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Subject:	COMMISSION STAFF WORKING DOCUMENT IMPACT ASSESSMENT REPORT Accompanying the document Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL amending Regulation (EU) 2016/1011 as regards the exemption of certain third country foreign exchange benchmarks and the designation of replacement benchmarks for certain benchmarks in cessation
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Delegations will find attached document SWD(2020) 142 final.

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COMMISSION STAFF WORKING DOCUMENT

IMPACT ASSESSMENT REPORT

Accompanying the document

**Proposal for a
REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
amending Regulation (EU) 2016/1011 as regards the exemption of certain third country
foreign exchange benchmarks and the designation of replacement benchmarks for
certain benchmarks in cessation**

{COM(2020) 337 final} - {SEC(2020) 284 final} - {SWD(2020) 143 final}

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Glossary

<i>Term or acronym</i>	<i>Meaning or definition</i>
€STR	Euro Short Term Rate
ARRC	Alternative Reference Rates Committee. The ARRC is a group of private-market participants convened by the Federal Reserve Board and Federal Reserve Bank of New York in cooperation with the Consumer Financial Protection Bureau, the Federal Deposit Insurance Corporation, the Federal Housing Finance Agency, the Office of Financial Research, the Office of the Comptroller of the Currency, the Commodity Futures Trading Commission, the Securities and Exchange Commission and the U.S. Treasury Department. The ARRC was initially convened in 2014 to identify risk-free alternative reference rates for U.S. dollar (USD)LIBOR, identify best practices for contract robustness, and create an implementation plan with metrics of success and a timeline to support an orderly adoption).
BBA	British Bankers' Association

BMR	EU Benchmark Regulation (Regulation (EU) 2016/1011)
BMR	Regulation (EU) 2016/1011 (the Regulation / the (EU) Benchmark Regulation)
CMU	Capital Markets Union
CCPs	Central Counterparties
Critical benchmark	A benchmark that has no or very few market-led substitutes and whose existence and accuracy are relevant for market integrity, financial stability or consumer protection in one or more Member States (BMR, recital 36)
ECB	European Central Bank
EMMI	European Money Markets Institute (the administrator of EURIBOR)
EMTA	Emerging Markets Trade Association
ESMA	European Securities and Market Authority
EUR RFR WG	Working Group on euro risk-free rates (Euro area private sector body dealing with fall-backs to EURIBOR)
EURIBOR	Euro Interbank Offered Rate
FCA	Financial Conduct Authority (the UK competent authority for securities and markets)
FSB	Financial Stability Board, an international organisation comprising high-ranking officials from central banks, national treasuries and securities markets regulators
FSB OSSG	FSB Official Sector Steering Group on Benchmark reform
FSMA	Financial Services and Markets Authority (the Belgian competent authority for securities and markets)
FICC	Fixed Income Clearing Corporation
FX	Foreign Exchange
GCF	General Collateral Financing
IBA	ICE Benchmark Administration (the current administrator of LIBOR)
ICE	InterContinental Exchange
IBOR	InterBank Offered Rate
ICMA	International Capital Market Association
Interbank (money) market	The market of loans and deposits between banks for maturities ranging from overnight to one year
ISDA	International Swaps and Derivatives Association
LIBOR	London Interbank Offered Rate
LMA	Loan Market Association
MMSR	Money Market Statistical Reporting

NDF	Non-Deliverable Forward contract
OTC	Over The Counter. Refers to products that are not traded on trading venues, but between an investment bank and a corporate counterparty.
RFR	Risk-Free Rate
SI	Systematic Internaliser, denoting an investment bank that regularly trades in a certain financial instrument (e.g., a derivative contract) against its own book (i.e., internalises these trades)
SMMD	Sterling Money Market Data Collection Reporting
Tough legacy contracts	Contracts that mature after the potential cessation date of the critical benchmark they reference and that cannot be renegotiated in time to migrate to a replacement rate or to include fall-back provisions
UCITS	Undertakings for Collective Investment in Transferable Securities
USD	United States Dollar

1. INTRODUCTION: POLITICAL AND LEGAL CONTEXT

Under the heading “An Economy that Works for People”, the Commission Work Programme for 2020 provides for a review of its regulation on financial benchmarks, Regulation (EU) 2016/1011 (the “Benchmark Regulation” or “BMR”).

The European co-legislators adopted the BMR in 2016 in order to make benchmarks more reliable, by introducing a licensing regime for administrators of benchmarks. The BMR also introduced requirements for the contribution of input data that is used to calculate a benchmark. Finally, the BMR also regulated the use of financial benchmarks. In particular, the BMR rules require EU supervised entities (such as banks, investment firms, insurance undertakings, fund managers) to use only benchmarks whose administrator has been authorised. Benchmarks administered in third countries can only be used via the equivalence, recognition or endorsement procedures. By setting governance and data quality standards for benchmarks that are referenced in financial contracts, the BMR aims to strengthen the trust of capital market participants in indices used as benchmarks in the Union. It contributes to the Commission’s efforts in favour of a true Capital Markets Union (CMU).

The Benchmark Regulation applies since January 2018¹. The transitional regime² for benchmarks administered outside the Union (“third country benchmarks”) allow for continued use of such benchmarks for a limited period of time, even if these indices do not comply with the BMR. The transitional regime has been extended, but will now expire at the end of December 2021. Benchmarks with systemic relevance are designated as “critical” by the European Commission and are subject to more stringent requirements and supervision. On the other hand, some benchmarks, such as central bank policy or currency exchange spot rates, are exempt from the scope of the BMR.

¹ Article 59(1) of the BMR.

² Article 51(5) of the BMR.

1.1 Critical benchmarks: political context

Global political context

Interbank overnight rates (IBORs) are the most important (and currently only) category of critical benchmarks. IBORs reflect the rate of interest that banks charge each other for the borrowing of short term funds. Interbank rates are traditionally assembled on the basis of rates communicated to benchmark administrators by a panel of banks. IBOR rates are therefore often referred to as “panel bank” rates because contributions reflect estimates by banks of the rates at which they could borrow funds in the interbank market. The rates communicated do not necessarily reflect actual transactions, they can also comprise estimates by banks.

As a consequence of the manipulation of interbank rates during the financial crisis, G20 leaders agreed to improve the oversight and governance of interest rate benchmarks. In 2013, G20 leaders asked the Financial Stability Board (FSB), a group of senior officials representing national treasuries, central banks, and supervisory agencies, to review the world’s major interbank benchmarks³. In 2014, the FSB published a report⁴ on benchmark reform and recommended a “multi-rate approach” with two broad objectives: (1) strengthening existing benchmarks and other potential reference rates based on interbank markets by underpinning them to the greatest extent possible with transaction data; and (2) developing alternative, nearly risk-free, overnight reference rates (RFRs)⁵. The recent global trend to develop nearly risk-free overnight rates as alternatives for existing IBORs is shown in Annex 4.1. Replacing IBORs with risk-free rates aims to make interbank indices more stable and representative (overnight risk-free rates are based on real transactions and not on estimates by banks).

EU political context

In line with the recommendations of the FSB, the reform of critical benchmarks, such as the IBOR rates, is a top priority of the Commission’s Capital Market Union (CMU) Action Plan. Preparing for the orderly phase out of a major benchmark supports one of the principal objectives set by the CMU Mid Term Review, namely to strengthen bank lending and stable financing of the corporate sector through capital markets.

Interbank borrowing rates are important indices used to calculate the interest due for corporate loans, but also in issuing short and medium term debt and in hedging debt positions. Therefore, the availability of, and the legal certainty around, interbank rates affects the capacity of banks to lend to the real economy and perform their core functions.

Finally, the measures considered in this assessment are to be viewed as supporting “an EU economy that works for people”, which is one of the headline ambitions set out in the 2020 Commission Work Programme. Bank lending to retail customers is an important element of an economy that serves the needs of the people. Retail loans reference IBOR

³ https://www.fsb.org/2014/07/pr_140722/

⁴ FSB, 2014, Reforming Major Interest Rate Benchmarks

⁵ The risk-free rate is the theoretical rate of return of an investment that carries zero or negligible risk (usually this is identified in overnight rates), it is the minimum return that an investor expects from an investment that include a risk component. And as such, the risk-free rate also acts as a benchmark for other interest rates. Typically, overnight rate are considered as risk-free or nearly risk-free.

rates, whose movement determines loan repayment amounts, which is a key consideration in managing personal finances for many citizens. By providing the tools for a legally sound transition from IBOR rates, this initiative benefits retail customers holding loans referencing those rates.

1.2 Critical benchmarks: legal context

According to the BMR, investment banks in the EU are only allowed to offer contracts based on reference indices provided by authorised EU administrators. The Benchmark Regulation also grants the Commission the power to designate as “critical” benchmarks, if they are used in financial contracts and credit agreements with a value of at least EUR 500 billion⁶. Due to their systemic relevance, critical benchmarks are subject to enhanced supervision by the relevant competent authority. For critical benchmarks, the relevant competent authority can impose changes in the way the critical benchmark is calculated⁷ and in the way that data used to calculate it is collected⁸. The regulator also has the power to demand changes to a benchmark methodology in order to ensure that the benchmark continues to represent the market it intends to reflect⁹.

If a critical benchmark ceases to be published, contracts still in course at the date of cessation can be disrupted and, ultimately, financial stability threatened. The BMR, therefore, grants the competent authorities powers to require an administrator to continue the administration of a critical benchmark (mandatory administration)¹⁰. The competent authority also has the power to require banks participating to a panel to continue contributing data (mandatory contribution)¹¹. Another tool to preserve a critical benchmark are the rules on transition of a critical benchmark to a new administrator.

However, the BMR does not contain provisions aimed at addressing how to manage the consequences of the cessation of a critical benchmark, e.g., due to “non-representativeness” on account of a lack of transactions in the interbank market. In 2016, at the time the BMR was designed and adopted, the possibility that a critical benchmark would cease to be published was regarded as remote. The emphasis was on preserving the critical benchmark by using the above mentioned tools.

1.3 Foreign exchange rates: political context

While foreign exchange spot rates play a crucial role for the international economy (see Section 2.2), spot exchange rates often are reflective of central bank monetary policies. In some countries, central banks have implemented controls to restrict the publication of foreign exchange rates by administrators located outside their local jurisdiction. The countries that operate restricted foreign exchange rates include India, South Korea, Taiwan, Philippines, Malaysia, Indonesia, Argentina, Nigeria and Kazakhstan. Locally supervised entities publish daily spot exchange rates for these currencies. Local publications are the only source for the spot exchange rate as the central banks in these jurisdictions prohibit the development or publication of spot exchange rates outside of their jurisdiction. These spot exchange rates are not so much designed to reflect an

⁶ Article 20 and Recitals 35 and 36 of the Benchmark Regulation.

⁷ Article 23(6) (c) of the Benchmark Regulation.

⁸ Article 23(6) (c) of the Benchmark Regulation.

⁹ Article 23 (6)(d) of the Benchmark Regulation.

¹⁰ Article 21 and Recital 37 of the Benchmark Regulation.

¹¹ Article 23 and Recital 39 of the Benchmark Regulation.

underlying market as they are designed as policy tools to influence a market. In consequence, they are unlikely to comply with the governance and data quality requirements of the BMR.

In countries that operate foreign exchange controls, the availability of currency hedging tools, such as forwards or swaps (see Section 2.2 for a description on how these tools function) is also limited. Liquidity for hedging currency exposures in the countries themselves is therefore thin. By comparison, the European market for currency forwards or swaps is more active and liquid due to the diversity and number of market participants. Hedging against convertibility risks is therefore done with forward contracts and currency swaps offered and traded in the European Union.

1.4. Foreign exchange rates: legal context

The Benchmark Regulation regulates the “use of a benchmark” by EU supervised entities”. As a consequence, foreign currency spot rates referenced in EU traded hedging tools (derivative contracts)¹² for “determining the amount payable under a financial instrument” are in the scope of the Benchmark Regulation, as long as the derivative involves an EU bank as a counterparty¹³.

At the end of the current transitional period the reference to currency spot exchange rates to calculate amounts payable under forward contracts and swaps offered and traded in the EU will no longer be allowed, except if the spot rates are recognised or endorsed for use in the Union. This means that, at the beginning of 2022, EU banks lose access to many public policy rates administered outside the EU, including spot exchange rates that they use as “inputs” to offer EU forwards and swaps for the hedging of currency risks.

In the legislative preparatory works for the Benchmark Regulation¹⁴, no specific mention can be found of foreign exchange benchmarks, with the exception of recital (1), which makes reference to their alleged manipulation. The matter of scope was discussed in the impact assessment – although the impacts of the scoping decision were not assessed. Based upon feedback from a stakeholder consultation, it was decided that the scope of the Regulation should be wide, encompassing all benchmarks used in financial instruments traded on EU trading venues. The detailed explanation of the legislative proposal makes it clear that this choice was motivated by the general principle that wherever discretion is exercised in producing a benchmark, there is a risk for manipulation. On the premise that any scope for regulatory arbitrage and any incentives for de-location should be avoided, the same or similar rules were set out for third country benchmarks that would be used in the EU. It was not discussed that this extension of the EU regime could deprive EU users of third country benchmarks for which no alternative exists in the EU.

The issue of foreign exchange rates was identified, albeit not explicitly, when designing the BMR central bank exemptions, which cover third country central banks. What was

¹² Which are considered as financial instruments due to the reference the definition pursuant to Article 2(1)(16) which refer to the definition contained in Directive 2014/65/EU (MiFID II).

¹³ A supervised entity pursuant to the definition in Article 3(1)(7)(b) BMR. Note also that it is only the dealer bank offering the derivative instrument which is considered to be using the benchmark, not the corporate end client seeking to hedge its foreign exchange exposure.

¹⁴ This holds for the original impact assessment (SWD(2013) 336 final), as well as for the Proposal for the Benchmark Regulation (COM/2013/0641 final).

not known at the time was that certain central banks would not publish their foreign exchange rates themselves, but delegate this task to private sector organisations. In that sense, the current extension of the foreign exchange rate exemption builds on the existing central bank exemption expanding it to exchange rates for non convertible currencies published by the private sector. The proposal thus remedies a slight design flaw in the current central bank exemption.

2 BACKGROUND

2.1 The Interbank Offered Rates (“IBORs”)

The BMR defines “critical benchmarks” as benchmarks used for financial instruments or financial contracts with a value of at least EUR 500 billion. Interbank Offered Rates (“IBORs”) rates play a significant role in global financial markets as reference rates for a large volume and broad range of financial instruments and contracts. Figure 1 in Annex 4.2 summarises the notional outstanding for the two main IBOR rates, LIBOR and EURIBOR, for all relevant currency rates and indicates all asset classes for which IBOR exposures exceed USD 1 trillion. This impact assessment focuses on the London Interbank Offered Rate (LIBOR) due to its most likely cessation by the end of 2021.¹⁵

LIBOR. LIBOR¹⁶, produced by ICE Benchmark Administration (IBA), is the reference interest rate for trillions of financial instruments and contracts, covering a vast array of financial instruments and contracts from interest rate derivatives, loan agreements, short- and medium term money market issuances and bonds to residential mortgages. LIBOR is the world’s most widely used borrowing rate. Banks all over the world reference LIBOR to calculate interest due on short and medium term loans. Most floating rate short and mid-term wholesale bank financing references LIBOR. Banks in the European Union appear particularly exposed to USD LIBOR, both for their USD borrowing and corporate lending books (see Annex 3.1.3 for an overview of EU banks USD funding sources).

According to the Bank for International Settlements (BIS), an organisation representing the world’s central banks, around USD 400 trillion¹⁷ of financial instruments and contracts reference LIBOR. LIBOR is also the discount rate most widely used to value future cash flows and investment portfolios (See Annex 4.2 for further details). In addition, the LIBOR rate is the core rate for risk management, valuation and performance measurement.

LIBOR is supervised by the UK Financial Conduct Authority (FCA). In 2017, the FCA announced serious concerns about the sustainability of LIBOR and warned market participants to prepare for its phase out by the end of 2021, hence launching the first process of replacing a major interbank borrowing rate. Despite being administered in the UK, LIBOR is heavily used by European entities in their business activity.

EURIBOR. The European Money Market Institute (EMMI) administers and publishes the Euro Interbank Offered Rate (EURIBOR) in Brussels. EURIBOR is currently the

¹⁵ The other critical benchmarks are EURIBOR, EONIA, the Stockholm Interbank Offered Rate (STIBOR) and the Warsaw Interbank Offered Rate (WIBOR).

¹⁶ LIBOR is calculated in five currencies (GBP, USD, EUR, JPY and CHF) for tenors ranging from 1 day to 12 months.

¹⁷ Andreas Schrimpf and Vladyslav Sushko, BIS Quarterly Review, 05 March 2019.

second most widely used interest rate benchmark globally. EURIBOR aims to measure the rate at which credit institutions in the EU can borrow wholesale funds denominated in euros. Apart from a derivatives exposure estimated at more than EUR 100 trillion¹⁸, primarily European corporate loan and retail mortgage markets reference their contracts to EURIBOR. More than one trillion euro in retail mortgages reference EURIBOR, mostly in the Spanish, Italian and Finnish retail markets. Mortgage exposures are typically long-term contracts with maturities of 30 or more years (see Annex 4.3 for further details).

2.2 Foreign exchange rates

Foreign exchange (FX) markets facilitate trade in goods and services and allow European companies and citizens to conduct transactions in foreign currencies. FX markets are necessary for companies to buy and sell products in other countries, but also for capital market transactions where companies or investors convert between currencies to move funds into foreign assets. FX markets are essential to make direct foreign investments (buying fixed assets) in other currency areas or to make portfolio investments, such as the purchase of stock, bonds or other financial assets denominated in different currencies. Investment flows account for the largest volume of FX transactions.

The importance of emerging market currencies

Over the last three years the trading of emerging market currencies outgrew that of major currencies. This is in particular true for Asian restricted currencies. While global turnover rose by 33%, the turnover of emerging market currencies rose by almost 60% in the three years to 2019. On average 35% of the volume in emerging market currencies is traded by large commercial and investment banks and investment firms that participate in the interdealer market. This interdealer activity generates liquidity enabling banks to service to their customer's requirements, i.e. institutional and corporate customers. On the other hand, 55% of volume is traded by the large investment banks with smaller financial institutions, such as smaller commercial banks and investment firms servicing clients both on- and off-shore; mutual funds, pension funds and insurance companies, that trade foreign exchange products for hedging onshore exposures, investing and risk management purposes; and by hedge funds¹⁹.

The role of currency hedging

EU corporations and investors that export or invest in other jurisdictions face the risk of currency **convertibility** and **fluctuation** of foreign exchange rates. A transaction in a foreign currency will, at some stage, require that one currency is exchanged for another in the international foreign exchange market. Before the transaction parties will be exposed to the risk that the exchange rate will move against them, especially if the currency is not readily convertible into the investor's base currency. This gives rise to the need to enter into a forward contract to hedge the risk of (delayed) conversion and volatility of the spot exchange rate. The need to manage currency risk has given rise to a variety of hedging tools, such as currency forward contracts and foreign exchange swaps.

¹⁸ Molitor, Philippe, ECB, 2018, Update on quantitative mapping exercise.

¹⁹ Figures supplied to DG FISMA staff in interviews with the Global FX Division - Asia Pacific of the Global Financial Markets Association (GFMA).

For example, an EU exporter that is set to receive payments in a foreign currency in 90 days may wish to lock in the price of this foreign currency in euro currency units by entering into a forward contract. Future delivery of the foreign currency is, in such way, guaranteed at a forward euro rate set in the forward contract. In this constellation, the EU corporate is hedging its foreign currency exchange rate risk. The possibility to hedge exchange rate risk allows European companies to enter markets which they would otherwise be reluctant to enter by reducing the exchange rate risk of the transaction.

An outright forward contract is an agreement to deliver a foreign currency at a future date at a rate agreed by the parties at conclusion of the contract. The agreed rate for delivery of the foreign currency in the future is the **forward exchange rate**. A foreign exchange swap consists of a simultaneous spot and forward transaction whereby a trader enters into a spot transaction to settle an expiring forward contract and enters into a new forward contract with a new settlement date in the future. As the spot purchase will be used to satisfy the forward delivery commitment, there is no exchange of the underlying amount on the settlement date, however there will be an exchange of payments reflecting the movement of the exchange rates between the agreement of the **forward exchange rate** and the **spot exchange rate** at the settlement date. There is no delivery of the underlying currency, the swap will pay out the difference between the agreed rate and the spot rate at expiry. The payment leg of the swap is therefore known as a non-deliverable forward (“NDF”) (See Annex 4.5 for further details).

A trend associated with the growth in emerging markets currencies was a surge in trading of **non-deliverable forward contracts** to hedge currency exposures of global investors investing in emerging market assets. EU financial stakeholders are very large users of non-deliverable forward contracts in currencies with a restricted rate, accounting for: 38% of global contract volumes in Korean Won (KRW); 52% of global contract volumes in Taiwanese Dollars (TWD) and 50% of global contract volumes in Philippine Pesos (PHP)²⁰.

