committee
Japan	TIBOR, JPY LIBOR and Euroyen TIBOR	TONA	Cross-Industry Committee on Japanese Yen Interest Rate Benchmarks
Canada	CDOR	CORRA	Canadian Alternative Reference Rate Working Group (CARR)
Switzerland	CHF LIBOR	SARON	The National Working Group on Swiss Franc Reference Rates
Australia	BBSW	RBA Cash Rate (AONIA)	Australian Financial Markets Association
Hong Kong	HIBOR	HONIA	Treasury Markets Association’s Market Practices Committee

Source: Morgan Stanley

Insurers may or may not hold financial instruments that depend explicitly on LIBOR. For insurers that do not hold such instruments, the most important issue they face may be how the discount rate they use to value their technical provisions will be calculated. We discuss this topic in Section 2.

Insurers that hold financial instruments such as swaps that depend explicitly on LIBOR will often be doing so for hedging purposes and face some additional issues. We discuss this further in Section 3. Some issues for the broader market, including ones that are not insurance specific, are discussed in Section 4. Finally, in Section 5 we discuss next steps and recent pronouncements by the PRA and the FCA in this area.

## 2. Issues for insurers: valuation of technical provisions

Solvency II generally requires insurers to calculate their Best Estimate Liability (BEL) by discounting future net cash flows at risk-free rates as specified by EIOPA. The Solvency II Delegated Regulation was changed in mid-2019 to clarify how Solvency II risk-free rates might be set going forwards. Perhaps, in part, this change reflected the ongoing debate about the transition away from LIBOR. The methodology currently used by EIOPA to determine risk-free rates for different currencies is set out in EIOPA (2019). For GBP it indicates the below.

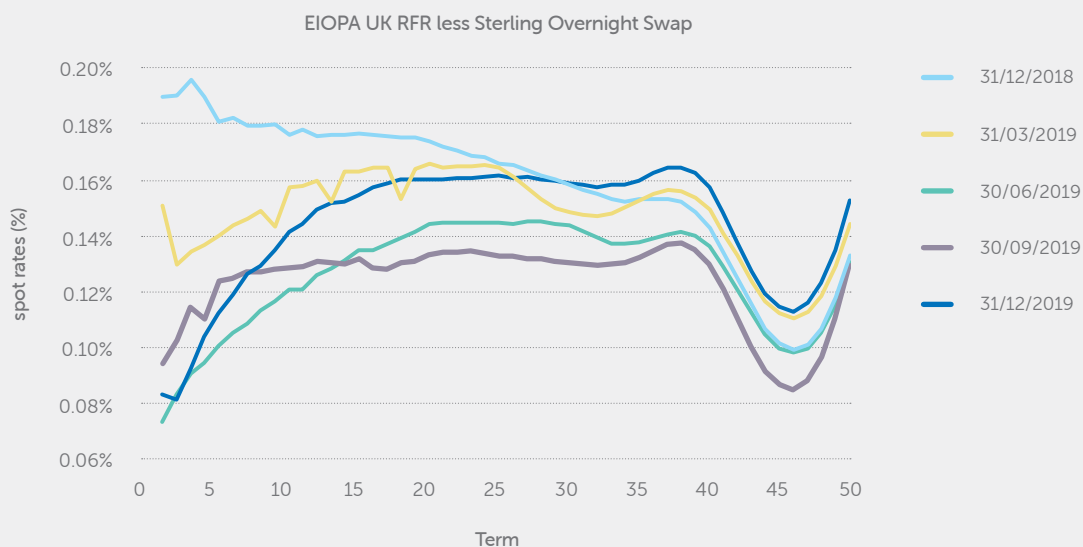
- (a) The GBP risk-free rate for Solvency II purposes is derived from swap rates. GBP is deemed to have a deep, liquid and transparent overnight swap market and for such a currency a credit risk adjustment is applied as per Article 45 of the Solvency II Delegated Regulation, calculated by reference to the 6 month LIBOR and the Overnight Index (OIS) rates.
- (b) Articles 44(1) and 45 of the Solvency II Delegated Regulation imply that the risk free rate is then derived from the 6 month LIBOR swap rate for the relevant term, less an adjustment calculated as 50% of the average difference (over a time period of one year) between the 6 month LIBOR and OIS rates compounded for six months. Article 45 further specifies that this adjustment should not be lower than 10 basis points and not higher than 35 basis points.