Based on data available from the 2019 Triennial Survey conducted by the BIS, the open interest of USD vs KRW and USD vs TWD non-deliverable forward contracts involving EU counterparts are estimated to amount to **USD 931 billion** and **USD 585 billion** respectively.

Market infrastructure used for offering forward contracts

Non-deliverable forwards in currencies such as INR, KRW, TWD and PHP, are actively traded on EU regulated platforms. These regulated platforms are fundamental to the market’s structure and critical to providing liquidity and transparency to the forward markets.

Interbank forward trades are not executed bilaterally but are traded on the primary electronic execution platforms such as NEX Markets (previously EBS) and Refinitiv, both of which are regulated as Multi-lateral Trading Platforms (MTFs). Primary platforms are a critical source of liquidity that enables banks to hedge their currency exposure build up by offering non-deliverable forwards to their clients.

²⁰ According to a member survey by GFMA’s Global FX Division (representing around 80% of the global inter-dealer market).

For institutional investors and the more sophisticated corporates, banks will provide prices for entering into a forward contract to their clients via multi-dealer platforms, such as FXAll and 360T. These platforms are also regulated as MTFs and banks use liquidity sourced from the primary platforms to offer forward contracts to their clients on the multi-dealer platforms. These multi-dealer platforms are critical to institutional investors who are obliged to provide their clients with best execution. Whilst, price is not the only determinant in achieving best execution it is a key component and being able to see prices being quoted by multiple banks on a single multi-dealer venue is critical to meeting the best execution obligations. Obviously trading bilaterally continues to be an option, but it introduces execution risk that is extremely difficult to mitigate, particularly in more volatile emerging market NDF currencies.

Using data collected from the operator of a multi-dealer platform regulated as both an MTF and a Swap Execution Facility (SEF) by the CFTC, approximately 47% of 2020 year-to-date total volume traded on the platform has been traded on the MTF, 37% has been traded on the SEF, and 16% has been traded on a bilateral basis.

As soon as non-deliverable forward contracts are available through EU investment banks on MTFs or is offered by an EU bank in a systematic manner, the forward contract is covered by the BMR.

Risk management requirements for EU banks offering forward contracts

European currency derivatives markets are highly regulated. Recent regulatory changes have ensured that currency devaluations or extreme market volatility in emerging markets did not reach an existential (for individual EU banks) or systemic (for the entire EU market) levels. Relevant regulatory changes and other market practice improvements include:

- (i) **Risk capital charges** and the related regulatory drive to discourage banks speculating on their own balance sheet mean that running inventories of European banks are significantly reduced. Most European banks run reasonably balanced books, such that the bigger risk during market dislocation is counterparty credit risk – exposure to clients rather than the bank’s own net position;
- (ii) **Post-trade clearing of interbank trades** greatly reduces the counterparty risk from interbank trades used to hedge other open positions. Even though the clearing of non-deliverable forwards is not mandated under EMIR, there has been significant growth in the absolute volume of non-deliverable forward transactions being cleared over the last four years, which reflects the reduced risk appetite of banks and the prevalence of centrally cleared contract offerings;
- (iii) **Initial and variation margin** from clients has reduced the counterparty risk from dealing with clients. In Europe, the main derivatives trading banks become subject to the exchange of margin under the Basel Committee's margin requirements for non-centrally cleared derivatives with the implementation of the requirements under EMIR in 2016;
- (iv) **XVA desks** (these are “value adjustment” desks that are used by banks to adjust derivative prices for the risk of a counterparty (credit valuation adjustment (CVA)) and the risk of their own default (debit valuation adjustment (DVA)) are

now commonplace to further mitigate the credit risk arising from counterparty default on derivatives contracts.

Other EU regulations implemented since the Financial Crisis mean that EU banks are required to ensure they do not incur any single exposure which could cause them to fail as a result of a single catastrophic event, such as a currency collapse. These include:

- (i) Requirements under the ***Bank Recovery and Resolution Directive*** for banks to draw up recovery and resolution plans, including identification and management of key exposures and taking steps to ensure the recoverability and resolvability of the institution while minimising the impact on the wider financial sector;
- (ii) Requirements for ***ring-fencing of certain banks' core business*** from risks arising from proprietary trading;
- (iii) Regimes in a number of EU jurisdictions introducing clearer ***responsibility for senior managers*** as well as personal liability for breaches of obligations including obligations regarding prudent management of businesses and ensuring effective control over the business.

On account of these regulatory constraints, EU banks offer a currency forward contract to a client only if they can mitigate the resulting risk to their balance sheets. Each bank applies individual risk limits that allow it to keep open positions for a certain quantity of currency risk for a certain period of time. On the other hand, the ability to hedge risk with other banks and a multitude of other market participants is a prerequisite for compliance with those limits. The following considerations are relevant in this respect:

- (i) The total pool of currency forwards in any one currency is a zero-sum environment. This means that the entire quantity of open contracts across all counterparties add up to a net exposure of zero. Different market participants have different motivations for trading currency hedges. The European market for forward contracts has developed because exporters and importers wish to hedge their exposure to restricted foreign currencies. The corporate client base of each bank offering currency hedges includes a mix of exporters and importers, enabling the bank to match buyers with sellers as efficiently as possible and so reduce the bank's net exposure to the currency. Other clients include investors wanting to gain exposure to the underlying currency and protect the value of any assets they have in that currency in a way similar to the importers/exporters. Other market participants, such as hedge funds, may use currency forwards as purely speculative instruments. This range of interests and participants increases market liquidity in a given NDF and creates further opportunities to reduce the bank's net currency exposures.
- (ii) European banks manage their exposure by acting as an intermediary market maker, offsetting positions between their client base of importing or exporting corporates, their investor client base and in the interbank market. While banks necessarily hold some currency risk for some period of time, as not all client positions can be matched simultaneously, the goal is always to minimise this exposure through a liquid and well-functioning market.

The need to have a deep and liquid pool of offsetting forward contracts as the basic ingredient of any risk management tool implies that the BMR "third country" chapter

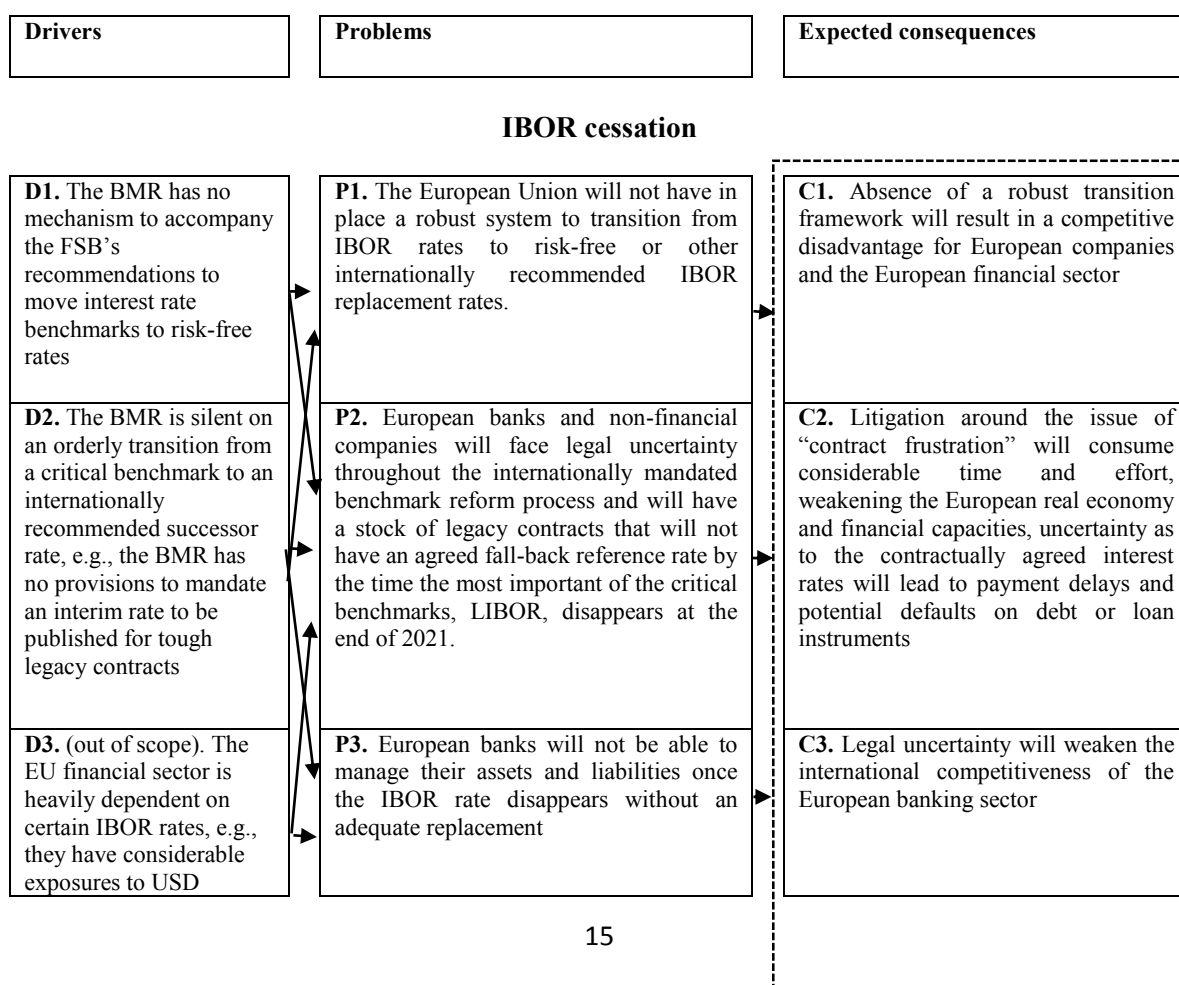
was not designed to prevent EU banks from writing currency forward contracts, both to hedge their own exposures and those of their clients.

As a practical matter, within European banks’ trading businesses, market risk is managed through a series of limits that are typically set at the product level and then further allocated to a desk or instrument level. For foreign exchange, limits are typically set for each currency pair. These risk limits are typically monitored intra-day by an independent risk function using Value at Risk calculations which determine the maximum loss expected (or worst case scenario) on a position, over a given time period and given a specified degree of confidence.

These Value at Risk calculations are tested and calibrated on a regular basis and are subject to supervision by prudential regulators. Credit risk is a function of tenor and settlement amount and, like market risk, is managed through a limit structure and ultimately constrained by either the capital requirement or Leverage ratio under Basel III.

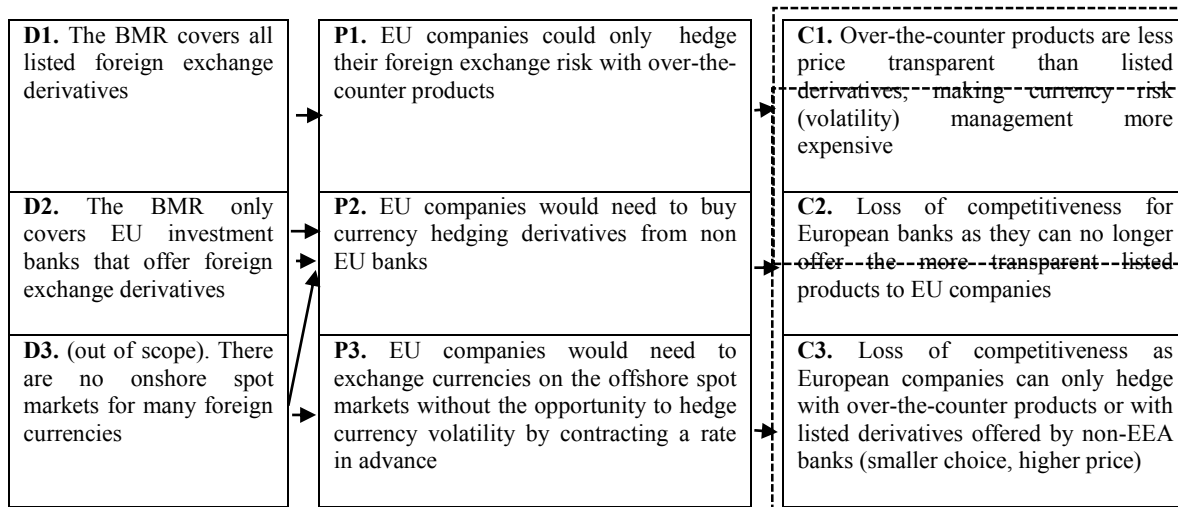
The credit risk associated with NDFs is low when compared to other instruments due to the fact that the tenor of transactions is very short term, the most liquid tenor is 1 month (87% of USD/KRW forwards have a tenor of less than 3 months, 94% have a tenor of less than 6 months (Source BIS Triennial Survey 2019).

3 PROBLEM DEFINITION





Foreign exchange rates



3.1 What are the problems?

3.1.1 IBOR rates: The legacy contracts issue

In July 2017, the UK’s FCA announced that it would not exercise the “mandatory contribution” powers granted by the BMR after the expiration of a gentlemen’s agreement with the LIBOR panel banks at the end of 2021²¹. The FCA’s announcement has generated the expectation that LIBOR publications will effectively cease shortly after the end of 2021. On 25 March 2020 the FCA reaffirmed its view that, despite the coronavirus pandemic, the assumption that firms cannot rely on LIBOR being published after the end of 2021 has not changed and should remain the target date for all firms to meet²². Further details on the LIBOR cessation plan are set out in Annex 4.4)

In case of cessation by the expected date, there is currently no agreed replacement rate for USD LIBOR references in many financial instruments or contracts that: (1) mature after the potential cessation date (December 2021) and that (2) cannot be renegotiated individually by that date (defined as “tough legacy contracts”). In these circumstances, the risk is that a contract party could refuse to fulfil its commitments due to the absence of an agreed reference index determining mutual payment obligations in a security or financial contract. Likewise a party could request the early termination of the contract because of the cessation of the agreed USD LIBOR index. The problem has two angles: (1) the absence of a replacement rate for USD LIBOR; and (2) the absence of a

²¹ <https://www.fca.org.uk/news/speeches/the-future-of-libor>

²² <https://www.fca.org.uk/news/statements/impact-coronavirus-firms-libor-transition-plans>; While panel banks remain free to continue submitting transaction or quotation data to IBA, on a voluntary basis, from January 2022 onwards, no regulatory intervention would compel them to do so. Therefore, panel banks might prefer to cease contributions as participation in a panel bank rate entails compliance costs as well as conduct and reputational risk.

mechanism whereby a potential replacement rate would be integrated into “legacy contracts”.

The absence of a replacement rate. In order to enable contractual negotiation to be successful, the relevant private sector working groups will need to reach agreement on a generally accepted fall-back rate. This agreement needs to cover each of the asset classes affected by an IBOR phase-out. Finally, as contractual negotiations take time, this agreement needs to be reached significantly **before** the critical IBOR rate is discontinued²³. Several private sector working groups are currently working on alternatives to LIBOR (see section 1.1 and detailed list in annex 1.4). These alternatives will most likely not be ready in time to ensure that all market participants can agree, let alone to renegotiate their contracts before the expected LIBOR cessation date at the end of 2021 (See Annex 3.2 for an estimation of the cost).

An additional problem linked to “availability” is that the aforementioned work streams have focused on overnight *risk-free* rates (RFRs). RFRs are rates that reflect relatively riskless overnight transaction while IBOR rates reflect term lending with longer maturities. RFRs therefore do not incorporate **duration and credit risk** of a longer-term issuer of, e.g., a loan or a debt instrument. While the new RFRs can serve as robust and credible overnight reference rates rooted in transactions in liquid markets, they do so at the expense of not capturing banks' marginal term funding costs²⁴. The work in the relevant private sector working groups has also revealed that central banks will confine themselves to publishing secured or unsecured overnight rates (SOFR, SONIA, €STR, see Annex 1.4). The overnight transactions that they receive to assemble the overnight rates will not reflect the credit risk inherent in borrowing money for longer terms.

A replacement rate that is effective as a tool to manage assets and liabilities on a European banking book must therefore reflect their marginal term funding cost, which means that the rate has to be **credit sensitive**. Given that financial intermediaries are both lenders and borrowers, they require a lending benchmark that behaves not too differently from the rates at which they raise funding²⁵. A rate that lacks such credit sensitive component would not be effective as a replacement. Moreover, lenders may be forced to reveal sensitive data about their own funding cost when LIBOR disappears²⁶. Discussions with stakeholders to understand their needs and concerns related to the LIBOR transition has only very recently led to the creation of a Credit Sensitivity Group – a work stream separate from the work of the ARRC – with the aim to build a shared understanding of the challenges that banks of all sizes and their borrowers may have in transitioning loan products from LIBOR²⁷.

²³ See annex 3.1.5 for an overview of the legal considerations.

²⁴ Andreas Schimpf and Vladyslav Sushko, BIS Quarterly Review, 05 March 2019

²⁵ Andreas Schimpf and Vladyslav Sushko, BIS Quarterly Review, 05 March 2019

²⁶ Risk.net, 7 Feb 2020, Secrets and Libor fallbacks

²⁷ The Federal Deposit Insurance Corporation, the Federal Reserve Board of Governors, the Office of the Comptroller of the Currency and the U.S. Department of the Treasury met with representatives of a number of U.S. regional banks on February 25, 2020 to discuss ways to support the transition of loan products away from LIBOR, including by holding a series of working sessions. Following up on this meeting, Credit Sensitivity Group workshops will be hosted by the New York Fed to further discuss these issues. They will also explore methodologies to develop a robust lending framework that considers a credit sensitive rate element in the lending markets as a supplement to SOFR.

See <https://www.newyorkfed.org/newsevents/events/markets/2020/0225-2020>.

Private sector benchmark aiming to create credit-sensitive rates have emerged recently²⁸. These initiatives are in an early stage and it is not yet clear how all stakeholders affected by the cessation of USD LIBOR would be able to agree on a fall-back rate in sufficient time to renegotiate all legacy portfolios before expected LIBOR cessation. But, as set out in the following section, even in a scenario where stakeholders were to agree on a USD LIBOR fall-back rate, stakeholders noted that there would still be not enough lawyers nor time to effectively adapt all the legacy contracts to the new agreed fall-back rate.

Problems linked to embedding a legacy rate into existing LIBOR contracts. Embedding a LIBOR successor rate (should it become available) in financial contracts constitutes a major challenge for many sectors of the economy, foremost corporate lenders and borrowers, clearing houses and a host of other financial service providers, such as accountants, valuation agents, asset and portfolio managers, whose portfolios are often benchmarked to LIBOR (e.g., a typical contractual risk objective might read: “returns will not be less than 12 month LIBOR over any twelve month period”).

The main challenge with embedding a replacement rate (once available) into existing LIBOR contracts stems from the fact that the number of contracts that would need to be renegotiated before the end of 2021 remains largely unknown. The vast majority of mid-tier financial and especially non-financial market participants are, at least at present, unable to quantify the precise legacy stock maturing beyond 2021 across the main asset classes that reference USD LIBOR (loans, debt, floating rate notes, derivatives, deposits, etc.). These institutions are also not in a position to assess the precise evolution of this legacy stock (i.e., their maturity ranges) over the next five years.

Even some of the major corporate lenders have not been able to provide precise figures on the number of their USD LIBOR contracts maturing beyond 2021. Most mid-sized and smaller financial and non-financial entities are currently assessing their debt issuances, their loan and debt portfolios as well as their derivatives exposure. In the course of these assessments many institutions are identifying LIBOR references in often-unexpected places. For example, the major European manufacturers have yet unquantifiable exposures in customer contracts that reference USD LIBOR.

What emerges, however, is that the LIBOR exposures of contracts maturing beyond 2021 are concentrated in USD LIBOR and that EU banks and corporate borrowers account for a large percentage of LIBOR contracts with maturity ranges beyond 2021. Several EU banks granted DG FISMA confidential access of their balance sheet exposures to USD LIBOR. While the precise data is commercially sensitive, a common theme emerges across the European banking sector: USD LIBOR exposures occur across four asset classes: (1) loan agreements and advances; (2) corporate deposit accounts; (3) debt instruments, both debt issued by banks as well as debt instruments held as assets by banks; (4) derivative contracts.

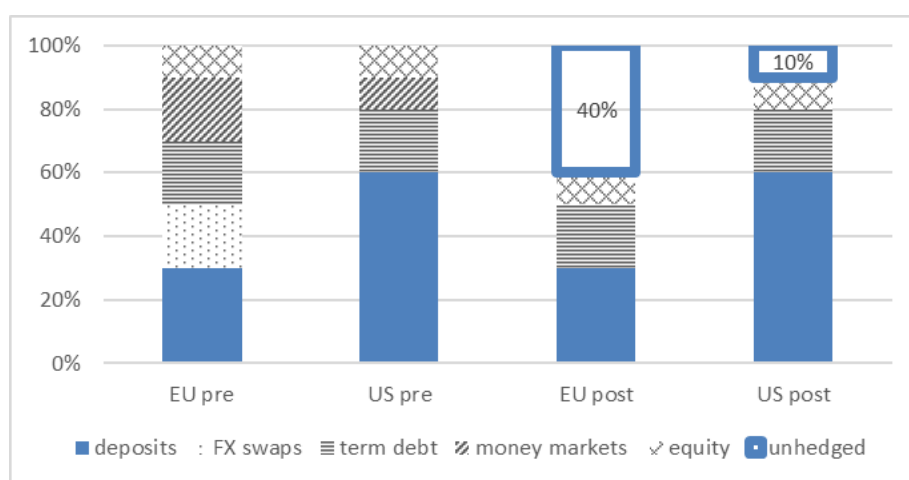
In terms of contracts to be renegotiated, each bank has thousands of UDS LIBOR loan arrangements, several hundreds of debt instruments, several hundred corporate accounts and tens of thousands of derivative contracts on their balance sheets. Exposures in loans and debt range in the lower to upper two digit USD billions, while derivatives exposures often exceed a trillion USD. Around 50% of contracts in each asset class mature beyond 2021.

²⁸ Risk.net, 12 May 2020, Markit plans SOFR credit spread add-on using CDS data

The high percentage of USD LIBOR exposures maturing beyond 2021 is a common feature in all non-US banks. EU banks do not have a large USD retail deposit base and therefore need access to USD funding via the wholesale markets (floating rate notes or longer-term debt issuances, (see Annex 3.1.3 for an overview of EU banks USD funding sources). Banks remunerate retail deposits at rates lower than USD LIBOR, usually the Federal Funds Rate. This provides banks with a USD retail base and a lower cost of funding when compared to their non-US peers.

For this reason, EU banks will be far more affected by the disappearance of USD LIBOR than their US competitors. Figure 1 shows that while a US deposit taking bank, post LIBOR cessation, is expected to have around 10% of unhedged money market liabilities, the unhedged liabilities of a European wholesale bank are expected to be around 40%, including not only money market financing but also financing via short-term currency swaps (see Annex 3.1.2. for further detail).

Figure 1 – Difference in hedged liabilities pre and post USD LIBOR cessation

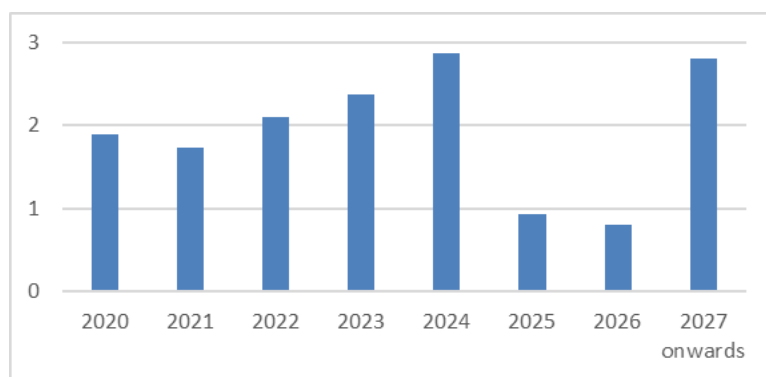


Source: DG FISMA calculations

Note: The bars represent the hedged liabilities of a stylised EU wholesale bank and US deposit taking bank. While the composition of the liabilities is different for both banks, both are able to 100% cover the risk on (hedge) their liabilities pre-USD LIBOR cessation (EU pre and US pre). Post-USD LIBOR cessation, the EU wholesale bank cannot hedge its FX swaps (20% of its liabilities) nor the money market funds (20% of its liabilities) (EU post). The US deposit taking bank has much higher deposits and has only the money market funds (10% of its liabilities) that are unhedged (US post).

In terms of the expected trajectory of IBOR exposures over time, Figure 2 indicates that Bloomberg expects a peak in LIBOR maturities at the end of 2024, but that roughly a third of LIBOR contracts will mature beyond 2027. These estimates correspond to the data collected by DG FISMA (see above) and to what ICE Benchmark Administration (IBA), the company that publishes LIBOR, expects in terms of trajectory, namely an early peak at the end of 2024 that would cover roughly two-thirds of current contracts and a longer draw-down period for the remaining one-third longer term contracts that will last beyond 2028.

Figure 2 - \$12 Trillion Problem (USD trillion)



Source: Bloomberg

Note: Bulk of global outstanding loans are due after LIBOR's 2021 demise

USD LIBOR also plays a major role in corporate (“real economy”) financing in the Union. Data from the International Capital Markets Association (ICMA), an association that represents corporate issuers of debt instruments, shows that around 75% of presently pending **floating rate notes** (more than USD 400 billion) mature post 2021. In terms of the trajectory for maturities and amounts, ICMA has established the following: Floating rate notes maturing in 2022 (USD 122 BN); 2023 (139 BN); 2024 (59 BN); 2025 (21 BN); 2026 (25 BN); 2027 (16 BN) and 2028 (50 BN). Volumes begin to drop off as of 2028²⁹.

An additional complication with respect to loan agreements is that USD LIBOR is used in loan agreements governed by a variety of different laws. Whilst a majority of syndicated loans in Europe tend to be under English law, there will be those governed by other laws (e.g. German, French, Dutch law, see annex 3.1.4 for an example with derivative contracts). Any option to address legacy contracts would need to be effective across all of the above legal systems.

The above figures on contracts, nominal exposures and maturity ranges are representative also for other panel bank based IBOR rates. For EU mid-size banks, a potential EURIBOR cessation would have a potentially even larger impact. For example, a EU27 mid-sized bank would have two-thirds of its balance sheet exposure on EURIBOR and only less than one-third on USD LIBOR. Other banks reflect a 70/30 split between EURIBOR and LIBOR balance sheet exposures across all of the five relevant asset classes, with EURIBOR often accounting for 70% of loan and debt exposures and somewhat less than 70% in the area of deposits and derivatives.

3.1.2 Foreign exchange rates: The loss of EU-based risk management tools

In case the BMR, as of 2022, prevents EU banks from offering forward contracts that calculate their pay-out by reference to the spot exchange rates of some of the main trading partners, EU exporters and investors can no longer hedge their currency exposures with forward contracts offered by EU banks. Legal restrictions in the country where these spot rates are published (Section 1.3.) prevent the emergence of replacement rates for these spot rates in the EU. In these circumstances, the risk is that EU exporters, investors and EU banks will no longer be able to efficiently hedge their currency

²⁹ ICMA paper for the GBP risk-free working group, figures assembled by RCB Capital Markets, October 2018

exposures. The problem has two angles: (1) The foreign spot exchange rate is indispensable to calculate payments due under the hedging contract; and (2) due to their monetary policy function, foreign currency spot rates in non-convertible currencies are unlikely to be equivalent, recognised or endorsed for use as a calculation rate in the EU.

The foreign exchange spot rate is an indispensable component in calculating the payment due under the EU hedging instrument. The EU hedging instrument needs to reference the relevant spot rates in order to calculate the pay-out under the derivative instruments (spot exchange vs. the agreed forward exchange rate, see Section 2.2). The spot exchange rate will be either calculated by a central bank (these spot rates are already BMR exempt) or by a benchmark administrator which may be appointed by a central bank (these spot rates will no longer be exempt after December 2022). Every day, the administrator will publish the rate at which a currency, e.g. Korean Won (KRW), shall be traded against USD. Forward rate agreements for the KRW will then calculate their pay-out by comparing the agreed forward rate with the published spot rate. If this comparison can no longer be made, the forward payments can no longer be calculated with the consequence that the respective payment obligations under the forward contract can no longer be executed.

Spot exchange rates in non-convertible currencies are unlikely to be BMR compliant. Because a published currency spot exchange rate is the product of a variety of sovereign decisions, such as the institution of exchange controls, currency pegs or exchange rate management by the issuer countries' central banks, such rates are unlikely to be BMR compliant. In other cases, sanctions and credit restrictions have impacts on the convertibility of a country's currency, which again entails that published spot exchange rates are volatile in line with exchange controls or other policy measure taken in response to, e.g., sanctions or political events. Typically non-deliverable forwards markets develop in some of the most risky and volatile currencies where EU companies have the most risk. According to figures gathered in the public consultation and other informal surveys carried out by DG FISMA³⁰, there are at least seven currency spot exchange rates which reflect sovereign decisions, exchange controls, currency pegs or other forms of exchange rate management, but are not administered by local central banks directly³¹ (and therefore non-exempt from the BMR):

1. KRW South Korean Won, administered by the Seoul Money Brokerage Services (SMBS)
2. TWD Taiwan dollar, administered by Taipei Forex Inc
3. PHP Philippine peso, administered by the Philippine Bankers Association (PBA)
4. INR Indian Rupee, administered by FBIL Reference Rate Financial Benchmark India
5. ARS Argentinian Peso, administered by Mercado Abierto Electrónico S.A (MAE)
6. NGN Nigerian Naira, administered by the FMDQ OTC Securities Exchange
7. KZT Kazakhstan Tenge, administered by the Kazakhstan Stock Exchange (KASE)

³⁰ ISDA response to the public consultation 'Review of the EU Benchmark Regulation'.

³¹ This is the case of Thai Bath and Malaysian Ringgit where the central banks administer the local spot FX market.

Scope of the problem. Starting point for this analysis are the figures supplied in Section 2.2 of this impact assessment according to which EU companies account for between 38 to over 52% of the currency exposures to three important Asian currencies. The precise percentages per currency are (1) 38% of global Non-Deliverable Forward (NDF) volumes in Korean Won (2) 52% of global NDF volumes in Taiwanese Dollars and (3) 50% of global NDF volumes in Philippine Pesos.

If these spot exchange rates are not compliant at the end of the transition period, as of January 2022, EU entities will no longer be able to trade the indicated EU percentages of the above global derivatives (NDF) volumes through investment banks inside the Union or on regulated trading venues in the EU.³²This could lead to delocalization of forward trades or unhedged currency exposures, both in the EU non-financial and financial sectors.

Unhedged foreign exchange exposures are highly undesirable. The currency volatility observed in the course of March 2020 because of the COVID 19 crisis serves as an example. As of March 2020, the market has seen significant volatility in the Asian FX markets resulting in a loss of liquidity and a widening of spreads. This acts as a foretaste of the volatility European companies will face, should they no longer be able to hedge their exposures with derivative transactions (NDFs). The following table shows indicative bid-offer spreads, as basis points, and their percentage changes from before the recent market dislocation and from 19 March 2020 for four Asian currencies for NDF trades with differing maturities and amounts.

Table 1 – Bid-offer spreads, and their percentage changes for four Asian currencies

Trade size USD mio	Trade Tenor	USDTWD			USDIND			USDKRW			USDPHP		
		Pre	Post	% change	Pre	Post	% change	Pre	Post	% change	Pre	Post	% change
20	1m	1.5	2	33%	1.5	2.75	83%	0.3	0.75	150%	3	5	67%
	3m	1.5	2.25	50%	2.245	3.5	56%	0.35	0.85	143%	3.5	5.5	57%
40	1m	2.5	3.5	40%	3	4.25	42%	0.5	1	100%	4.5	6.5	44%
	3m	2.5	4	60%	3.5	5	43%	0.6	1.15	92%	5	7.5	50%
60	1m	3.25	4.75	46%	3.5	5	43%	0.65	1.25	92%	5.5	8	45%
	3m	3.72	5.5	47%	4	5.5	38%	0.75	1.5	100%	6.25	9.75	56%

Source:

3.2 What are the problem drivers?

3.2.1 Legacy contracts

Driver 1: The BMR has no mechanism to accompany the FSB’s recommendations to move interest rate benchmarks away from panel bank rates. The BMR has no tools for an orderly phase out of panel bank rates that are deemed no longer representative of the interbank markets. To the contrary, when it comes to critical benchmarks, the BMR’s provisions all aim to maintain the administration of critical benchmarks in the form of panel bank rates. For example, the BMR stresses improvements in the governance and supervision of panel bank rates, as well as the methodologies used for collecting and

³² Derivatives trades are in scope of the BMR as soon as the instrument is traded on a multilateral trading facility (MTFs) or through an investment bank in the Union. MTFs in the EU27 include NEX (Amsterdam), Refinitiv (FXall, Dublin) and 360 T (Frankfurt).

processing the data on which these rates are established. It also has provisions to impose mandatory panel bank contributions and mandatory administration of critical benchmarks, albeit limited to five years.

Driver 2: the BMR has no provisions to mandate an interim rate to be published for legacy contracts. The BMR contains rules allowing the regulator to demand changes to a benchmark methodology in order to maintain or re-establish the representative nature of a benchmark (Article 23(6)(d) BMR). The entire BMR philosophy rests on the premise that critical benchmarks need to be maintained. The BMR, therefore, is not equipped to deal with the “legacy” consequences of the cessation of a critical panel bank rate.

Driver 3 (Out-of-scope): EU banks are heavily exposed to USD LIBOR funding and need a credit sensitive fall-back rate for legacy contracts. The fact that EU banks are reliant on USD wholesale financing is demonstrated in the balance sheet comparison in Annex 3.1.2. A switch to a risk-free reference rate would be easier to achieve for banks with a large USD retail deposit base (which is remunerated at a nearly risk-free federal funds rate). European banks have very limited USD retail deposits and will, in consequence, be more affected by the phase-out of USD LIBOR than their US peers who finance corporate lending out of their large USD (retail) deposits³³. This driver does not result from either the BMR or from its implementation, hence it is referred to as an “out-of-scope” driver.

3.2.2 *The loss of EU based risk management tools*

Driver 1: European banks can only offer hedging tools that reference BMR compliant rates. Although companies themselves are not subject to the BMR, the financial counterparty to a derivative transaction is a “supervised entity” subject to the BMR. This means that EU banks can only offer currency forward contracts or swap that calculate pay-outs by reference to spot exchange rates that either comply with the BMR or that are exempt from it (e.g., spot rates provided by central banks or other public authorities). The same limitation does not apply to non-EU banks.

Driver 2: There is no EU onshore replacement for a foreign exchange spot rate. As foreign exchange spot rates are subject to sovereign intervention, they are administered “on-shore” in the relevant countries. The administering organisations are either central banks or central bank backed self-regulatory organisations, exchanges or banking/financial institutional associations in these countries. Off-shore replicas of an onshore foreign exchange rate are strictly prohibited as they are seen as diminishing the effectiveness of foreign exchange interventions.

³³ In contrast to US banks, European banks cannot use the US onshore deposits of their US branches or subsidiaries for international lending activities because of the rules on intermediate holding companies. These rules require that the intermediate holding company keeps the dollar deposits it collects in the US onshore. Banks with US intermediate holding companies are, in consequence, dependent on borrowing USD in wholesale markets or via currency basis swaps with US banks (see Annex 3.1.3 for an overview of EU banks funding sources).

3.3 How will the problem evolve?

3.3.1 Legacy contracts

As set out at various meetings convened at the Financial Stability Board, three possible end-game scenarios for LIBOR, arranged in order of likelihood, are envisaged:

Scenario 1 (likely)

LIBOR ceases to exist. Some regulators take the view that the interest in phasing out potentially non-representative panel bank rates takes precedence over the interest to find a solution for all legacy contracts that mature after the potential cessation date (“tough legacy contracts”). The absence of a legacy rate would provide strong incentives for an early transition. It would, however, not address the fact that a large legacy loan portfolio currently referencing USD LIBOR would have no obvious and commercially sensible rate to fall back to. In the absence of such a rate being available in significant time before the LIBOR cessation, a speedy renegotiation scenario is unlikely.

Scenario 2 (possible, but unstable)

LIBOR continues on a voluntary basis, but is assessed as not representative. This is an uncertain scenario and will depend on panel banks risk appetite and importance in the underlying market. If the second ISDA consultation finds a consensus in the course of 2020, a FCA’s non-representativeness statement, issued at any point in time after December 2021, would trigger derivative contracts to move their legacy contracts to the designated ISDA fall-back. As explained above, this might cover up to 60% of pending derivatives exposures. Most of tough legacy contracts (see 3.1.1 for details on tough legacy contracts), such as loans and short and medium term debt, will most likely not be able to do so due to the difficulties in amending contracts at short notice. In addition, Central Clearing Counterparties, organisations that ensure that all derivatives trades are completed, have indicated that they would not continue to clear LIBOR derivatives at the point LIBOR is declared to be no longer representative. However, authorities currently have no statutory means to allow ongoing use of a no longer representative LIBOR rate (or a more sustainable version of such a rate as a legacy rate) for tough legacy contracts – i.e. those that would otherwise be frustrated or face severe disruption if they were unable to carry on using LIBOR.

Scenario 3 (unlikely)

LIBOR continues on a voluntary submission-basis and passes the representativeness-test. This scenario is unlikely and will depend on the panel bank’s willingness to assume the risk of contributing quotes based on expert judgement to the LIBOR administrator. This outcome would be fragile and likely temporary, prone at all times to unravel, when a panel bank does decide to depart, triggering the regulator to launch an assessment of continued “representativeness”.

3.3.2 Loss of EU-based risk management tools

In case the BMR prohibits EU banks and trading venues offering hedging contracts to reference foreign exchange spot rates as of January 2022, EU corporations face several choices:

Scenario 1 (likely)

Hedging with ‘over-the-counter’ contacts. EU businesses wanting to hedge foreign exchange risk when no BMR-compliant listed contracts are available for this purpose would need to turn to less regulated over-the-counter instruments. Over-the-counter trades (over-the-counter derivatives are traded bilaterally with a bank and are less transparent than derivatives traded on an exchange) with a non-European bank would be outside the scope of the BMR. In case of switching to over-the-counter trading, there would be a loss in pre- and post-trade transparency and a loss of liquidity, two features associated with trading derivatives on an exchange. In addition, parties would have to arrange clearing bilaterally, as opposed to **straight-through clearing** that is associated with trading derivatives on an exchange.

Scenario 2 (possible, but potentially expensive)

Hedging with contracts listed outside the EU. Some of the disadvantages in over-the-counter trading could be mitigated by using derivatives listed on exchanges in countries outside the EU and offered by non-EU banks. These products will have to be procured and provided offshore. Trading derivatives in a third country might be more expensive for European companies and delocalisation of currency hedging to third country banks will be a net loss of business for European banks.

Scenario 3 (unlikely)

EU corporates stop hedging currency risk. If the current BMR exemption for third country currency exchange spot rates expires, EU banks will be prohibited from referencing foreign spot exchange rates published in a series of third countries. Hedging of currency risk – out of the EU – might become impossible in practice, as EU banks cannot provide the product and non EU operators might not be available to provide the product or at an affordable cost. This would have the effect either of reducing the ability of EU corporates to invest in markets where the spot rate is not published by the local central bank, but by a private body reflecting the monetary policy of its local central bank. This puts EU companies in a competitively inferior position to non-EU companies who can continue to hedge via derivatives traded in their own jurisdictions.

4 WHY SHOULD THE EU ACT?

4.1 Legal basis

The legal basis for the adoption of the Benchmark Regulation BMR is Article 114 of the Treaty on the Functioning of the European Union (TFEU). Adoption of amendments aimed at enhancing the efficiency of this regulation by providing supervisory powers to the relevant competent authority and de-regulating certain benchmarks should also fall under the same legal basis.

More in particular, Article 114 of the Treaty on the TFEU confers the European Parliament and the Council the competence to adopt measures for the approximation of the provisions laid down by law, regulation or administrative action in Member States which have as their object the establishment and functioning of the internal market. Article 114 TFEU allows the EU to take measures not only to eliminate current obstacles to the exercise of the fundamental freedoms, but also to prevent, if they are sufficiently concretely foreseeable, the emergence of such obstacles, including those which make it difficult for economic operators, including investors, to take full advantage of the benefits of the internal market. Thus, Article 114 of the TFEU gives the EU the right to

act since, in line with the problem definition outlined in section [3.2], the options that will be assessed by this impact assessment will aim at (1) addressing contract continuity issues that arise in the context of the very likely cessation of one of the most widely used EU critical benchmarks (LIBOR) by the end of December 2021; and (2) ensuring continued availability of spot foreign exchange rates for use in hedging tools issued in the European Union after the end of the BMR transition period in December 2021.

More specifically, as to the first issue covered by this impact assessment, the lack in the BMR of mechanisms to accompany the FSB's recommendations for reform (driver 1) and to mandate an interim rate to be published for tough legacy contracts (driver 2) combined with the heavy exposure of EU banks to USD LIBOR funding (driver 3) would be likely to result in heterogeneous implementing or legislative solutions by Member States whose financial institutions are largely impacted by the transition. This would create confusion among benchmark users and end-investors, resulting in disruptions to the internal market, preventing them from fully benefiting from the single market. Since the problems identified in section 3.1, resulting from the above mentioned drivers, affect the whole of EU, i.e. a vast number of European financial and non-financial companies using LIBOR, use of Article 114 is most appropriate to tackle these problems comprehensively and uniformly. Indeed, the identified problems require a robust system to transition from IBOR rates that can uniformly be relied on by companies in all Member State jurisdictions. Furthermore, as the current proposal seeks to amend the BMR in order to create a harmonised "orderly transition" regime critical benchmarks, it is appropriate to use the same legal basis for this harmonisation measure. Article 114 TFEU gives therefore the EU the legal basis to enhance the current regulation in order to address this fragmentation.