The shift from LIBOR to SONIA might in due course be expected to lead to an increase in many insurers' technical provisions, since LIBOR includes a credit spread (over SONIA) which is arguably only partially removed at present.

Currently the impact might be expected to be modest, as over the last few months the EIOPA (base) GBP RFR yield curve has been only modestly higher than the corresponding SONIA yield curve; see Figure 1.

As a first order approximation, if the yield curve used to discount future cash flows reduces by y% per annum then the technical provisions rise by y% times the average duration (in years) of the liability cash flows.

**FIGURE 1: SPREAD BETWEEN EIOPA UK (BASE) RFR YIELD CURVE AND SONIA SWAP YIELD CURVE**



Source: Barnett Waddingham, Bank of England and EIOPA

Moreover, UK firms where the Solvency II technical provision impact might otherwise be expected to be greatest (i.e. firms with the longest liabilities), often use matching adjustment (MA) portfolios. These sorts of insurers set their discount rates principally by reference to yields on instruments within their MA portfolios, rather than by reference to EIOPA RFR rates per se. So changes, if any, in the methodology used to set EIOPA (base) RFR rates will have less impact on them. Firms making use of Solvency II's Volatility Adjustment may also be less impacted.

Beyond the confines of Solvency II, firms reporting under IFRS (International Financial Reporting Standards) need to decide how to set discount rates when drawing up their IFRS 17 financial statements.

⋮ This means that they will also need to decide on the ongoing importance they should give to LIBOR, OIS or other interest rate measures in such computations as LIBOR transition progresses.

### 3. Issues for insurers: hedging

Firms wanting to hedge or otherwise mitigate interest rate risk will want to understand the interest rate exposures they have, in order to hedge them most effectively. Alongside any relevant underlying economic perspective, firms will often also want to understand how any such hedge might impact their regulatory capital position (and their financial statements).

Suppose a firm wants to hedge interest rate exposures arising within its Solvency II technical provisions by entering into suitable interest rate swaps. Ignore for the moment the 10-35 basis points corridor included in the EIOPA GBP RFR derivation and the difference between the liability term and the period of time used to define the floating rate benchmark.

⋮ The current way in which the EIOPA base GBP RFR yield curve is set implies, in effect, that around one-half of the Solvency II GBP BEL is being discounted using LIBOR and one half using SONIA.

In theory, therefore, the optimal hedge (from a regulatory capital perspective) might currently involve use of swaps that are of suitable terms split roughly 50/50 between LIBOR-based swaps and SONIA-based swaps.

Much the same logic applies to interest rate sensitivities arising via firms' risk margins, another element in the firm's total Solvency II technical provisions. By 'LIBOR-based' we here mean that the interest rate underlying the floating rate of the swap is

LIBOR and by 'SONIA-based' that it is SONIA. In practice, a theoretically optimal hedge would also want to address effects arising from the 10-35 bp corridor, etc, and take due regard of the underlying economics of the cash flows.

However, we might expect the EIOPA calculation methodology to change by the time LIBOR is discontinued to one in which:

- (a) 100% of the BEL is discounted at SONIA (for GBP) or other (near) risk-free rates (for other currencies)
- (b) No further credit risk adjustment is applied (there being no need for such an adjustment as long as the relevant overnight rate involves a market that is sufficiently deep, liquid and transparent).

If this is the case then insurers wishing to hedge their liabilities will be incentivised towards using OIS swap based hedging instruments and away from LIBOR swap based instruments as the LIBOR transition progresses.