In a similar manner, as to the second issue dealt with in this impact assessment, the requirement for European banks to offer only hedging tools that reference BMR compliant rates (drivers 1 and 2) along with the circumstance that certain foreign currency spot rates will not become compliant before the end of the transitional period (drivers 3 and 4) would result in problems identified in section 3.1.2; namely it would put at a competitive disadvantage both European banks offering derivatives as a hedge for currency exposure, and European companies that wish to hedge currency exposures via listed derivatives that can only do so if the currency spot rate which the derivative is intended to hedge is itself BMR compliant. The purpose of the action at EU level is in this case precisely to tackle the above mentioned problems by reducing the scope of the BMR and exempt specific foreign currency spot rates. This would ensure their continued use as an underlying for all EU based dealer banks and their corporate clients, thereby avoiding disruptions to the functioning of the internal market. As this action is aimed not to harm the competitiveness of certain EU stakeholders and the effectiveness of the financial system, for the Union economy, its citizens and businesses, article 114 TFEU is the appropriate legal base to achieve this coordinated deregulation objective.

Therefore, the establishment of an EU mechanism to deal with legacy contracts and of an exemption regime to ensure of continued reference of foreign currencies spot rates would fall under the competence of the EU according to Article 114 of the Treaty of Functioning of the European Union (TFEU).

4.2 Subsidiarity: Necessity of EU action

According to the principle of subsidiarity (Article 5.3 of the TEU), action at EU level should be taken only when the aims envisaged cannot be achieved sufficiently by

Member States alone and can therefore, by reason of the scale or effects of the proposed action, be better achieved by the EU. While some benchmarks are national, the benchmark industry as a whole is international in both production and use. Issues concerning critical benchmarks as well the use of non-EU benchmarks have by definition a European dimension.

Whereas LIBOR is administered and supervised in UK, it is widely used by EU banks as the interest rate for their USD funding currency calculates the US interbank lending market and clearly involve cross jurisdictional issues. Similarly, spot foreign exchange markets are global by nature and benchmarks in these sectors involve the same cross-jurisdictional issues. For such international benchmarks, purely national action could not effectively tackle the problems outlined above.

The problems and their drivers, as identified in section [2], could possibly be addressed through individual action by Member States. As to the issue of the IBOR transition, they could intervene introducing legislation indicating the national replacement rate in contracts referencing the disappearing IBOR. Nevertheless, individual action by Member States is likely to only partially address the identified issues (notably because some Member States may legislate, while others would not). Furthermore, different approaches to the legacy contract issue across the Member States would introduce fragmentation in the single market. For example, if each Member State determined, through national statute, a different fall-back rate for USD LIBOR, competition in the banking sector might yield “winners and losers” on the basis of differences in the remuneration that banks would obtain for ex LIBOR loans. Competitive distortions could also arise because banks in different Member States would have different refinancing costs (as they vary according to the chosen ex LIBOR fall-back rate).

Action at EU level as regards a harmonised orderly transition regime for critical benchmarks that works for legacy contracts across the Union is thus needed in order to ensure coherence and to further improve the functioning of the single market. More specifically, while action at national level in relation to national benchmarks may help ensure that any intervention is appropriately tailored to the problems, this may lead to a patchwork of divergent rules, could create an un-level playing field within the internal market and result in an inconsistent and un-coordinated approach. A patchwork of national rules would impede the opportunity to produce cross border benchmarks and therefore impede cross border transactions linked to them. In contrast, an EU initiative would help enhance the single market by creating a common framework for reliable and appropriately used benchmarks across different Member States.

Equally, action at EU level is also needed for ensuring the continuous use of foreign currency spot rates as they are already covered by regulation adopted at European level (the BMR) and action at national level would not be sufficient to reach the aim.

4.3 Subsidiarity: Added value of EU action

The problems connected to the use of critical benchmarks have by definition a European dimension and EU action would reduce significantly the complexity, financial and administrative burdens for all key stakeholders (i.e. banks exposed in USD LIBOR or other disappearing IBOR) to renegotiating legacy contracts in order to insert a replacement rate. The purpose of the action at EU level is to protect the public interest against these problems by contributing to creating an effective and efficient regime for

legacy contracts affected by the cessation of a critical benchmark ensuring contract continuity and financial stability for the Union economy, its citizens and businesses.

Equally the use of non-EU benchmarks is a common feature for all jurisdictions of the EU and action at national level would create the risk of uncoordinated action in a core area of the capital markets. Such a result would be, as mentioned in the introduction, at odds with the aim of the CMU and the need to ensure optimal financing conditions for the European economy. Ensuring the use of certain foreign currency spot rates throughout Europe would bring clear benefits ensuring a level playing field among all supervised entities and business corporates at the same time.

5 OBJECTIVES: WHAT IS TO BE ACHIEVED?

5.1 Disorderly IBOR transition

General objective: Ensure the highest possible degree of financial stability during the IBOR transition.

Specific objectives:

- (i) **Ensure legal certainty:** ensure that all contracts pending when an IBOR rate is discontinued benefit from a successor rate, ensure legal certainty and avoid litigation risk for all financial and non-financial counterparts in contracts referencing the discontinued IBOR;
- (ii) **Allow for more efficient balance sheet management:** ensure that all EU banks with LIBOR exposures on the asset and liability side of their balance sheets can manage legacy balance sheet exposures in a predictable manner;
- (iii) **Ensure contract continuity:** allow for the highest degree of certainty that the legacy rate will actually be published during the designated period and allow for adaptations of time-lines in line with identified needs in ensuring specific objectives 1 and 2 above.
- (iv) **Allow orderly wind-down of any critical benchmark:** ensure that the toolkit provided can be used by competent authorities for any critical benchmark that needs to be wound down, including non-IBORs

5.2 Loss of an EU-based risk management tool

General objective: Maintain the highest possible degree of financial stability in foreign exchange hedging for both the EU financial and non-financial sectors

Specific objectives

- (i) **Maintain transparency in FX derivatives trading:** create a rulebook that allows EU based derivative contracts that hedge foreign exchange risk to continue trading on regulated markets and avoid a migration of these contracts to less transparent over-the-counter (OTC) trading;
- (ii) **Maintain risk management for EU exporters and foreign direct investors:** create a legal framework that allows EU exporters and foreign direct investors to continue to manage currency risk by means of EU based derivatives contracts;
- (iii) **Avoid EU banks' undue exposure to currency risk:** ensure that the new legal framework designed to allow EU investors to continue use hedging tools provided by EU banks limits the recourse to non-compliant rates to a clearly

identified category of “monetary policy” rates so as to avoid undue exposure of banks’ balance sheets to currency risks.

- (iv) **Maintain a level playing field for EU banks:** ensure that EU banks are not placed at a competitive disadvantage in offering hedging tools to EU exporters and foreign direct investors when compared to non-EU competitors.

5.3 Options to avoid a disorderly IBOR cessation

In order to ensure the highest possible degree of financial stability for both the financial and non-financial sector in the course of an IBOR transition, this impact assessment analyses four options, three of which contain a temporary IBOR legacy rate and one which proposes a permanent replacement rate:

Option 1: Create new powers in the BMR to enable the regulator which determines an IBOR rate to be no longer representative of an underlying market to mandate the publication of a temporary legacy rate to bridge the wind down of legacy contracts still pending at the point the original IBOR is deemed to be no longer representative (“*mandating a temporary legacy rate*”);

Option 2: Create a new simplified authorisation procedure within the BMR to allow the regulator which deems an IBOR rate no longer representative of an underlying market to withdraw the authorisation of the IBOR and issue a simplified authorisation for a temporary legacy rate to allow for the wind-down of legacy contracts (“*simplified authorisation for a temporary legacy rate*”);

Option 3: Create a new exemption from compliance with the BMR for a temporary legacy rate that will be published either by the private or the public sector when the competent regulator determines that an IBOR is no longer representative of an underlying market and withdraws the authorisation to publish the IBOR rate (“*exemption for a temporary legacy rate*”); and

Option 4: Create new powers in the BMR to enable the regulator which determines an IBOR rate to be no longer representative of an underlying market to mandate the publication of a permanent successor rate which can be used as a reference rate both in legacy and in new contracts (“*mandating a permanent successor rate*”).

5.4. Options for avoiding loss of EU-based risk management tools

In order to maintain financial stability in foreign exchange hedging for both the EU financial and non-financial sectors, this impact assessment analyses four options:

Option 1: Create new powers in the BMR to enable regulators to authorise individual hedging contracts that reference third country currency spot exchange rates that are not recognised or endorsed for use in the Union (“*contract authorisation*”);

Option 2: Create a new statutory exemption in the BMR according to which foreign exchange hedging contracts are exempt from the requirement that contracts offered by EU dealers can only reference recognised or endorsed spot exchange rates (“*contract exemption*”);

Option 3: Create a new statutory exemption in the BMR according to which third country foreign exchange spot rates do not need to be recognised or endorsed for use in the Union (“*spot rate exemption*”); and

Option 4: Create a new statutory rule in the BMR whereby – in analogy to the designation of an index as a critical benchmark according to the current Article 20 BMR – the European Commission designates certain spot currency exchange rates as critical rates, with the consequence that all other third country spot exchange rates can be referenced in contracts in the Union without recognition or endorsement (“*designation approach*”).

6 WHAT IS THE BASELINE FROM WHICH OPTIONS ARE ASSESSED?

6.1 Disorderly IBOR transition

Without any further intervention the most likely scenario (3.3.1) is that LIBOR ceases to exist without a legacy or replacement rate. EU banks and their clients would need to negotiate a replacement rate among themselves individually and then amend all their USD LIBOR contracts to embed this rate retroactively.

This raises issues of feasibility and cost, both for corporate lenders and for their, often small and medium sized borrowers. For corporate lenders, as with USD LIBOR exposure data, data on the **potential cost of renegotiation** of USD LIBOR legacy contracts is not readily available and commercially sensitive. In terms of cost and complexity, the cash market (loans and debt) is more challenging than derivatives. In the latter, agreements may be covered by a standardised set of terms and can be amended via accepted protocols, generally concluded between more sophisticated counterparties who adhere to a common industry association (e.g., the International Swaps and Derivatives Association – ISDA). In the cash markets, the concept of a protocol does not exist. Counterparties have varying degrees of sophistication and individual negotiations are required for each agreement.

One major bank has submitted confidential estimates with the immediate caveat that these figures do not reflect the full scope of the problem. In the debt and loan markets, there are thousands of contracts that their legal departments would need to renegotiate (because they mature after the end of 2021) and even if all the cost of renegotiation could be assumed, there are simply not enough hours available between now and December 2021 to successfully complete the renegotiation of all legacy contracts³⁴. In addition, efforts at renegotiation will not be successful until the relevant risk-free rate working groups have recommended generally accepted legacy rates for the contracts still pending when LIBOR is discontinued.

The legal cost associated with renegotiating “tough legacy” contracts is expected to vary, driven by the following key variables: Complexity, client sophistication and lawyer time required. According to confidential estimates by a major corporate lender, renegotiating loan agreements with relatively more standardized terms (only derivatives use the standardized ISDA protocols) would likely cost, on average, **EUR 55,000 per transaction**, with variations depending on jurisdiction, governing laws and whether there are contractual securities involved or not. More complex and bespoke loan or debt renegotiations could see costs rise significantly, possibly exceeding **EUR 100,000 per**

³⁴ In terms of magnitude, this concerns for a large bank ten thousands of loan contracts, hundreds of debt contracts and ten thousands of derivative contracts.

transaction. Cost also increases if parties engage in extended negotiations, because of a lack of borrower or lender cooperation.

On the basis of the contract volumes shared by several major and mid-tier banks on a confidential basis (see above, Section 3.1.1), the total cost of renegotiating the loan, debt and derivatives (incl. complex loans and debt) on these banks' balance sheets would range **between EUR 793 million (mid-tier institution) and EUR 3.47 billion (large institution).**

In order to estimate the cost burden on EU small business borrowers, we take into account the following factors. We know from our interviews that the lower range of the above cost estimates reflects a bank with a focus on private and small business customers. We conservatively estimate that the cost of renegotiation incumbent on the non-financial counterpart is only around 20% of the cost incurred by the bank. This would result in potential and estimated total cost per bank in the small business sector to the order of **EUR 158.6 million** for loans, debt and derivatives (incl. complex loans and debt).

We could further extrapolate the cost burden on the small business sector by taking the institution's approximate domestic corporate lending market share (25%) to estimate that the small business sector in that (large) Member State would face an approximate burden of **EUR 634.4 million** if all small business in that Member State (and not just the example bank's customers) would need to renegotiate their loans and debt arrangements. On the basis that this (large) Member State accounts for slightly less than one-third of the Eurozone GDP, the small business burden of renegotiating their USD LIBOR loans and debt arrangements in the Eurozone can be estimated at **EUR 1.9 billion.**

6.2 Loss of EU-based risk management tools

Without any further regulatory intervention, the most likely scenario (Section 3.3.2) is that EU exporters and investors would shift their currency hedges to less transparent and less regulated 'over-the-counter' contacts with non-EU banks. This has negative repercussions on EU exporters and investors, but the reduced EU-based non-deliverable forward trading volumes would also negatively affect the risk management efficiency of EU banks themselves.

As we are unable to assess the precise cost of such a shift to over-the-counter instruments, the baseline will be presented as the values in foreign trade that are at risk if this shift is either (1) not successful; (2) very costly or (3) leads to losses due to less regulated forward contracts being used to hedge currency exposures. We do not expect EU companies' exposures to leading Asian currencies to diminish over time (with the consequence that hedging these exposures to their volatility will become less relevant). If anything, as explained in Section 2.2, the turnover of emerging market currencies rose by almost 60% in the three years to 2019.

The following indicators provide an impression of the trading and investment volumes at risk, if e.g., the USD/KRW or USD/IND exposures could no longer be hedged in an efficient manner:

Table 2 – EU trade relationships with Korea and India (data in € billion)

	Korea	India	% change (Korea)

EU exports of goods	49.6 billion	46 billion	+ 77%
EU imports in goods	51.1 billion	46 billion	
EU exports of services	13.5 billion	N/A	
EU imports of services	7.9 billion	N/A	
EU inward foreign direct investment (FDI)	28.3 billion	11.0 billion	+ 112%
EU out-ward FDI	51.3 billion	77.0 billion	+ 39%

For EU banks, as explained in Section 2.2., the corporate client base of each EU bank offering currency hedges includes a mix of exporters and importers, enabling the bank to match buyers with sellers as efficiently as possible and so reduce the bank’s net exposure to the currency. Making currency spot exchange rates “unavailable” for use in the EU would have negative repercussions on the risk management for the EU banking sector as the possibility to offset position among a larger client base is lost.

Preventing an EU bank from entering into forward contracts referencing a spot foreign currency exchange rate published by a private institution in the relevant jurisdiction would not only increase the exposure of its EU clients to currency collapses, as they would be unable to hedge these risks with an EU bank, but also prevent the bank to hedge its own currency exposures.

For example, a European car manufacturer investing in a factory in Korea, would accrue exposure to the Korean won in terms of their initial investment and on-going local employee costs. A European bank may provide the car manufacturer with financing to purchase the factory. It therefore has risk of loss tied to the client’s currency exposures. If the bank takes security over the factory in order to provide the loan, the bank would take the factory onto its balance sheet in the event the car manufacturer defaults and therefore also take on the client’s exposure to Korean Won.

Both the bank and the client need to be able to use the USD/KRW spot rate to enter into a currency forward or swap contract to hedge themselves from risk of losses from these exposures in this example. Prohibiting use of a currency spot rate would not negate the risk to the bank but instead leave it with unhedged risk.

Non-deliverable forwards represent the most standardized liquid instrument for managing these currency exposures. Banks frequently trade in NDFs in order to: (1) execute trades for clients, (2) to enable clients to hedge their exposures denominated in the relevant currency; and (3) to hedge their own exposures denominated in the relevant currency.

Where the bank is hedging its own exposures denominated in the relevant currency, the purpose of the NDF is to protect the bank against unfavourable changes in the exchange rate, including as a result of the collapse of the relevant currency. In this situation, preventing a bank from entering into forward contracts referencing a spot exchange rate published by a private institution would be more likely to increase the bank's exposure to currency collapses than to reduce it.

Finally, in order to attempt to mitigate naturally occurring risks if the main benchmark is prohibited, it is more likely that banks and their clients attempt to use ‘proxy’ hedges. These are transactions which do not directly offset the source of the risk, but instead take a position in an exposure which, if historic correlation holds true, provides them with an approximate hedge. Unfortunately, correlations often break down and can leave institutions at risk of an unhedged loss on both their original exposure and on their proxy hedge.

7 DESCRIPTION OF THE POLICY OPTIONS

7.1 Disorderly IBOR transition

7.1.1 Features common to all options

All of the options discussed in this impact assessment share a set of common design features. In brief, all of the options will:

- (i) enable the competent authority to order the cessation of an IBOR rate that is no longer representative of an underlying market; and
- (ii) entrust the competent authority with powers to decide what “accompanying measures”, if any, should be taken when it orders a critical benchmark to cease.

Accompanying measures under (ii) depend on the policy option that would ultimately be selected, and include the following: mandating the conversion of the critical benchmark into a temporary legacy rate ([Option 1](#)); authorising a temporary legacy rate ([Option 2](#)); allowing for a legacy rate to be published under a statutory exemption ([Option 3](#)); or mandating conversion of the critical benchmark into a permanent successor rate ([Option 4](#)). In all of the options, the legacy rate is designed as a single rate applicable across all asset classes.

All options share the following design features:

Future-proofing. All of the individual policy options considered in the report aim to establish the necessary mechanisms to accompany the orderly cessation of all critical benchmarks, not just IBORs. This requires a degree of ‘future-proofing’ in designing the options, both to cover all IBORs and any other critical benchmarks in the future. To achieve this, it is essential that the type of methodology change that governs the conversion of an IBOR into a legacy rate (Option 1), the methodology requirements that govern the authorisation of a legacy rate (Option 2), the methodology that underpins exempted legacy rates (Option 3); or the type of methodology change that governs the conversion of an IBOR into a permanent successor rate (Option 4) are not be “hard-wired” into legislation. This will allow the competent regulator to choose the required methodology changes to an existing IBOR (Options 1 and 4) or methodology requirements for a newly authorised legacy rate (Option 2) from the latest state of the art, when it is time to take the relevant decisions. Any choice for a conversion methodology will be made taking into account the work done by private sector alternative reference rate working groups operating under the auspices of the relevant central bank.

Transparency and clarity of process. A further principle underpinning all of the retained options is that the market must be informed in advance on the stages of an IBOR conversion or cessation process. The options are structured along a common grid, designed to ensure that market participants understand both in advance, and at the time the powers are used, how the competent regulator will exercise its powers. All options will therefore comprise a number of procedural obligations designed to ensure transparency and clarity throughout the conversion or cessation process: (1) prior guidance; (2) one or several pre-conversion or pre-cessation notices; (3) public consultations.

Prior guidance on the process. A common requirement would be that the competent regulator, prior to launching an IBOR pre-conversion or pre-cessation process, issues policy guidance on how the new powers will be exercised in advance of launching the

pre-conversion or pre-cessation process. This guidance will have to set out how, and on the basis of which factors, the regulator will determine that an IBOR no longer represents the underlying market and how it will exercise its new BMR powers thereafter. For Options 1 and 4, the guidance should include a description of the types of methodology changes the competent authority might consider when mandating the conversion of an IBOR into a legacy or a permanent successor rate. For Option 2, the guidance would set out the factors and criteria to be considered in granting authorisation for a legacy rate. While the new BMR powers should not entail material constraints on the kind of methodology changes that the administrator may impose (as part of a conversion) or assess (as part of a new authorisation), there will be procedural requirements on the competent regulator to explain how it intends to exercise the new powers.

Potentially two public “pre-conversion” or “pre-cessation” notices. All options would oblige the competent regulator to publish potentially two “pre-conversion” or “pre-cessation” notices. The first notice shall be published when the “representativeness” assessment of the IBOR rate is concluded with a negative result. In the first notice, the competent regulator will be required to give reasons for its decision to order the cessation of the IBOR and set out when representativeness is (was) lost. The regulators should also set out the remedial steps, if any, that it envisages for legacy contracts.

The second notice shall be published when the “reconciliation phase” that follows the representativeness assessment is complete (see below). In the second notice, the regulator shall specify when its decision to either convert or cease the IBOR rate applies. In case the regulator requires a change of methodology for a legacy rate (Option 1) or a permanent replacement rate (Option 4), the second “pre-conversion notice” would also need to explain the changes made to the methodology and any other information on the conversion into a legacy (permanent successor) rate that would be beneficial to market users. This ensures that the new “conversion” powers are exercised in a transparent manner, taking into account the results of a public consultation. The aim is to allow potential users to adapt risk management systems and controls and assess all legal implications resulting from the conversion.

Public consultation prior to conversion/authorisation of legacy or successor rates. For the option that includes mandated conversion of an IBOR into a legacy rate (Option 1) or a permanent successor rate (Option 4), there will be an obligation on the competent regulator to consult, given that market participants need to assess whether the proposed methodology changes to the IBOR rate require changes in their risk positions and operations, and whether they have any potential contractual and legal impacts. For Option 2, the administrator seeking authorisation would be obliged to carry out the consultation. In both cases, the consultation must be structured in sufficient detail for potential users to assess all operational and legal consequences inherent in the use of the proposed rate.