At the time Risk Magazine's 2019 Special Report on LIBOR transition and implementation was published, EIOPA had not yet indicated how discount curves used by insurers to value their liabilities would be set after the transition. Risk Magazine thought that this left "UK insurers in a bind – move their liability hedge to SONIA early on and create basis risk, or remain in a market that will become less liquid over time."

In January 2020, EIOPA issued a discussion paper that addressed "for the first time" the implications for EIOPA risk free rates of the transition. The paper expresses support for an approach aligned with the one set out above. However, it also floats the possibility of little change as well as some options for how the timing of any shift of approach might operate. Stakeholders have been invited to provide feedback to EIOPA on this paper by 30 April 2020. Based on this feedback, EIOPA will produce a consultation paper that includes specific policy recommendations.

How basis risk impacts insurers' capital requirements potentially depends on whether they use the standard formula SCR (Solvency Capital Requirement) or whether they use an internal model to set their SCR.

In principle, firms using the standard formula would likely be in a relatively binary position. As long as they can disregard basis risk on the grounds of materiality, they would typically be able to take credit for the hedge without being penalised to any material extent for the basis risk between LIBOR and OIS swap rates. However, if the basis risk is sufficiently material then they may be required to disregard the hedge, potentially significantly impacting their capital position; see EIOPA (2014).

⋮ In contrast, an internal model is likely to be in a more nuanced but therefore potentially more complicated position.

Internal models would likely need to consider the basis risk more accurately, so the outcome is likely to be less binary in nature. However, the model may need updating as the LIBOR transition progresses. Changing a model can involve a lot of time and effort.

The trade-offs involved can also vary in other ways between firms. For example, variable annuity providers may use dynamic hedging approaches to replicate long-dated guarantees. They may need to emphasise liquidity more than other types of insurers, making them more exposed to the other issues described in the next section.

## 4. Issues for the broader market

For other financial market participants, issues tend to revolve more around how to handle instruments that reference LIBOR and what sorts of instruments to transact in the run up to LIBOR discontinuance. It is not practical merely to replace references to LIBOR in the instrument documentation with references to SONIA or equivalents in other currencies. Instead, some further adjustment is needed to ensure that one or other party is not financially disadvantaged.

⋮ Historic instruments that were entered into before LIBOR was expected to demise are typically the most challenging, as there may have been no thought given at the time as to what to do if LIBOR was discontinued.

The position here seems to vary significantly by jurisdiction and by instrument type. UK based firms appear to have made more headway than most, perhaps because the Bank of England has been one of the more vocal regulators in this area. Trading volumes in OIS-benchmarked swaps are already similar for some durations to those for LIBOR-benchmarked swaps. Half of new sterling swap notional cleared at LCH (the London Stock Exchange Group's clearing house) is now linked to SONIA. Every new sterling floating rate issue in 2019 has been pegged to SONIA, according to Risk Magazine.

Other relevant issues include:

- (a) The usual way in which, say, a swap would be transitioned from a LIBOR-benchmarked structure to an OIS-benchmarked structure would be to include an adjustment to the fixed leg alongside the change in the floating rate leg, the two in combination resulting in no net value transfer between the two parties. Or the existing swap could be closed and simultaneously a new one entered into with equivalent overall economic impact
- (b) If there is a rush to transition LIBOR-benchmarked swaps to OIS-benchmarked swaps towards the end of LIBOR phase-out, then the terms on which restructuring as per (a) can be entered into may move against the relevant market participant
- (c) Towards the end of the LIBOR phase-out period, liquidity might be expected to decline in LIBOR-benchmarked instruments
- (d) The sheer number of transactions involved increases the risk that some will not be transitioned by the time LIBOR ceases to be published