Common procedure and timelines. In consequence, all options rely on a transparent and predictable IBOR “pre-conversion” (Option 1 and 4) or IBOR “pre-cessation” process (Options 2 and 3). In brief, the common process is organised as follows:

Once the competent IBOR regulator determines that the IBOR’s representativeness cannot be restored and that the benchmark needs to either cease (Options 2 and 3) or be converted into a temporary legacy rate to cover the portfolio of contracts pending at that point (Option 1 only) or a permanent successor rate for all contracts that require a credit-sensitive rate (Option 4):

Initial notice of pre-conversion/pre-cessation. The administrator would receive a notice of the date at which the decision to discontinue the IBOR (Options 2 and 3) or to replace the IBOR with a legacy rate (Option 1) or a permanent replacement rate (Option 4) would take effect. This date would be no later than the date at which the benchmark would become unrepresentative.

Reconciliation process. The administrator would have a (four month) period in which to engage with the regulator on how to organise the cessation (Options 2 and 3) or the conversion of the non-representative benchmark into a legacy rate for pending legacy contracts (Option 1) or into a permanent successor rate for all contracts that require a credit-sensitive benchmark (Option 4). The required public consultations described above would form part of this four month period (“reconciliation process”).

Definite notice of pre-conversion/pre-cessation. After completion of the reconciliation process, the regulator would publish a “**pre-conversion/pre-cessation notice**” specifying:

- (i) the date at which the IBOR conversion would take effect (Options 1 and 4) or the date at which the panel bank IBOR’s authorisation is withdrawn (Options 2 and 3);
- (ii) the effective date for the legacy rate to be published under the mandated methodology (Options 1 and 4); as well as
- (iii) the asset classes that can continue to reference the legacy rate and for how long they can do so. The pre-conversion notice would prohibit use of the legacy rate in new contracts, written after the IBOR cessation is announced (Options 1 and 4).

Periodic review of the usage permissions. After the conversion of the IBOR into the legacy rate, the competent regulator (Option 1) would have the power to periodically review the “usage permissions” and the period of permitted use of the legacy rate. These reviews are specifically intended to put the maximum pressure on the market to continue to try to renegotiate existing LIBOR exposures. There would be no such usage monitoring or controls with Options 2 to 4.

Non IBOR-specificity. Although the present proposal is intrinsically linked to the currently ongoing IBOR transition, especially the expected cessation of LIBOR, all options would also enable a competent authority to ensure an orderly transition away from any other critical benchmark, the representativeness of which can no longer be restored. This is the case

Now that the common features are established, the following chapters present the features that distinguish the four policy options, in terms of process, the methodology underpinning the legacy rate, jurisdiction neutrality, cross-border application and ensuring that no new contracts make use of a potential legacy rate:

7.1.2 Option 1: Mandating IBOR conversion

The pre-conversion process. Once the competent IBOR regulator determines that the IBOR’s representativeness cannot be restored and that the benchmark needs to be converted to a new methodology to cover the portfolio of contracts pending at that point, Option 1 would start a four stage process: (1) Initial notice of pre-conversion/pre-cessation; (2) Reconciliation (four months, the required public consultations described

above would form part of this four month period); (3) Definite notice of pre-conversion specifying the effective date of the conversion and (4) Periodic review of the usage permissions.

The conversion. Option 1 equips the competent regulator with a power that will enable it to impose a methodology change on an administrator of a critical benchmark that is not limited by the constraints of “representativeness”. The criteria for introducing a methodology change would be to safeguard the interests of market stability and consumer protection. The powers to mandate conversion of an IBOR are therefore designed as a “matter of last resort”, once and only when it is clear that the critical benchmark’s representativeness cannot be restored. Option 1 will confer a significant degree of discretion on the regulator, e.g. in terms of the type of methodology change that the competent regulator can impose or the factors the regulator must take into account in reaching a decision on the features of the converted rate. This is because the impact assessment concludes (Section 3.1.1.c.) that it is unrealistic, for the legislator, to be able to determine what the precise methodology change should be, when the emergence of adequate, liquid risk-free rates is still uncertain, market conditions may change and agreement on a credit spread to be added to an underlying risk free rate to reflect the IBOR’s credit-sensitivity is not yet reached.

However, while giving sufficient flexibility to the competent authority to mandate the most appropriate methodology change, the new conversion powers would be constrained by the requirement for the regulator to take into account recommendations on alternative benchmarks adopted by private sector working groups operating under the auspices of the relevant central bank. As regards the IBOR transition, these working groups are tasked with identifying and recommending risk-free rates that will replace current IBOR-based benchmarks, also for the purpose of integrating those rates as fall-backs in existing contracts that reference IBORs. Since these recommendations will represent industry consensus on the most appropriate alternative rate, they will act as an aid and a constraint to the competent authorities choosing the most appropriate methodology for the wind-down of a critical benchmark. The need for the regulator to align itself with the recommendations of private sector groups is further highlighted by the need to ensure consistency of alternative rates between tough legacy contracts and those covered by the work of private sector groups, among others to preserve the efficiency of hedging relationships spanning different contracts and asset classes.

The future powers governing conversion of an IBOR are designed to encourage parties to legacy contracts to accept the converted rate as automatically “flowing through” into their legacy contracts. For this reason, the IBOR conversion powers are designed to ensure that the converted rate remains the same IBOR benchmark, with the same name, produced by the same administrator. After publication of the “pre-conversion” notice, the benchmark can be adjusted to its new methodology and should continue to be published as the critical benchmark such that it can ‘flow through’ to contracts referencing the benchmark that have not been renegotiated to fall back to an alternative rate. It is not a permanent successor rate (see anti-circumvention provisions below). As regards the IBOR transition, these working groups are tasked with identifying and recommend risk-free rates that could serve as an alternative to current IBOR benchmarks, also for the purpose of integrating those rates as fall-backs in existing contracts that reference IBOR. Since these recommendations will represent industry consensus on the most appropriate alternative rate, they will act as an important consideration impacting competent authority’s discretion in designating the most suitable replacement rate.

Jurisdiction neutrality. Option 1 would avoid the need to create complex statutory fallback provisions for IBOR legacy contracts in the different jurisdictions which govern most of the pending USD LIBOR exposures (mostly, but not limited to NY, English and French laws). The ability for a competent authority to mandate conversion of the IBOR rate would ensure that there is no change in the reference rate (the “flow through” avoids the need to replace the reference rate in each individual contract). As Option 1 removes the need to renegotiate individual contracts, it is applicable irrespective of the applicable law governing the contract (“jurisdiction neutral”).

Cross-border application. A further concern, applicable to LIBOR only, is that the converted rate would need to benefit financial and non-financial contract parties in the EU27, irrespective of which authority mandates the IBOR conversion. Option 1 would address this matter in the following way:

- (i) ***Sub-option 1:*** the UK Financial Conduct Authority (FCA) will use its new BMR powers to mandate a USD LIBOR conversion on or around January 2022, when the UK is no longer in the single market³⁵. At that stage (the UK is expected to depart the single market at the end of 2020), the use of the converted rate would be allowed in the Union either by way of recognition or endorsement. According to the BMR³⁶, the authority competent for recognising any third country rate will be ESMA. The competent authority for approving an endorsement for use in the Union would be the competent regulator of the endorsing entity.
- (ii) ***Sub-option 2:*** In case the UK Financial Conduct Authority decided not to mandate conversion of LIBOR (or would not be vested with the appropriate powers, e.g., due delays in adoption of the amended BMR beyond the end of the transition period in December 2020), the reformed BMR would empower, as of January 2022, ESMA to mandate conversion of LIBOR (the LIBOR administrator has an EU entity).

“No new flow” provisions. Option 1 would also address the need to ensure that the designated converted rate is not used by market participants beyond its intended purpose. Option 1 provides the competent regulator with powers to ensure that market participants do not increase exposures to the legacy rate after the previous version of the IBOR is discontinued.

In order to ensure that the converted IBOR rate is not used by supervised entities (e.g., EU banks) to generate new exposures after the change in methodology (for example by the creation of new loan or debt agreements that reference the IBOR legacy rate), the following safeguards will apply: Supervised entities in the EU are allowed to reference the converted rate solely to (1) manage or reduce their legacy exposures to the IBOR rate or to (2) facilitate their clients’ management or reduction of their legacy exposures to the IBOR rate. In consequence, supervised entities in the EU would be permitted to use the converted IBOR rate to:

- (i) continue to receive performance of their rights and to comply with their obligations under agreements existing on “conversion date”;

³⁵ The supportive reply received by the FCA to the roadmap published by the European Commission suggests this could be the most likely option: <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12268-Review-of-the-Benchmark-Regulation/F512186>

³⁶ Article 40 BMR.

- (ii) terminate their legacy transactions or use the legacy rate to calculate the termination amounts payable;
- (iii) value their positions, e.g., to margin them or calculate any capital requirements attributable to them,
- (iv) reduce their legacy exposures; and
- (v) facilitate their clients' reduction of their legacy portfolios.

Use of the converted rate to continue to service contracts (point 1) and to reduce bank and client legacy exposures (points 4 and 5) could comprise new transactions to enable a party to transition a legacy contract to an alternative benchmark or to service, hedge, reduce or close-out existing exposures³⁷. Reducing legacy exposures may require allowing client-facing supervised entities such as central counterparties and market makers to reference the legacy rate so that their clients can close out existing exposures.

7.1.3 Option 2: Simplified authorisation for a temporary legacy rate

The pre-cessation process. Once the competent IBOR regulator determines that the IBOR's representativeness cannot be restored and that the benchmark needs to cease, Option 2 would start a three stage process: (1) Initial notice of pre-conversion/pre-cessation; (2) Reconciliation (four months); (3) Definite notice of pre-conversion/pre-cessation announcing the precise date of the IBOR's cessation (withdrawal of authorisation). With option 2, there may or may not be an authorisation of a legacy rate, the competent regulator has no influence on its availability or the timelines for its publication.

The legacy rate. The legacy rate would be authorised by a simplified procedure and the authorisation of the successor rate would be temporary. Contrary to option 1, the principle of "same administrator, same name" would not apply. It would be left to private market participants to design a rate that reflects the credit-sensitive features of an IBOR and the administrator would need to convince the competent regulator that the successor rate is BMR compliant. With the simplified authorisation the competent regulator could, however, modulate compliance requirements based on the fact that the legacy rate is authorised for a limited period of time only.

Jurisdiction neutrality. Option 2 would not avoid the need to create complex statutory fall-back provisions for IBOR legacy contracts in the different jurisdictions which govern most of the pending USD LIBOR exposures. The new successor rate would need to be embedded via a statutory fall-back mechanism ("all references to IBOR shall be read as references to rate X"). Option 2, while removing the need to renegotiate individual contracts, is not "jurisdiction neutral", as each jurisdiction would need to statutory fall-back laws. This also implies that a statutory fall-back provisions for English law contracts would not automatically extend to contracts concluded under the laws of other EU Member States.

³⁷ Entering into a new transaction may be necessary to allow supervised entities to maintain the value of their legacy positions. For example, if an option in a contract provides the right to enter into a new contract at a fixed price in the future, parties would need to be able to execute that contract in order for the option to retain its value.

Cross-border application. A further concern is that a LIBOR legacy rate authorised by a competent authority outside of the European Union would need to benefit financial and non-financial contract parties in the EU27. Option 2 would address this matter in the following way:

- (i) **Sub-option 1:** the UK Financial Conduct Authority (FCA) will use its new BMR powers to authorise a USD LIBOR legacy rate via the simplified procedure. As there is no IBOR conversion, the precise date of authorisation is unknown, but is expected to be after January 2022, when the UK is no longer in the single market (the UK is expected to depart the single market at the end of 2020). The use of the legacy rate would be allowed in the Union either by way of recognition or endorsement. According to the BMR, the authority competent for recognising any third country rate will be ESMA. The competent authority for approving an endorsement for use in the Union would be the competent regulator of the endorsing entity.
- (ii) **Sub-option 2:** In case the UK Financial Conduct Authority decided not to authorise a LIBOR legacy rate (or would not be vested with the appropriate powers, e.g., due delays in adoption of the amended BMR beyond the end of the transition period in December 2020), the reformed BMR would empower, as of January 2022, ESMA to authorise a legacy rate. This authorisation could be granted to the current LIBOR administrator's EU entity or to another administrator.

“No new flow” provisions. Option 2 would allow the competent regulator who makes use of the simplified authorisation procedure to decide on the contracts eligible to use the legacy rate. The regulator would, analogous to Option 1, limit use of the legacy rate to maintain performance or facilitate the winding down of tough legacy contracts (following the same procedure as described in Option 1).

7.1.4 Option 3: Exemption for a temporary legacy rate

The pre-cessation process. Once the competent IBOR regulator determines that the IBOR's representativeness cannot be restored and that the benchmark needs to cease, Option 3 would start a three stage process: (1) Initial notice of pre-conversion/pre-cessation; (2) Reconciliation (four months); (3) Definite notice of pre-conversion/pre-cessation announcing the precise date of the IBOR's cessation (withdrawal of authorisation). With option 3, there may or may not be a legacy rate (provided under a statutory exemption), the competent regulator has no influence on its existence.

The temporary legacy rate. The legacy rate would be exempt from compliance with the BMR. Contrary to option 1, the principle of “same administrator, same name” would not apply. It would be left to private market participants or a public authority to design a rate that reflects the credit-sensitive features of an IBOR, but there would be no need to convince a competent regulator that the successor rate is BMR compliant. Due to this lack of regulatory control, the exemption for any successor rate would be limited to a period specified in the BMR itself. The exemption would not be renewable, except by means of an amendment to the BMR.

Jurisdiction neutrality. Option 3 would not avoid the need to create complex statutory fall-back provisions for IBOR legacy contracts in the different jurisdictions which govern most of the pending USD LIBOR exposures. The new successor rate would need to be embedded via a statutory fall-back mechanism in the various national laws which govern

the IBOR contracts (“all references to IBOR shall be read as references to rate X”). Option 3, while removing the need to renegotiate individual contracts, is not “jurisdiction neutral”, as each jurisdiction would need to adopt statutory fall-back laws. This also implies that a statutory fall-back provision for, e.g., English law contracts would not automatically extend to contracts concluded under the laws of other EU Member States.

Cross-border application. As the exempt rate is not subject to any regulatory mandates or approvals, the exempt rate could be used in the European Union, irrespective of whether it is administered inside the EU or in a third country. The only limit to cross-border application would be the expiry of the temporary exemption.

“No new flow” provisions. The additional safeguards to limit use to manage or reduce their legacy exposures that apply to Options 1 and 2 would not apply to a statutory exemption; the only safeguard against new debt, loan or derivatives referencing the legacy rate would be that the exemption is limited in time and not renewable without a further statutory amendment.

7.1.5 Option 4: Mandating a permanent successor rate

The pre-conversion process. Once the competent IBOR regulator determines that the IBOR’s representativeness cannot be restored and that the benchmark needs to be converted into a successor rate for all contracts that require a credit-sensitive borrowing benchmark, Option 4 would start a three stage process: (1) Initial notice of pre-conversion/pre-cessation; (2) Reconciliation (four months, the required public consultations described above would form part of this four month period); (3) Definite notice of pre-conversion/pre-cessation specifying the effective date of the replacement rate. Option 4 would not require periodic review of usage permissions.

The permanent successor rate. The publication of the successor rate would be mandated by the competent regulator that has decided that the IBOR is no longer representative. The advantage of a mandated successor rate would be that this rate would still be published under the “IBOR” name (“same administrator, same name”), even if reflective of a different underlying market. The mandate to publish a successor rate would not be limited in time, as this rate can be used both for tough legacy, but also for new contracts that require a credit sensitive rate. In order to ensure “representativeness” of the successor rate, the regulator mandating it would need to be convinced that the new rate is based on observable transactions in the market, such as the observed cost of EU banks borrowing on a wholesale senior and unsecured basis, as represented in a “bank yield” rate. But there might be other, more appropriate data sources that could become available in future. In order to “future proof” this approach, the mandating regulator would need to have wide discretion to mandate recourse to appropriate data sources based both on the yield of loans or debt issued by the entire banking sector, including a representative range of alternative financing sources such as asset managers, money market funds, broker-dealers, insurance companies, private equity firms or hedge funds.

Jurisdiction neutrality. Option 4 would avoid the need to create complex statutory fall-back provisions for IBOR legacy contracts in the different jurisdictions which govern most of the pending USD LIBOR exposures. The ability for a competent authority to mandate the successor rate would ensure that there is no change of the rate (hence no need to replace the reference rate in a legacy contract), just a change in the methodology with which the IBOR rate is assembled. As Option 1 removes the need to renegotiate individual contracts, it is applicable irrespective of the applicable law governing the

contract (“jurisdiction neutral”). In case the IBOR successor rate was mandated by a competent regulator outside the European Union, the same sub-options as those described in option 1 would apply.

“No new flow” provisions. As Option 4 is available for contracts, irrespective of their date of conclusion, there is no need for “no new flow” provisions.

7.1.6 Summary of the main distinguishing features of the four policy options

The main distinguishing factors between the various options is the speed and efficiency with which the competent regulator can act in mandating the publication of a suitable successor rate for legacy contracts. In term of effectiveness and efficiency, the decisive criteria are whether the legacy or successor rates would be mandated immediately upon a finding that the IBOR rate is no longer representative or whether the legacy or successor rate would require a private initiative and even a fresh authorisation.

Table 3 – Summary of the main features of the four policy options – IBOR

	Option 1	Option 2	Option 3	Option 4
Pre-conversion/cessation process	Three stages ending with IBOR conversion into a tightly monitored temporary converted rate	Two stages ending with the withdrawal of the IBOR authorisation	Two stages ending with the withdrawal of the IBOR authorisation	Two stages ending with IBOR conversion into a permanent successor rate
Content of the pre-conversion/cessation notice	Conversion date plus details of new IBOR methodology	Cessation date	Cessation date	Conversion date plus details of new IBOR methodology
Legacy/replacement rate	Mandated	Not mandated, subject to authorisation	Not mandated, no authorisation required	Mandated
Availability of legacy/replacement rate	Mandated as part of IBOR conversion, applies immediately post conversion	Not mandated, requires private initiative and obtaining authorisation, timing uncertain	Not mandated, requires private initiative, but no authorisation, timing uncertain	Mandated as part of IBOR conversion, applies immediately post conversion
Jurisdiction neutral	Does not involve renegotiation and therefore applies across all jurisdictions	Requires national statutory fall-back statutes	Requires national statutory fall-back statutes	Does not involve renegotiation and therefore applies across all jurisdictions
Cross-border application	Non EU converted rate applies via ESMA recognition or endorsement; EU legacy rates is mandated by ESMA	Non EU legacy rate applies via ESMA recognition or endorsement; EU legacy rates is authorised by ESMA	No recognition, endorsement or authorisation requirements necessary	Non EU legacy rate applies via ESMA recognition or endorsement; EU legacy rates is mandated by ESMA
No new flow rule	“Manage or reduce” usage restrictions apply	“Manage or reduce” usage restrictions apply	No usage restrictions, but time limit for exemption	No usage restrictions apply

7.2 Loss of EU-based risk management tools

7.2.1 Features common to all options

All of the options discussed in this impact assessment share a set of common design features. In brief, all of the options will allow EU banks to continue to offer non-deliverable forwards (traded on a transparent trading venue or through the bank) that reference non-convertible currency spot rates. The only difference between the four options lies the legal mechanism to achieve this result.

Two of the options aim to achieve continued availability of the relevant spot rates by providing statutory exemptions (Options 2 and 3), another option would require a prior authorisation for the (by necessity standardised) currency forward contracts (Option 1). The most far-reaching option would empower the European Commission to delineate and regularly review currency spot rates eligible for an exemption (Option 4).

7.2.2 Option 1: Contract authorisation

Option 1 would create new powers in the BMR to enable regulators to authorise individual non-deliverable forward contracts that reference third country currency spot exchange rates that are neither recognised nor endorsed for use in the Union (“**contract authorisation**”). Under this amendment, the forward contract (not the spot rates) would be authorised for trading by EU banks, either on exchanges or via their “systematic Internalisation” platform.

This Option would introduce a significant departure from the current set up of the BMR architecture, as it would switch from providing authorisation of benchmark administrators to authorising individual contracts referencing certain benchmarks. The BMR would need to include provisions specifying which regulator is competent to approve the relevant non-deliverable forward contracts. The obvious choice would be that authorisations are granted by the regulator who supervises the relevant EU bank, but it could also be the competent regulator supervising the listing venue (a regulated market or a multilateral trading platform, see Section 2.2 above). The territorial scope of the authorisation would therefore be limited to the Member State where the bank or trading venue are authorised.