- (e) Standardised derivatives are relatively easy to transition. They are generally governed by standardised documentation and changes can be made en masse, via introduction of a protocol to that documentation. Contracts yet to be entered into can be dealt with by having them based on SONIA, etc, from outset
- (f) More difficult to deal with are many forms of existing floating rate debt and loan instruments, as well as some more exotic types of derivatives. For example, changing the terms of floating rate debt issued by a corporate generally requires the permission of the noteholders
- (g) If a floating rate note was privately placed then the issuer will typically know who the debtholders are and can approach them to discuss terms. To date, the topic has often not been on the radar of debtholders but this will presumably change as the LIBOR discontinuance date approaches. More challenging are listed bonds. These instruments may be broadly held, so the corporate may not know who the holders are after a deal is issued. To change the interest rate there are basically two options – buy the notes back and reissue using the new benchmark, or run a consent solicitation process to get permission to change the terms. Typically, at least 75% of holders need to agree with the latter route
- (h) The Eurozone seems some way behind the UK and this may colour approaches adopted by some EU regulators important for UK institutions. For example, the ECB does not appear to believe that it is the ECB's job to decide whether Euribor (Euro Interbank Offered Rate) should live or die. It believes that this is something best decided by other policymakers. New issuance that might kick-start greater use of €STR benchmarked (euro short-term rate) corporate instruments may be depressed, due to the ECB's (European Central Bank's) current quantitative easing policy. Trading in €STR swaps has only recently commenced. Euribor is also used as the reference rate for many retail mortgages, making it quite tricky to discontinue. Legislation extending the EU Benchmark Regulation deadline to 2021 extended the period that regulators could force banks to contribute to critical benchmarks, from two to five years. This means that Euribor could be around for at least five more years unless EU policymakers change direction.

However, even in the UK, the overall picture in terms of market preparedness is rather patchy, according to Khwaja (2020). The largest market is the dollar market. Here there has been

strong growth in SOFR (Secured Overnight Financing Rate) futures over 2019. SOFR futures open interest has risen from 2% to c. 20% of CME Eurodollar futures open interest, over the period 31 January 2019 to 31 December 2019. Volumes in SOFR swaps have also risen substantially, but as at 31 December 2019 the amount of SOFR swaps notional was still just 1% of US dollar LIBOR swaps notional. Moreover, volume in SOFR is currently still concentrated on short maturities.

Open interest in SONIA futures has also increased but at a slower rate to SOFR, from £91bn to £160bn over the period 31 January 2019 to 31 December 2019 according to Khwaja (2020).

**In a letter sent to major banks and insurers on 16 January 2020 (see next section), the PRA and FCA indicated that “over the last 6 months, SONIA Overnight Index Swaps accounted for around 50% of cleared swaps by notional traded value.”**

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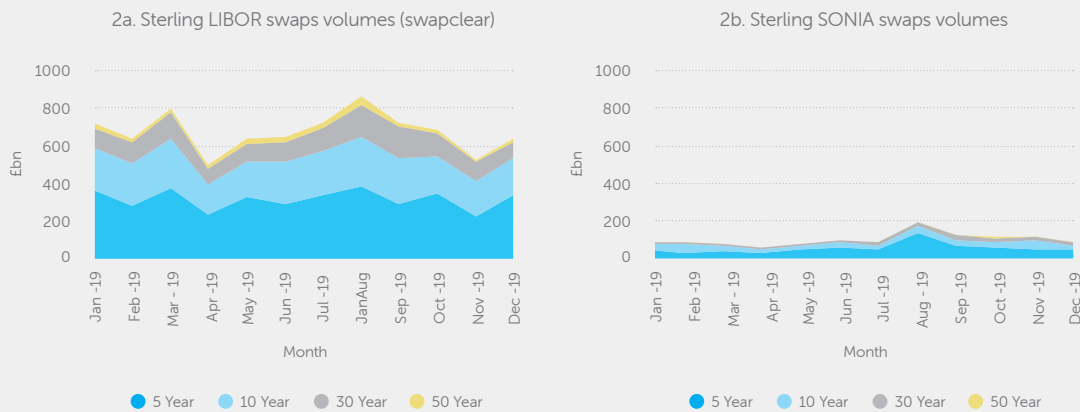
However, data cited by Khwaja (2020) suggests a less rosy picture if short-dated maturities are excluded. His data indicates that volumes traded in Sterling LIBOR swaps with maturities beyond two years (i.e. beyond the planned demise of LIBOR) are still substantially larger than corresponding volumes in SONIA swaps; see Figure 2.