Option 1 would also need to establish new BMR powers to authorise individual forward contracts (by necessity with standardised terms and conditions as well as with standardised maturities), as the current supervision of trading venues, be they regulated markets or multilateral trading platforms, does not comprise the authorisation of individual contracts. The authorisation approach would therefore imply a paradigm shift not only for the BMR, but also for other pieces of EU legislation that cover the supervision of market infrastructure, notably the regulation on markets in financial instruments (MiFIR).

In granting authorisation for forward contracts, competent regulators would have to verify certain basic features, such as a sufficiently robust waterfall of spot rate sources or options in: (i) a primary rate source; (ii) non-primary rate sources, including "fall-back rates", which may be published or unpublished. On the other hand, overly narrow phrasing of the foreign exchange spot rates admitted for reference in forward contracts offered in the EU would not make this option sufficiently “future proof” and hence not provide an adequate solution for the problems.

7.2.3 Option 2: Contract exemption

Option 2 would introduce a new statutory exemption in the BMR according to which the reference to a spot rate to calculate the payments due in a forward contract is not considered in scope of the BMR (“**contract exemption**”). The difference from the authorisation option (option 1) would reside in the fact that, instead of individual contract authorisations, all currency forward contracts referencing a third country spot rate would be exempt from the BMR, without the need for intervention of a national competent authority, either in the Member State where the bank or the trading venue offering the forward contract are located. This would avoid administrative burdens and align with the current (non-regulated) status of over-the-counter forward contracts offered by non-EU banks. It would also mean that the territorial scope of the exemption would comprise any contract offered anywhere in the EU (cross-border application).

Like the authorisation option, in order to avoid uncertainty among market participants, the scope of the exemption for spot rates that can be referenced in EU forward contracts would have to be made very clear. In order to ring-fence this exemption to currency spot rates used for purposes of calculating contractual payments under a forward contract, the exemption would apply to all forward contracts referencing a spot rate (aka as the “settlement” rate) for a non-convertible currency.

7.2.4 Option 3: Spot rate exemption

Option 3 would introduce a new statutory exemption in the BMR according to which third country foreign exchange spot rates do not need to be recognised or endorsed for use in the Union when they are used in forward contracts written by EU banks (“**spot rate exemption**”). As anticipated, this regulatory intervention would treat foreign exchange spot rates (whether based on a survey or a transaction-based mechanism) akin to central bank spot exchange rates. The exemption would allow forward contracts offered by EU banks or traded on EU exchanges to reference third country spot currency rates without the need of equivalence, recognition or endorsement. The territorial scope of the exemption would comprise any forward contract referencing an exempt spot offered anywhere in the EU (cross-border application).

This exemption would be designed to exclude foreign exchange spot rates used in forward contracts as “settlement” rates to calculate the parties’ respective contractual obligations. As the rate exemption option would expand on the concept of the central bank and “public authority” exemptions currently present in the BMR, it would be formulated so as to include all currency spot rates for non-convertible currencies (as explained in Section 2.2, the non-convertible nature implies that the rate is a public policy tool).

7.2.5 Option 4: Rate designation

Option 4 would introduce– in analogy to the designation of an index as a critical benchmark according to the current Article 20 BMR – a new empowerment in the BMR empowering the European Commission to designate certain currency spot rates as critical benchmarks, with the consequence that all spot exchange rates not designated could be referenced in forward contracts offered by European banks without equivalence recognition or endorsement (“**rate designation**”) being necessary. Only third country spot rates considered critical would have to be BMR-compliant.

The designation approach is the “reverse side of the medal” to the rate exemption approach: instead of exempting a defined set of rates (spot rates for non-convertible currencies), only spot rates that are designated as “critical” by a delegated act issued by the European Commission would be in scope of the BMR.

A designation as critical would rely on three criteria (i) the financial benchmark has systemic importance in the financial system of the Union, (ii) a disruption in the determination of the financial benchmark could affect public confidence in the benchmark or financial system of the Union, (iii) the determination of the financial benchmark could be susceptible to manipulation.

Many currency spot rates, although important for export industries, due to their rather limited use compared to other categories of benchmarks, would not be deemed of systemic importance for the safeguard of financial stability in the EU, hence only major currency spot rates such as the USD/EUR exchange rate might be suitable candidates for designation as critical by the European Commission..

7.2.6 Summary of the main distinguishing features of the four policy options

The main distinguishing factors between the various options is the speed and efficiency with which the reference to currency rates in listed derivatives could be allowed: the options entailing an exemption would allow a prompt reference of the rate. On the other hand, option 1 requiring an authorisation by the competent regulator would reach the same objective of the other three with more administrative burdens and in a longer time.

Table 4 – Summary of the main features of the four policy options – risk management tool

	Option 1	Option 2	Option 3	Option 4
Coverage	Forward contracts that contain a sufficiently robust waterfall of spot rate sources	All forward contracts referencing a spot rate for a non-convertible currency	All currency spot rates provided for non-convertible currencies	All currency spot rates, except those designated as critical by the EC.
Availability of spot rate for calculating forward payments	Requires prior authorisation of eligible forward contracts	Available for all contracts covered by the exemption (defined as forwards referencing spot rates for non-convertible currencies)	Immediately available for all spot rates covered by the exemption (spot rates for non-convertible currencies)	Immediately available for all spot rates not designated as critical by the EC.
Cross-border application	Contract authorisation applies either in the Member State where the bank offering the forward or the trading venue offering the forward for trading are located, no cross-border application.	The territorial scope of the exemption would comprise any contract offered anywhere in the EU (cross-border application)	The territorial scope of the exemption would comprise any forward contract referencing an exempt spot rate offered anywhere in the EU (cross-border application).	The territorial scope of the exemption would comprise any forward contract referencing a spot rate not designated as critical by the EC.

8 OPTION DISCARDED AT AN EARLY STAGE

8.1 Disorderly IBOR transition

Option 4 is discarded at an early stage as no competent securities market regulator, at this stage in the incipient efforts to create credit-sensitive replacements for an IBOR rate, would have the capacity to determine all the necessary data sources for such a credit sensitive rate. While it is possible for a central bank to rely on statistical data to determine a daily overnight interbank borrowing rate, the construction of a credit-sensitive rate, such as an IBOR, is more complex and requires a broader set of data sources. Recent initiatives show the heterogeneous approaches taken by the private sector in trying to construct alternatives to USD LIBOR:

- AMERIBOR (the American Interbank Overnight Rate), is constructed from wholesale bank funding data and tracks rates at Cboe’s American Financial Exchange, where 150 smaller regional US banks lend for various maturity ranges to each other;
- The ICE Bank Yield Index (IBYI) is based on wholesale bank funding data³⁸. The IBYI will comprise term deposits, commercial paper and certificates of deposit, but also bond yields that reflect trading in secondary markets. The IBYI can be used as an add-on to SOFR or as stand-alone rate.
- IHS Markit is developing a credit-sensitive rate³⁹ based on credit default swap price data collected by the firm over three million daily price quotes on more than 3,800 single-name CDS contracts for its CDX and iTraxx indices.

Many markets regulators would find it difficult or even incompatible with their “compliance-focused” mandate to select “winners and losers” among the various credit-sensitive rates that are currently being tested by the private sector. This report therefore concludes that any regulatory mandate for a permanent IBOR successor rate would be inappropriate.

8.2 Loss of an EU-based management tool

The designation option (option 4) was discarded at an early stage because it is a functional equivalent to the exemption approach (option 3) in the sense that the end result would be the disapplication of the BMR for a specified type of foreign spot exchange rate (a spot exchange rate for a non-convertible currency). However, this option is less consistent with the original BMR approach to provide for comprehensive coverage of all third country benchmarks (the “all-in” approach was a specific policy goal at the time the BMR was negotiated). This change of approach is likely to create some uncertainty for market participants, as also spot exchange rate for fully convertible currencies might be covered, unless a delegated act by the European Commission would designate an exchange rate as “critical”.

³⁸ See ICE working documents: <https://www.theice.com/iba/Bank-Yield-Index-Test-Rates>.

³⁹ Risk.net article of 12 May 2020, Markit plans to design a credit spread add-on using CDS data. Markit’s financials sub-index is considered likely to be used as a proxy for bank funding costs, with corporate CDS sectors potentially added to SOFR to more accurately match loan rates to the implied credit risk of the borrower

Empowering the European Commission to designate spot exchange rates as critical would also entail certain administrative costs and be a potentially time-consuming process. Furthermore, this option would require a prolonged timeframe to deploy its effects, since it necessitates not only amending the BMR but also subsequently adopting one or several delegated acts to provide market participants with clarity as to which exchange rates are critical (and would therefore require recognition or endorsement) and which ones are not (and could therefore be used without recognition and endorsement to calculate forward payments).

Considering that this policy option would be nothing more than an alternative way to achieve a result that could be accomplished with a statutory exemption in a less complex and time-consuming way (Option 3°, Option 4 is discarded at an early stage).

9 WHAT ARE THE IMPACTS OF THE POLICY OPTIONS?

9.1 Disorderly IBOR transition

9.1.1 Specific objective no 1: Legal certainty

All three options comprise the issuance of two “pre-conversion/pre-cessation” notices and would be characterised by a high degree of legal certainty giving market participants a clear schedule of events and certainty on the availability of a legacy rate.

Option 1 scores highest on legal certainty as the IBOR cessation (in its previous form) is directly linked to the regulator mandating conversion of the IBOR into a legacy rate. This implies that legacy rate is available at the time the IBOR in its previous form is no longer published. In this way IBOR cessation (in its previous form) is contingent on a conversion of the previous version into a legacy rate.

This contingency is not ensured with Options 2 and 3, as the regulator would be empowered to order the cessation of IBOR, irrespective of whether a legacy rate is available and authorised for use in legacy contracts or irrespective of whether a legacy rate is available to benefit from the statutory exemption in the BMR.

9.1.2 Specific objective No 2: Effectiveness for users (balance sheet management)

A legacy rate can only be effective if it is accepted by market participants. The only way to achieve acceptance is by testing the rate with market participants prior to publication.

In order to enhance the acceptance of a mandated, authorised or exempt legacy rate, the proposed changes to the old IBOR rate will require market consultation. A high degree of acceptance can be ensured with Options 1 and 2, as the regulator-initiated changes to the IBOR methodology or the methodology underpinning an authorised IBOR legacy rate can be consulted prior to implementation so that all market participants can understand and accept the rate prior to conversion/authorisation by the competent regulator. Option 3, as it requires no action by the competent regulator, will not yield a rate that is based on a methodology that is subject to a broad-based market consultation.

Option 1 scores highest in ensuring transparency for benchmark users and in ensuring that users have input into the change-process. This is because the public consultation would be organised by the competent regulator, who would be able to ensure that the

focus is appropriate and covers practical aspects of the proposed changes such as, for example, risk implications and operational implications, or key variables in a calculation.

Option 2 would oblige a potential administrator to conduct the consultation process prior to seeking authorisation, with the consequence that a private sector consultation is less prominent and carries potentially less “clout” among the stakeholder community. In addition, a private administrator might be less detailed in describing the details of the methodology underpinning a new benchmark (as this might be commercially sensitive) or might feel less need in consulting on methodological detail. A less transparent consultation on the methodology behind a legacy benchmark will provide market participants with less transparency and a lower ability to assess the suitability of the altered benchmark for continued use in their legacy portfolio.

Option 3 scores lowest in terms of transparency and acceptance, as a statutory exemption cannot be made contingent on only “pre-consulted” rates being able to benefit. A statutory exemption provides no legal hook to ensure that rates published under the exemption are sufficiently pre-consulted. The rates published under an exemption therefore risk missing the intended purpose.

9.1.3 Specific objective No 3: Continuity

Sub-objective 1: Seamless transition: In order for the pre-conversion/pre-cessation process to be effective, the competent regulator should only be able to launch this process only once the methodology for a legacy rate is available and agreed by market participants.

Option 1 best ensures that the pre-conversion notice can only be issued when all material aspects of the mandated legacy rate, such as sourcing of new input data, developing a new calculation methodology, and establishing surveillance procedures and publication tools are in place. This is important as changes to an IBOR rate require technological and procedural development, and potentially sourcing and agreeing (where possible) new data provision arrangements with third party providers (e.g., the underlying risk-free rate to which the credit spread is added must be obtained from the US Federal Reserve). Option 1 therefore provides clarity on the issues the competent regulator must consider when choosing the methodology for the mandated legacy rate.

Options 2 and 3 only require a pre-cessation notice which provides clarity on when the IBOR ceases to be published, but does not require any further clarity on whether a legacy rate is available upon IBOR cessation (Option 3) or available and authorised for use (Option 2) prior to the withdrawal of the IBOR’s authorisation. These later stages are left to private sector initiatives which may or may not produce a legacy rate that is subject to prior stakeholder consultation. Options 2 and 3 therefore provide no build-in clarity on what issues the competent regulator (legislator) must consider when authorising (exempting) a legacy rate based on an alternative methodology. These rates would also unlikely to be available concurrently with the IBOR cessation, a gap that creates legal uncertainty and the above described risks of contract frustration.

Sub-objective 2: Time to prepare the transition. Users of the legacy rate would also need time to assess and address any consequential changes in their risk positions and operations, and any potential contractual and legal impacts. Where a change to the methodology of a benchmark is proposed (i.e., the rate no longer measures current

unsecured bank funding costs but rather changes to a risk free rate plus a fixed historical bank lending spread), there will be operational impacts that need to be assessed prior to the publication of the “pre-cessation” notice.

Again, Option 1 scores better than Options 2 and 3 on the timing of the pre-cessation notice as they oblige the competent regulator to assess all material operational and legal risk inherent in the IBOR conversion, prior to issuing the pre-conversion notice (as there is an obligation to mandate the legacy rate immediately upon announcing the effective date of the old LIBOR’s cessation).

Options 2 and 3, by contrast, do not require clarity on all material aspects of a potential successor rate, which leaves uncertainty as to when a legacy rate will be authorised or when such a rate will be published under a statutory exemption. Options 2 and 3 would therefore be less effective in ensuring a smooth IBOR transition

Sub-objective 3: Sustainability. Option 1, on the other hand, entails a certain risk to continuity where an administrator is unable or unwilling to effect the changes required by the competent authority or considers that continued publication of a legacy rate would result in material risk to the administrator. In these circumstances, the administrator could be tempted to withdraw from the process of designing the legacy rate, obliging the competent authority either to appoint a replacement or arrange for publication of the rate itself. This risk is obviously also inherent in relying on a statutory exemption for the legacy rate to be published (Option 3).

Option 2 would mitigate this risk because, even a simplified, authorisation procedure would ensure that the administrator has a clear and unambiguous permit to publish the rate as compliant with the BMR.

In order to avoid risks of discontinuity for an IBOR published with a changed methodology (or a changed underlying economic reality), it might be necessary to exempt the administrator from certain requirements of the BMR relating to the quality of the input data or to representativeness in relation to an underlying. This is especially acute, should the legacy rate be based on a formulaic approach based on risk free underlying plus a historic spread. As the administrator will no longer have any control over the benchmark and its methodology, the mandated legacy rate is only effective, if there is clarity on the “no liability” rule in publishing a mandated rate. In order to address the liability issue, Option 1 requires that the competent regulator is given clear and unambiguous powers to change the underlying methodology of the IBOR.

Options 1 and 3 are best in ensuring the “no liability” rule as the rate is mandated by a competent regulator (Option 1) or specifically exempt from BMR compliance (Option 3). Option 2 is least suitable in ensuring this principle, as the administrator must seek an authorisation, albeit in a simplified process.

9.1.4 Specific objective no. 4: Allow orderly wind-down of any critical benchmark:

Option 1 would provide the regulator with most comprehensive set of powers to ensure the orderly wind-down of a critical benchmark. The benchmark conversion toolkit under option 1 is flexible enough to be adapted to the particularities surrounding the cessation of any type of critical benchmark. The fact that under option 1, the regulator is very much involved in the various phases of the orderly wind-down of a benchmark and has a

considerable degree of discretion in designing the legacy rate, means that this option is suited to ensure the orderly wind-down of any critical benchmark. Although designed with the cessation of LIBOR in mind, option 1 would allow the regulator to mandate the change of methodology, make changes to the code of conduct of the benchmark or any other changes to benchmark rules, which are all general empowerments that can be applied in case of a cessation event of any critical benchmark.

Option 2 and 3 comparatively score lower against this objective.

Option 2 relies on private market participants to design and put forward a temporary legacy rate for the discontinued benchmark, with the regulator authorizing the rate via a simplified procedure at the end of the process. Since under this option the impetus for identifying the legacy rate comes, by design, from private sector initiatives, this option is dependent on the private sector incentives for rolling out a legacy benchmark. While this reliance on a private sector-led solution could be justified in case of LIBOR, given the systemic need to find a legacy rate, it may not make it most suitable for the wind-down of all benchmarks, in particular those where the stakeholder makeup is such that the private sector administrator may not be sufficiently incentivized to seek an authorisation for the legacy benchmark.

Option 3 is even more reliant on private sector initiative to find a legacy rate, while not affording litigation protection to the administrator publishing the rate in the form of an authorization by the regulator. Therefore, it scores lower than option 2 against objective no 4. Indeed, the increased legal risk for the potential administrator of the rate may discourage it to engage in designing and publishing the legacy benchmark, which makes the viability of this option dependent on the features of a specific benchmark, its user base and other incentives outside the scope of regulator's influence. While due to the varied and large user base of LIBOR, option 3 provides proper incentives for the private sector administrator to design a replacement rate, this may not be the case for other benchmarks. Therefore, option 3 is not well-suited to ensure an orderly wind-down of critical benchmarks across the board.

9.2 Loss of an EU-based risk management tool

9.2.1. Specific objective no. 1: Maintain exchange trading of currency forwards

The best policy options to ensure that the EU based derivative contracts hedging foreign exchange risk continue trading on regulated markets avoiding migration to less transparent over-the-counter (OTC) trading are Options 2 and 3 which provide for exemptions of the spot rates/the forward contracts referencing those spot rates from the scope of application of the BMR. Option 1 leaves some form of discretion to the competent authority which has to authorise the contract.

Option 1 scores the lowest in ensuring transparency for currency forward trading. Competent authorities would have a limited discretion to assess those contracts against the legislative requirements provided for the authorisation. Several contracts might not be suitable for being authorised and need to migrate to over-the-counter trading. Depending on the efficiency of the competent authority and on other administrative factors, in some

cases, the burden of complying with the requirements to seek individual authorisation for each hedging contract is likely to discourage the offer of exchange-traded foreign exchange contract relying on spot exchange rates.

Both Option 2 and option 3 would score highest in maintaining high standards of transparency. A statutory exemption, either for forward contracts referencing the spot rate or for the spot rate itself, entails legal certainty that contracts referencing those spot rates can be offered on regulated markets.

9.2.2 Specific objective no. 2: Maintain a risk management tool for EU exporters and foreign direct investors

Option 1 would score the lowest against this objective. Empowering competent authorities with a specific authorisation for forward contracts referencing spot exchange rates would make those contracts subject to the risk of not being permitted. A rejection of the authorisation would leave EU exporters and foreign direct investors in the impossibility to be protected against volatility risks by means of EU based derivatives contracts.

Option 2 and Option 3 would be the best in creating a legal framework allowing EU exporters and foreign direct investors, as well as EU banks, to continue to manage currency risk by means of EU based forward contracts. Providing exemptions for the relevant forward contracts or spot rates would ensure a clean “safe harbour” for this risk management tool.

9.2.3 Specific objective no. 3: Avoid EU banks’ undue exposure to currency risk

Option 2 and Option 3 would highest on maintaining EU banks current risk management approach. As explained in Section 2.2., the most important tool for currency risk management is a deep and liquid EU market for forward contracts. Banks only offer a hedge to a client if they can mitigate the resulting risk to themselves. While banks can hedge a certain level of exposures internally by offsetting client positions (aka as risk warehousing’), the ability to hedge currency risk with other banks in the interbank market and with a multitude of other market participants is a prerequisite of managing and being able to meet the bank’s internal risk limits.

This range of interests and participants increases market liquidity in a given forward contract and creates further opportunities to manage the bank’s net exposure. Preventing the emergence of a forward market for non-convertible currencies is therefore detrimental for bank’s risk management and both Options 2 and 3 are the most effective in granting European banks the most immediate access to the spot rates that are needed to calculate contractual obligations under the forward contracts.

Option 1 would also score high in maintaining forward contracts as efficient risk management tools, provided that the competent regulator authorises the relevant contracts within predictable timeframes. The competent authority would in fact be empowered with a scrutiny over contracts referencing those FX rates to verify certain

basic features of the rates⁴⁰ referred to in the contracts offered by EU banks which would allow a higher degree of supervision.

As the contract authorisation would require some time, Option 1 is slightly less efficient than Options 2 and 3.

9.2.4 Specific objective no. 4: Ensure EU banks' international competitiveness is not unduly hampered

Of the non-discarded options, options 2 and 3 would score highest in this regard. This is the result of the options not requiring the bank to take the initiative to seek the authorisation or the exemption for either the rate used or the contract offered.

Moreover, for option 2, and for option 3 once a rate is exempt, any EU bank could offer hedging contracts based on that rate, with the specificities of the contract offered unencumbered by any specificity of the authorisation. In that regard, an EU bank would thus be as free as any non-EU bank in offering hedging products.

Options 1 while still allowing EU banks to offer hedging products on rates that would currently not meet the requirements of the BMR, would clearly be more burdensome for an EU bank as it would need to seek the authorisation from its competent authority for each contract offered. This would certainly put it at a net disadvantage when compared to non-EU banks.

9 IMPACTS PER CATEGORY OF STAKEHOLDER

10.1 Disorderly IBOR transition

The main stakeholders affected by a disorderly IBOR cessation would be banks (both as IBOR contributors and as users of IBOR rates in both their borrowing and their lending activities), corporate borrowers, corporate and financial sector debt issuers, benchmark administrators, competent benchmark regulators and central banks. Retail users would only be marginally affected as the stock of retail mortgages referencing LIBOR is rather low. Potential impact on retail investors are nevertheless included in the list as EURIBOR references are common features in floating rate retail mortgages in Spain and Italy.

10.1.1 Option 1: Mandating conversion to a temporary legacy rate

Contributors

Option 1 will most likely no longer require panel bank submissions; they therefore do not require the engagement of the current IBOR contributors, resulting in a net reduction of both of costs and liabilities for these stakeholders. Legacy rates will typically take the form of a "tracker rate" of the relevant currency risk-free rate plus an appropriate spread to reflect the credit sensitive quality of an IBOR. As the spread will be calculated on the

⁴⁰ Such as whether the foreign exchange hedging contracts will refer to a sufficiently robust waterfall of settlement rate sources or options in: (i) a primary rate source; (ii) non-primary rate sources, including "fall-back rates", which may be published or unpublished.

historic mean difference between a risk free and a credit sensitive rate, it will be fixed and does not require transaction data from panel banks.

Administrators

Option 1 provides the highest degree of legal certainty to the administrator that is mandated to convert an IBOR into a temporary legacy rate. This option provides the regulator with the clearest mandate on all the issues that need to be considered before converting the existing IBOR into a legacy rate, such as sourcing of necessary input data, developing a new calculation methodology, and establishing surveillance procedures and publication tools.

Close discussions between the administrator and the competent regulator will be crucial in discussing any of these proposed methodology changes and the exercise of any of the new powers more generally. Option 1 is the only option that would allow for such a “forward-looking” engagement between the regulator and the competent authority, the reconciliation process for all other options is confined to the organisation of the IBOR cessation and the precise timing on when the withdrawal of the IBOR authorisation would take effect.

Option 1 is also the only option that provides up-front clarity on the required methodology for a legacy rate, allowing the administrator to engage, at an early stage, in sourcing and agreeing new data provision arrangements with third party providers (where necessary).

Option 1 best ensures that an administrator, which is compelled to publish an IBOR with a changed methodology (or even a changed underlying economic reality), is exempted from the requirements of the BMR on issues such as input data or appropriateness of the methodology; issues over which a mandated administrator will not have any control.

In order to grant the administrator with a legal defence (“liability shield”) in relation to the publication and use of a legacy rate, Option 1 grants the competent regulator clear and unambiguous powers to compel the administrator to change the methodology (and potentially the economic reality of the IBOR) and to compel the administrator to publish this converted legacy IBOR as a continuation of the previous IBOR. Option 1 leaves no uncertainty or confusion as to the exercise of these regulatory powers and their legal consequences. The precise regulatory mandate in Option 1 provides the administrator with an express safe-harbour or immunity offering protection from lawsuits. Option 1 implies that, since the regulator (acting in accordance with its statutory empowerments) mandates the methodology underpinning the temporary legacy rate, the administrator would not face liability or litigation risk in publishing the mandated legacy rate.

Another important aspect for administrators are potential licence fees to be paid upstream of producing the legacy rate that results from an IBOR conversion. With Option 1, the following considerations need to be taken into account:

Cost and charges associated with the administration of legacy rates depend on whether the administrator would need to license certain input data (e.g., risk-free rates, compounded risk-free term rates, forward looking risk-free rates). If these base rate RFRs are published by the private sector (e.g., the SIX Exchange publishes SARON), then licence fees would be due when a legacy rate is produced using the base rate as one set of input data. A private administrator of the RFR base rate would most likely calculate a fee

for the legacy rate administrator to integrate its RFR rate. Potentially, users would also have to pay a fee to the administrator of the base rate, once the legacy comprises a third party base rate as one of its components (although the latter scenario reflects current practice and might not apply to a legally mandated legacy rate).

On the other hand, for those RFR base rates that are published by central banks (the FED publishes SOFR, the BoE SONIA and the ECB € STR), no license fees might be due. But as soon as the mandated legacy rate would require use of a compounded version of the risk-free rate (a “term equivalent” risk free rate) that is compiled by a private administrator, such as Bloomberg, the legacy rate administrator would need to pay a license fee for the “term equivalent” version RFR.

Even if the mandated legacy rate administrator would be able to obtain the relevant inputs for free from, e.g., a central bank, it would still charge a license fee to establish a reserve fund to cover potential litigation risk. This is especially the case when the legacy rate is published in several jurisdictions, because some jurisdictions (such as the United States) do not offer the “liability shield” that is provided by Option 1 under an amended EU benchmark regulation. The potential amount of a license fee would depend on the administrator’s assessment of litigation risk and the amounts that would need to be set aside in reserve in order to cover this risk. The amounts might be lower if the state of NY (and other relevant US states) adopts a statutory fall-back mechanism. If they do not, fees for legacy LIBOR will be much higher.

Users

The legacy rate is designed as a “single replacement rate” for a discontinued IBOR. A single replacement rate would imply that there is one methodology which determines the rate. This would ensure that the fall-back rate is calculated in the identical manner across all asset classes and applies to all legacy contracts, regardless of the “governing law” of the contract. Option 1 will, therefore, also be suitable as a fall-back for multicurrency loan agreements; avoiding the insertion of a replacement rate for each IBOR currency is a clear benefit for benchmark users in the loan markets.

Users would also need time to assess and address any consequential changes in their risk positions and operations, and any potential contractual and legal impact. Where a change to the underlying economic reality of a benchmark is proposed (i.e. the rate no longer measures current unsecured bank funding costs but rather changes in risk free rates plus a fixed historical bank lending spread), the impact is likely to be greater, both in terms of economic risks, operations and legal contracts, and so will require more time for an administrator and users of a benchmark to assess and address this.

More specifically on the operating costs, these will likely turn out to be absorbed by the overall operational expenditure incurred by the users as part of the transition from IBORs to risk-free rates. This because the rate recommended as a fall-back rate for legacy IBOR contracts would most likely also emerge as the legacy rate mandated through the conversion process.

Since the features of the credit sensitive IBOR rate are fundamentally different from its successor benchmark based on a risk-free rate, the users will have to identify internal and external system changes, assess impacts on processes and controls, and implement system changes. However, the public policy commitment to IBOR reform and phase-out has been known to the industry for a few years already, and therefore the users will have

already started implementing the operational changes needed to accommodate the overall transition. Internally transferring tough legacy contracts to the legacy rate should thus represent a minor cost item in the overall operational expenditures incurred by the users in a wider transition context.

Option 1 is the only option that allows for a regulator-led public consultation on the material changes to an IBOR benchmark that may be required in converting such a benchmark into a sustainable legacy rate. As opposed to Options 2 and 3, Option 1 would provide up-front clarity as to legacy rate's input data, calculation methodology, and applicable surveillance procedures and publication tools. Option 1 therefore best ensures that the consultation result would directly translate into a "pre-conversion" notice that clearly sets out a seamless transition path from the previous IBOR to its legacy rate.

Option 1 would also require transparency for users and would best ensure that users have input into the IBOR conversion process. The consultation organised by a regulator would allow focus on specific aspects of the proposed changes such as, for example, risk implications and operational implications, or key variables in a calculation. With Option 1 market participants will have transparency and be able to assess the suitability of the converted benchmark.

In order to grant users with a legal defence in relation to the publication and use of a legacy rate, Option 1 grants the competent regulator clear and unambiguous powers to compel the administrator to change the methodology (and potentially the economic reality of the IBOR) and to compel the administrator to publish this converted legacy IBOR as a continuation of the previous IBOR. Option 1 leaves no uncertainty or confusion as to the exercise of these regulatory powers and their legal consequences. The precise regulatory mandate in Option 1 provides users with an express safe-harbour or immunity offering protection from lawsuits.

In terms of avoided cost of renegotiation for EU banks, Option 1, on account of the "flow through" principle that does not require any form of individual contract negotiations will potentially result in savings ranging from **EUR 793 million to 3.47 billion** per bank, depending on the exposures of the relevant credit institution (the lower figure represents a mid-tier and the upper figure a large EU corporate lender).

Option 1 would also reduce a potential and very approximately estimated small business burden of **EUR 1.9 billion** incurred in renegotiating their USD LIBOR loans and debt arrangements maturing beyond 2021 in the Eurozone.

The legacy rate option is the only option that does not require a statutory fall-back mechanism for the "tough legacy" contracts, as the original IBOR does not cease to be published, but will be published by the same administrator under the same name. This option is therefore the most straightforward as it does not require replacing all IBOR references in legacy contracts by a statutory fall-back provision in all jurisdictions whose laws govern those IBOR contracts (e.g., US, English, French or German contract laws). All other options, new authorization, exemption, etc. that rely on cessation of the existing IBOR would indeed face this issue.

In terms of avoiding a contract termination scenario, Option 1 is the safest option because of the lower litigation risk based on claims of contract frustration – since the rate is published by the same administrator under the same name.

With respect to potential licence fees to be paid upstream of producing the legacy rate and which may therefore have repercussions on the “downstream” license fee applied to users of the legacy rate, the following considerations apply:

- (i) Cost and charges associated with the administration of legacy rates depend on whether the authorised administrator would need to license certain input data (e.g., risk-free rates, compounded risk-free term rates, forward looking risk-free rates) or whether the authorised administrator would produce all the required inputs under its own authority.
- (ii) It would also be relevant whether some of the inputs are published by central banks (the FED publishes SOFR, the BoE SONIA and the ECB €STR) or whether the mandated legacy rate would require use of a compounded version of the risk-free rate (a “term equivalent” risk free rate) that is compiled by a private administrator, such as Bloomberg, the legacy rate administrator would need to pay a license fee for the “term equivalent” version RFR.
- (iii) Cost associated with the need to build a reserve fund to cover potential litigation risk would be less than with Option 1 as the authorisation would only cover publication in the EU. But while an authorisation would provide a “liability shield” against EU based litigants, the same rate might still be published in the United States where such protection would not apply. Therefore, a certain increase in fees to cover third country litigation cost might still be likely.

SMEs

Mostly as counterparties to business loans extended by financial institution, SMEs are one of the special interest groups impacted by the presented policy options. As noted in the report, some \$3.4 trillion of EU banks exposures can be attributed to business loans, however, no data on how much of that is attributable to SMEs is available – but certainly a significant part of it. Since SMEs as counterparties to these contracts are of various levels of sophistication, contracts vary in terms and there is no mechanism equivalent to ISDA protocol to enable *en masse* insertion of fall-back clauses, consent solicitation for the purpose of transitioning loans to risk free rates may prove to be challenging in case of SMEs. This is precisely why ensuring a mandatory legacy rate for tough legacy contracts plays an important role and will have significant positive impacts on SMEs. The replacement rate will ensure legal certainty for SMEs as to the applicable financing rate, which is an important factor for their continued smooth operation, especially in current circumstances when the COVID 19 crisis is putting at risk the very survival of many companies.

Regulators

Feedback received by ESMA⁴¹ and the UK FCA⁴² shows support for the empowerment of competent authorities with tools to minimise the potential disruption caused by the cessation of an IBOR, including tools that could enable the use of an alternative formula

⁴¹ ESMA response to the Benchmark review public consultation launched by the European Commission in October 2019: <https://www.esma.europa.eu/press-news/esma-news/esma-responds-european-commission-consultation-benchmark-regulation-review>

⁴² UK FCA feedback to the Roadmap for the BMR Review published by the European Commission in March 2020 <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12268-Review-of-the-Benchmark-Regulation/F512186>.

for the retiring benchmark's calculation that protects the economic position of contractual parties while the critical benchmark is retired.

The main impact would be on the competent authority charged with the conversion of a discontinued IBOR rate into a legacy rate in cooperation with the administrator, since that authority would be taking on the responsibility to mandate the appropriate methodology for the calculation of the legacy rate. As shown in Annex 4.1, all of the proposed alternative reference rates are based on a methodology which is based on the overnight (nearly) risk-free rates. In addition, panel bank IBORs are published for multiple currencies and various maturities (the most commonly used LIBOR tenors are for example one, three, and six months). An additional complication in determining the appropriate legacy rate is that the overnight risk free rate for USD borrowing (SOFR) is a secured rate and, in consequence, does not comprise a credit sensitive component reflective of banks' credit risk⁴³. Under this option, the decision on determining the credit spread equating the nearly risk-free overnight rate to the discontinued credit-sensitive rate would also rest with the regulator; the benchmark administrator will only need to publish it. Leaving such discretion to the regulator is consistent with existing Article 23(6)(d) BMR which allows the regulator to apply a (non-specified) methodology change.

However, it cannot be excluded that the regulator's decisions about the mandated methodology for the conversion of the benchmark would not give rise to litigation for misuse or abuse of discretionary powers. The risk of legal challenge equally holds true where ESMA would be in charge of designing the legacy rate, especially taking into consideration the case law stemming from *Meroni* judgement⁴⁴, which set limitations on the margins of discretion that can be exercised by European agencies.

Another risk for the competent regulator that is specific to Option 1 is that the relevant administrator might seek to withdraw from the process of designing and ultimately publishing the legacy rate, arguing that the public sector can best reduce litigation risk by assuming itself the publication of such a rate. The risk-free overnight rates published by central banks can be cited as examples for the public sector publishing benchmarks themselves.

In order to mitigate this "withdrawal" risk, Option 1 might have to provide for a process whereby the administrator is permitted to withdraw from the process of designing the legacy rate and the competent regulator permitted to appoint a replacement or arrange for publication of the rate itself. The conditions for such a withdrawal would have to be carefully structured and would require the mandated administrator to set out cogent reasons for withdrawal.⁴⁵

Central banks

Central banks generally take care of money markets within their own jurisdictions. Central banks often use interbank rates to gauge the transmission of monetary policy. As

⁴³ Secured rates, being overnight and collateralised by US treasuries, have a no credit component at all.

⁴⁴ C-9/56 and C-10/56 (*Meroni v High Authority* [1957/1958] ECR 133)

⁴⁵ For example, as to why it is unable to effect the changes to the IBOR rate required by the regulator, why it considers that it cannot continue publishing the benchmark with the changed methodology on a sustainable basis or why it considers that to continue do so would result in material risk to the administrator

a tool to assess whether monetary policy is effective, risk-free rates are more suitable than rates that reflect liquidity and credit risk. Therefore, central banks would not generally be favourable to large-scale use of credit sensitive reference rates. In addition, the FSB takes the view that corporate borrowers should not be impacted by IBOR rate spikes in times of crisis, especially since banks have more “crisis-proof” stable funding sources, such as deposits or long term debt that does not reference an IBOR rate.

However, the replacement rate would be confined to legacy contracts and, therefore, would represent a temporary reference rate with a ring-fenced user group. Therefore, and unless they are acting in the capacity of competent authorities or as bank regulators, the impacts of the continuity option on the ECB or the European national central banks should therefore be limited.

When Central Banks act as bank supervisors they would be involved and consulted upon in the pre-cessation procedure by the competent authority. In case of EU critical benchmarks, central banks acting as bank supervisors would also be part of the decision making process as part of the college of supervisors⁴⁶.

Mortgage holders

All options, if based on risk-free rates with an added credit spread will have a slight “calculation” disadvantage for private mortgages. Retail user rates are invariably based on a “forward looking” calculation methodology. Retail users rely on the fact that their monthly mortgage payments are predictable and hence the amount of the next instalment of their mortgage repayment should be known well in advance of the payment date. As it is expected that, in designing the IBOR bridging rate and defining its characteristics, the national competent authorities and/or the index administrator would align themselves with the fall-back rate and methodologies proposed by the different private sector working groups, there is a risk that, for the sake of simplicity, these legacy rates will, across all asset classes, including mortgages, be calculated by compounding the daily risk-free rates "in arrears" to create a term rate. As compounding can only be done at the end of the reference period, the precise interest payment will not be known before the payment date. However, there are certain backward-looking methodologies, such as last reset, that calculate due interest based on the observation period preceding the interest rate period, which consequently allow mortgage holders to know the instalment of their mortgage repayment well in advance of the payment date.. Nevertheless, applying these calculation methodologies to mortgages comes with challenges as the different methodology used to determine the rate applicable to the hedging instrument would result in hedging inefficiencies or even discontinuation of the hedging relationship.

The socio-economic impacts on mortgage holders under this policy option would be positive, since this option would provide them with legal certainty as to the benchmark rate their contracts would fall back to upon specified trigger event. Legacy LIBOR denominated mortgages do not have suitable contractual fall-backs in place to appropriately accommodate the cessation of LIBOR, opening mortgage holders to economic uncertainty about the applicable interest rate upon LIBOR cessation. The same is true for other IBOR-denominated mortgages which fall into the category of tough legacy contracts. Given the robust powers conferred to the regulator, this option would

⁴⁶ The need for bank supervisors to be part of the non-representativeness assessment was raised also in the feedback received to the public consultation by single national competent authorities (French, Spanish and Danish).

ensure that tough legacy mortgage contracts transition to an appropriate alternative rate, which would represent an economic analogue to the discontinued benchmark, ensuring that the impacts on financial obligations of the mortgage holders are limited. However, it should be noted that the fact that mortgage holders, in most case where backward methodologies would be used for the calculation of the applicable monthly interest rate, would not know their mortgage repayment amounts at the beginning of the interest rate period may make it harder to manage their personal finances.

10.1.2 Option 2: Simplified authorisation for a temporary legacy rate

Contributors

The impacts on the contributors under this option are analogous to the ones detailed under option 1. As all potential IBOR replacement rates, except for the permanent replacement rate, will no longer be based on panel bank submissions, all of the mooted (risk free rate plus a credit spread) options are a net positive for current IBOR contributors – both in terms of costs saved and liabilities avoided.

Administrators

Option 2 provides some degree of legal certainty to the administrator that will need to seek an authorisation in order to supply a temporary legacy rate. This option provides some clarity as to the issues that need to be considered before authorising a legacy rate, such as sourcing of necessary input data, developing a new calculation methodology, and establishing surveillance procedures and publication tools.

Close discussions between the administrator and the competent regulator will be crucial in discussing any of these proposed legacy rates prior to authorisation. Option 2 allows for some degree of “forward-looking” engagement between the regulator and the potential administrator, but the mandatory reconciliation process is necessarily confined to the organisation of the IBOR cessation and the precise timing on when the withdrawal of the IBOR authorisation would take effect. The potential administrator seeking authorisation might also not be identical with the administrator involved in the reconciliation process.

Option 2 provides less up-front clarity on the required methodology for an authorised legacy rate, obliging the administrator to propose its own ideas on sourcing and agreeing data provision arrangements with third party providers (where necessary).

Option 2 would ensure that an administrator which is authorised to publish an IBOR with a changed methodology (or even a changed underlying economic reality), is insured against compliance-related litigation on issues such as input data or appropriateness of the methodology.

Since the regulator (acting in accordance with its statutory empowerments) authorises the methodology underpinning the temporary legacy rate, the administrator would face reduced liability or litigation risk in publishing the mandated legacy rate.

Users

The legacy rate is designed as a “single replacement rate” for a discontinued IBOR. A single replacement rate would imply that there is one methodology which determines the rate. This would ensure that the fall-back rate is calculated in the identical manner across all asset classes and applies to all legacy contracts, regardless of the “governing law” of

the contract. Option 2, as the regulator might receive different applications from different administrators of a potential legacy rate, might not be able to maintain the design of a “single replacement rate”. As there are no legal powers in the BMR, or in any other law governing authorisation requirements, to apply quantitative restrictions on the amount of authorisations granted for a particular economic activity or sector, there is no remedy for multiple legacy rates being published. This makes Option 2 unsuitable as a fall-back for many types of agreements, such as multicurrency loan agreements.

Users would also need time to assess and address any consequential changes in their risk positions and operations, and any potential contractual and legal impact. Where a change to the underlying economic reality of a benchmark is proposed (i.e. the rate no longer measures current unsecured bank funding costs but rather changes in risk free rates plus a fixed historical bank lending spread), the impact is likely to be greater, both in terms of economic risks, operations and legal contracts, and so will require more time for an administrator and users of a benchmark to assess and address this.

The considerations on operational costs for users, discussed under option 1, are also valid in the option 2 scenario.

Option 2 allows for an administrator-led public consultation on the material characteristics of a legacy rate. Option 2 could provide potential users with some up-front clarity as to legacy rate’s input data, calculation methodology, and applicable surveillance procedures and publication tools. Option 2 might not, however, ensure that the administrator-led consultation would directly translate into a seamless “flow through” transition path from the previous IBOR to its legacy rate. This is because the benchmark that results from the consultation would still need to seek authorisation and the regulator’s “pre-cessation” notice in Option 2 is, by necessity, silent on the characteristics of a potential successor rate.