**Khwaja (2020) comments that there is “no evidence of a reduction in sterling LIBOR swaps trading and not even for those with maturity of greater than two years, which would continue past January 2022, the assumed end of LIBOR”.**

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Source: Barnett Waddingham, adapted from Khwaja (2020)

**FIGURE 2: STERLING LIBOR SWAPS VOLUMES (SWAPCLEAR) VERSUS STERLING SONIA SWAPS VOLUMES FOR MATURITIES BEYOND 2 YEARS**



Arguably trailing behind both the dollar and sterling area is the Eurozone — at least in terms of adoption of €STR. €STR swaps only started trading in October 2019 and their outstanding notional of c. €66bn at end 2019 is still very small in relation to c. the €25 trillion of outstanding notional for Euribor swaps, or the €8 trillion of EONIA (Euro Overnight Index Average) swaps notional. (EONIA is another overnight interest rate used in the Eurozone).

## 5. Next steps and recent pronouncements from the PRA and FCA

In the latter part of 2019, the PRA approached some firms (including some insurers) seeking further information on their LIBOR transition planning. For Solvency II firms this included providing the PRA with data on their BEL (best estimate liabilities), split by currency and by type of discount rate used (IBOR versus 'risk-free rate'). The deadline for provision of this information to the PRA was 31 December 2019.

In June 2019, the PRA and FCA also provided individual feedback to major firms who had received their earlier 2018/19 'Dear CEO' letter on LIBOR transition.

On 16 January 2020, the PRA and FCA again wrote to firms reiterating the importance of robust planning by firms in relation to LIBOR transition. Their letter covered the below.

1. Reinforced the previous message: "The intention is that sterling LIBOR will cease to exist after the end of 2021. No firm should plan otherwise."

2. Indicated a continued support for market led transition efforts by, for example, the Working Group on Sterling Risk Free Reference Rates including targets for 2020 involving:
  - (a) A further shift of volumes from LIBOR to SONIA in derivatives markets, supported by a statement from the Bank and FCA encouraging a switch in the convention for sterling interest rate swaps from 2 March 2020
  - (b) Cessation of the issuance of cash products linked to sterling LIBOR by the end of Q3 2020
  - (c) A significant reduction in the stock of LIBOR referencing contracts by Q1 2021

3. Provided further details of regulatory expectations, including guidance to the effect that firms' planning in this area from Q1 2020 should encompass at least the following areas:
  - (a) Product development
  - (b) Reviewing infrastructure, including loan system capabilities
  - (c) Client communications and awareness
  - (d) Updating documentation
4. Indicated that the FCA and PRA would be stepping up engagement with firms; e.g. by reviewing firms' own management information and collecting additional data from firms, with the threat of recourse by regulators to additional supervisory tools if they think by mid-2020 that insufficient progress is being made in phasing out LIBOR

UK's financial regulatory system most focused on market-wide or macro-prudential concerns. Its involvement reflects the perceived risk of market disorder if LIBOR were to be discontinued in a manner that led to significant legal uncertainty about who owed what to whom.

The latest PRA and FCA letter on LIBOR transition comes hot on the heels of other PRA and FCA consultation papers focusing on operational resilience. It would look rather foolish for a firm to be tripped up in this area by well telescoped market changes that are obviously likely to have a significant impact on its operational activities.

The importance of this issue is highlighted in the letter by reference to the deliberations of the Bank of England's Financial Policy Committee in this area. This Committee is the part of the

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