Option 2 would also bring some transparency for users and would ensure that users have input into the IBOR replacement process. The consultation organised by a potential administrator would allow focus on specific aspects of the proposed changes such as, for example, risk implications and operational implications, or key variables in a calculation. With Option 2 market participants will have transparency and be able to assess the suitability of the replacement benchmark.

Option 2 would require a statutory fall-back mechanism for the “tough legacy” contracts, as the original IBOR will cease and be replaced by a new legacy rate. Option 2 is therefore not able to ensure that the authorised legacy rate automatically “flows through” into legacy contracts. To achieve the intended result, Option 2 requires a statutory fall-back provision in all jurisdictions whose laws govern those IBOR contracts (e.g., US, English, French or German contract laws).

The above referenced potential cost savings for both corporate banks and the EU small business sectors are therefore much more tentative and uncertain with Option 2 when compared with the “flow through” approach in Option 1.

In terms of avoiding a contract termination scenario, Option 2 is not very stable as the authorised legacy rate is potentially published with a time gap after cessation of the IBOR, which entails a high degree of litigation risk based on claims of contract frustration.

With respect to potential licence fees to be paid upstream of producing the legacy rate as part of an authorisation, and which might have repercussions on the “downstream” license fee charged to users, similar consideration as those made in the context of Option 1 would apply.

SMEs

The considerations under option 1 are also valid here, with a net positive effect on SMEs. Under this option the regulator has fewer influence over the design of the legacy rate and intervenes at the end of the process only to authorize the legacy benchmark. This means the regulator has less power to cater to any special needs of SMEs in designing the legacy rate methodology, if any would arise.

Regulators

Regulators might come under pressure to mandate a legacy rate that caters to the needs and requirements of individual asset classes, such as derivatives, debt and loan markets. For example, there are certain sectors and borrowers in the syndicated loan market which rely on forward-looking term rates (e.g. the export finance market, trade finance and small borrowers without treasury functions) and for which the backward looking methodology recommended by International Swaps and Derivatives Association for derivatives would not be suitable.

Any potential litigation risk could be effectively mitigated if the regulator aligns with the fall-back rates chosen by market participants themselves. This would, however, require that the private sector working groups that are currently considering term structures for the new risk-free reference rates would indeed agree on asset class specific term structures.

The main advantage of the authorisation option is that the regulator(s) could authorise several asset-specific fall-back rates to cater for the particular needs of different users. The disadvantage of several fall-back rates is that it impedes standardised and liquid hedging tools that hitherto applied across asset classes.

Another advantage for regulators with Option 2 is that the competent regulator does not have to deal with the “withdrawal” risk associated with Option 1.

Central banks

The impacts on central banks under this option are analogous to the ones detailed under option 1. Unless they are acting in the capacity of bank regulators, the impacts of all three options on the ECB or the European national central banks should be limited. The ECB or national central banks would not be involved in providing nor authorising (or otherwise approving) the successor rate to IBOR.

Mortgage holders

Since under this option, the regulator might have more leeway to create product-specific rates best adapted to a given group of assets, this may result in legacy rate better suited for the needs of mortgage holders.

Such a rate would likely be based on a forward-looking methodology with payments known at the beginning of the interest period. Individual mortgage holders might indeed find it difficult to adapt to a backward looking rate where payments are only clear at the end of the reference period. However, mandating such an option would depend on the

existence of sufficiently liquid markets in IBOR derivatives, as data therefrom would be used as input for calculating the legacy rate using the forward-looking methodology. Appropriate levels of liquidity in those markets have still not been reached and therefore it is questionable whether this theoretical advantage could indeed materialize in the IBOR phase out process, should this policy option be pursued. However, there are certain backward-looking methodologies, such as last reset, which are consistent with the need of mortgage holders to know the interest rate at the beginning of the period, that could also be considered by the competent regulator in exercising its conversion powers.

Regarding the socio-economic impacts on mortgage holders, the considerations set out under option 1 are equally valid under this option – the foreseen procedure for the orderly wind-down of critical benchmark would benefit mortgage holders by removing the legal and economic uncertainty for tough legacy mortgage contracts with no suitable fallback rate upon cessation of IBOR rates.

10.1.3 Option 3: Exemption for a temporary legacy rate

Contributors

The impacts on the contributors under this option are analogous to the ones detailed under option 1. As all potential IBOR replacement rates, except for the permanent replacement rate, will no longer be based on panel bank submissions, all of the mooted options are a net positive for current IBOR contributors – both in terms of costs saved and liabilities avoided.

Administrators

Option 3 provides no legal certainty to the administrator that will publish a legacy rate of its own design pursuant to a statutory exemption. Option 3 provides no prior clarity as to the issues that need to be considered before publishing a legacy rate, such as sourcing of necessary input data, developing a new calculation methodology, and establishing surveillance procedures and publication tools.

Under option 3, there would be no “forward-looking” engagement between the regulator and a future benchmark administrator; the mandatory reconciliation process would be confined to various operational issues connected to the cessation of IBOR and determining the precise moment as of which the withdrawal of the IBOR authorisation would take effect.

Option 3 provides no up-front clarity on the required methodology for an authorised legacy rate, obliging the administrator to assume sole responsibility on data sourcing and agreeing data provision arrangements with third party providers (where necessary).

This option also does not provide the administrator with any insurance against compliance-related litigation on issues such as input data or appropriateness of the methodology.

Users

The legacy rate is designed as a “single replacement rate” for a discontinued IBOR. A single replacement rate would imply that there is one methodology which determines the rate. This would ensure that the fall-back rate is calculated in the identical manner across all asset classes and applies to all legacy contracts, regardless of the “governing law” of the contract. Since under option 3 various administrators may publish different versions of a legacy rate under the new statutory exemption, this would likely result in compromising the principle of a “single replacement rate”. This makes Option 3 less

suitable as a fall-back for certain types of contracts, such as multicurrency loan agreements.

Option 3 does not require any type of public consultation on the material characteristics of a legacy rate, although a potential administrator may voluntarily do so. In that case, Option 3 could provide potential users with some up-front clarity as to legacy rate's input data, calculation methodology, and applicable surveillance procedures and publication tools. However, Option 3 does not ensure that the administrator-led consultation would directly translate into a seamless transition path from the previous IBOR to its legacy rate. This is because the benchmark that results from the consultation might still be published with a time lag after the expiry of the previous IBOR rate in accordance with the timelines set out in the regulator's "pre-cessation" notice. As in Option 2, the pre-cessation notice would be, by necessity, silent on the characteristics and go-live of a potential successor rate. In conclusion, the reliance on solely market forces to produce a temporary legacy rate, without involvement of the regulators, may result in suboptimal user participation in the rate design process and differential legacy rate offerings. Users may find it hard to navigate such a post-cessation landscape.

Option 3 would require a statutory fall-back mechanism for the "tough legacy" contracts, as the original IBOR will cease and be replaced by a new legacy rate. Option 3 is therefore not able to ensure that the authorised legacy rate automatically "flows through" into legacy contracts. To achieve the intended result, Option 2 requires a statutory fall-back provision in all jurisdictions whose laws govern those IBOR contracts (e.g., US, English, French or German contract laws).

Potential for renegotiation cost savings for both corporate banks and the EU small business sectors is therefore much more modest with Option 3 as compared to the "flow through" approach in Option 1.

In terms of avoiding a contract termination scenario, Option 3 is not very stable as the authorised legacy rate is potentially published with a time gap after cessation of the IBOR, which entails a high degree of litigation risk based on claims of contract frustration.

As opposed to the other two options, the exemption option requires that the co-legislators themselves decide on the duration of the exemption. Previous BMR experience with transitional provisions enshrined in primary legislation demonstrate that it is very difficult to establish appropriate durations in a legislative instrument. This exemption option would therefore create an unstable situation for users.

With respect to potential licence fees to be paid upstream of producing the legacy rate as part of an authorisation, and which might have repercussions on the "downstream" license fee to be paid by users, similar consideration as those made in the context of Option 2 would apply.

Finally, the considerations on operational costs for users, discussed under option 1, are also valid in the option 3 scenario, with an important addition. Since the legacy rate under option 3 would not have to be BMR compliant, this could theoretically allow for more divergence from the fall-back rates proposed by the private industry groups.

SMEs

The considerations under option 2 are also valid here.

Regulators

Under this option the regulator does not intervene, leaving the entire issue of how to structure an appropriate legacy rate to the private sector. While advantageous in terms of flexibility, this option gives the regulator no control with respect to the methodology or underlying data used to calculate the legacy rate. Since this option entails no involvement of the regulator in the establishment of the methodology underpinning the rate, the regulator cannot ensure emergence of a single replacement rate that presents the optimal solution for all market participants in their entirety.

An additional disadvantage of the exemption approach is the lack of legal certainty as to the time during which the rate is published. As the regulator does not intervene at all, there would be no legal means to compel an administrator or other entity that publishes the exempt rate to maintain publications throughout the entire duration of the legacy rate exemption specified in the BMR. The exemption option would therefore seem too fragile and prone to considerable "cessation risk" itself.

On the other hand, no liability for the successor rates published under an exemption is a positive factor for regulators. On the negative side, regulators would be seen as not contributing to the resolution of the "tough legacy" issue.

Another advantage for regulators with Option 2 is that the competent regulator does not have to deal with the "withdrawal" risk associated with Option 1.

Central banks

The impacts on central banks under this option are analogous to the ones detailed under option 1. Unless they are acting in the capacity of bank regulators, the impacts of all three options on the ECB or the European national central banks should be limited. The ECB or national central banks would not be involved in providing nor authorising (or otherwise approving) the successor rate to IBOR.

Mortgage holders

As detailed under option 1, this option may result in a suboptimal rate calculation methodology applied to mortgages referencing IBORs. Indeed, all of the options, if based on RFR compounded in arrears (backward-looking methodology) with an added credit spread will have negative impacts on private mortgages.

With regards to socio-economic impacts on mortgage holders, similar to option 1 and 2, the net effect of option 3 would be positive where it the procedure for the .

10.2 Loss of EU-based risk management tools

The main stakeholders affected by the loss of EU based foreign exchange hedging contracts fall into two broad categories: the buy side and the sell side.

The sell side consists of the large EU investment banks that *sell* the foreign exchange forward contracts and therefore sell protection to investors.

The buy side comprises entities (mainly EU corporates) that are active in business in non-EU countries and undertake foreign exchange spot transactions. Those entities are therefore exposed to the risk of convertibility and fluctuation of third country currencies and need to manage such risk *buying* protection against exchange rate volatility. The buy side comprises corporate accounts, asset managers that invest in foreign currency assets and any other trading account that is exposed to currency volatility, such as hedge funds, proprietary traders, commodity traders and also retail accounts.

One of the options, Option 1, which rely on contract authorisation, also impact regulators.

10.2.1 Option 1: Contract authorisation

Sell side

EU dealer banks offering derivatives for currency hedging would be positively impacted by a “per contract” authorisation rule. This authorisation, if exercised to the full, would allow them to continue offering new forward contract or roll over existing contracts to their buy side clients, including forward contracts traded on public trading venues, also after the end of the transitional period; in addition, they could continue to engage in new forward contracts to hedge their own exposure in foreign currencies, including with forward contracts traded on public trading venues.

However, under this specific option, EU dealer banks would need to obtain a “per contract” authorisation before offering the forward contract. This would create an additional administrative burden as previously no authorisation was required for them when offering forwards, either as an internaliser or on a regulated trading venue. Also, if the grant of authorisations would be slow or not keep up with the emergence of new types of forward contracts, this time lag might introduce inefficiencies in hedging foreign exchange risk. This procedure may therefore entail costs that would make their forward contracts more expensive and less competitive compared to those of non-EU counterparties not subject to similar requirements. Only part of these costs would be in fact offset by the savings (shared by all the other options) for EU dealers who would no longer have to verify on a case by case basis whether currency spot rates referenced in their forward contracts have been recognised or endorsed for use in the Union.

Buy side

Under this option, the EU buy side (mainly EU corporates active in business in non-EU countries exposed to fluctuations of such third country currency) would be positively impacted. This option would allow them to continue hedging with forward contracts offered by EU banks and/or traded on an EU exchange, making use of the same range of instruments and counterparties as they are currently doing. The downside of this option is that authorisations might not be able to keep up with both demand and supply of new forward contracts. Furthermore, authorisation processes can be lengthy and would likely increase the cost of hedging instruments offered by EU banks as compared to the offerings by non-EU banks (which would not have to go through such authorisation procedure). The new costs might work as a disincentive for EU entities to remain in the forward hedging business, potentially also reducing the efficiency of their own risk management.

EU Regulators

This option puts a considerable burden on the regulators competent for the supervision of the relevant listing venues of the foreign exchange hedging contracts (be they regulated markets or multilateral trading platforms) which would have to exercise the new BMR power to authorise individual listed contracts. Considering that the current supervision of trading venues does not comprise the authorisation of individual contracts traded on a venue, this policy choice would therefore require investments by regulators in acquiring expertise to execute the new task. Trading venue regulators are not currently equipped to deal with individual contract authorisations.

On the other hand, this current lacuna in regulatory expertise could be remedied as the regulator should be required to take into account in its scrutiny some basic contract features, such as whether the foreign exchange hedging contracts will refer to a sufficiently robust waterfall of settlement rate sources or options in: (i) a primary rate source; (ii) non-primary rate sources, including "fall-back rates", as an orientation on whether a contract should be authorised or not.

10.2.2 Option 2: Contract exemption

Sell side

Considering that this exemption option avoids the risk of option 1 that contract authorisations cannot keep pace with supply and demand for hedging tools, EU dealer banks offering derivatives for currency hedging would be even more positively impacted by new rules exempting traded contracts from the requirement to use BMR-compliant rates for hedging from risk of currency volatility. The amendment would allow them to continue offering hedging contracts via public trading venues to the buy side after the end of the transitional period; in addition, they could continue use hedging tools to hedge their own exposure in foreign currencies, including on public trading venues, also after the end of the transitional period.

Without scrutiny by a competent authority over BMR compliance of rates referenced in such contracts⁴⁷, however, EU Banks might have to support the cost to reinforce their internal risk management procedure in order to ensure the financial stability of their balance sheet would not be negatively impacted by an excessive exposure to foreign exchange risk in those third countries' currencies. Part of these costs would however be offset by the savings (shared by all the other options) realized by no longer needing to check whether the currency spot rates used as reference in their hedging contracts have been duly recognised or endorsed for use in the Union. The additional cost would certainly be outweighed by the advantage of having deeper liquidity pools of forward exchange contracts and contract counterparties that could all trade forward contracts among each other to hedge their respective currency exposures.

Buy side

Under this option, the EU buy side would be very positively impacted. The contract exemption would allow them to continue using EU-traded contracts to hedge their exposure in foreign currencies also after the end of the transitional period, making use of the same instruments and counterparties as they are currently doing. Considering that

⁴⁷ To be noted that since this option would not force the sell side to move to (less transparent) OTC trading and thus outside of the current scope of BMR, it would allow competent authorities to have more visibility over these instruments as their trading would remain on "lit" markets

under this option, EU banks would not have to incur further costs under this option, the price of the protection from the currency risk would remain approximately unvaried.

Regulators

This option would not have impacts on competent authorities as they would not have a role in determining the scope of the exemption for hedging contracts. An advantage for regulators would be that they would have fewer recognition/endorsement applications for foreign exchange spot rates to process (and decide on their BMR compatibility).

10.2.3 Option 3: Rate exemption

Sell side

EU dealer banks offering forward contracts for currency hedging as well as investment funds and hedge funds would be very positively impacted. The amendment would allow them to continue offering all existing forward contract to hedge foreign exchange rate fluctuations on public trading venues also after the end of the transitional period. In this respect, option 3 is more future-proof than options 1 and 2.

On the negative side, the availability of third country rates would depend on the scope of the exemption as formulated by the co-legislators and any adaptation might require (again) changing the primary legislation.

Buy side

EU end clients of third country foreign exchange benchmarks would be very positively impacted by the policy outcomes of this option. The amendment would allow them to continue entering into forward contracts referencing spot exchange rates with EU banks and trade these contracts with other EU counterparts on transparent trading venues. The high levels of liquidity that currently characterise the EU forward markets for non-convertible currencies would be preserved.

Regulators

This option would not have impacts on competent authorities as they would not have a role in determining the scope of the exemption for currency rates. However, lower numbers of recognition/endorsement applications for foreign exchange spot rates to process (and decide on their BMR compatibility) would reflect positively on their workload.

11 HOW DO THE OPTIONS COMPARE?

11.1 Disorderly IBOR transition

In terms of design features, it is of essential that all temporary IBOR successor rates (Options 1 to 3) will very likely switch to the same underlying (risk free rates plus a historic spread) as a basis to establish the synthetic IBOR rate. It is essential that all IBOR exposures, be it derivatives, money markets, bonds or loans, in a particular currency revert to the same replacement rate in case the relevant currency IBOR is discontinued. The permanent replacement option, on the other hand, would be a total game changer as it introduces a customised bank yield rate that will certainly provide an alternative for the “niche” market of bank funding. The bank yield rate might be less

suitable as an “across-the-board” replacement rate that also comprises derivatives and corporate debt.

In terms of efficiency to achieve the stated aim – creating more legal certainty as to valuations of tough legacy contracts – the **mandated temporary legacy rate** is the most straightforward, as it avoids considerable debate on statutory powers to embed the modified IBOR in legacy contracts. All alternative options on temporary legacy rates would be saddled with the issue that the legacy rate is not a legal continuum to the IBOR rate it intends to replace, albeit for a limited time-period and ring-fenced to a pre-defined user community (parties to tough legacy contracts).

The main issue with a statutory fall-back mechanism in the BMR is that such tool might cause considerable legal debate and involve the need to adopt statutory fall-back provisions in several European Member States. Inserting the statutory fall-back as a corollary of the BMR reform might be easier, but might also expose the EU institutions to arguments of taking action that is *ultra vires* by adopting rules pertaining to contract law.

The main advantage of the **authorised temporary legacy rate** is that this authorisation would not be tied to the original administrator of the critical benchmark, giving the regulator more choice in who should publish the legacy rate. The authorisation approach would also provide regulators from jurisdictions different than that where the original authorisation was granted powers to authorise publication of a legacy rate (e.g., if there was a particularly pronounced user dependency in that jurisdiction). This option would therefore score high with those that are concerned by **regulatory autonomy**, hence most likely jurisdictions with a large user community, but not the home country of the benchmark administrator. Another advantage of the authorisation approach would also be that the competent supervisory authority could determine and, if necessary, recalibrate the duration of the authorisation or even consider authorising customised replacement rates for different asset classes.

The main disadvantage of the “authorisation” approach would be that it opens the Pandora box of whether the BMR follows the “administrator” or the “per benchmark” approach. Switching, only because of tough legacy contracts, to a “per-benchmark” to authorisation might have unintended design consequences for the entire BMR structure. These might only emerge in practical application and would then raise the need for additional BMR amendments, which makes the authorisation approach not entirely “future proof”, leading to the potential need to amend the BMR again, once the full consequences of the switch to “per benchmark” authorisations emerge. In addition, authorising several legacy rates per asset class would not result in cross-asset class hedging capacities being available to the same extent than with a single replacement rate.

The **exemption option** would be more future proof as the scope and duration of the exempt benchmark would be set out in the statute itself. As the exemption for a temporary IBOR legacy rate would be limited in time, the “per benchmark” exemption would not set a precedent for the remainder of the rule-book.

A major disadvantage of the **exemption approach** would be the need for the legislator to decide on a statutory time-line during which publication of the bridging rate was exempt from BMR compliance while still being published. Previous experience with transitional provisions enshrined in the BMR (for third country benchmarks) demonstrate that it is very difficult to establish appropriate duration for temporary derogations in a legislative instrument. Determining the duration of a derogatory rules is usually better vested in the

implementing measures taken by the competent regulators. An additional disadvantage of the exemption approach is that there would be no regulatory tools to compel an administrator or other entity that publishes the exempt rate to maintain publication throughout the period necessary to wind down tough legacy stock (a temporary exemption could no longer rely on mandatory contribution or mandatory administration powers).

Table 5 – Comparison of the IBOR options

	Effectiveness			Efficiency	Coherence	Total
	Legal certainty for all LIBOR contract parties	Better balance sheet risk management for EU banks	Avoidance of moral hazard			
Baseline	0	0	0	0	0	0
Option1 Mandating conversion into a legacy rate	+++	++	++	++	0	9
Option2 Authorisation of a legacy rate	++	++	+	+	++	8
Option 3 Exemption of legacy rate	+	+	++	+	++	7

Note: Magnitude of impact as compared with the baseline scenario (the baseline is indicated as 0): +++ strongly positive (score 3); ++ very positive (score 2); + positive (score 1). For the total, due to their importance, the Effectiveness criteria are weighted double.

11.2 Loss of EU-based risk-management tools

Ensuring continued usage of foreign exchange spot rates is crucial to determine the payoff under a hedging contract. Authorising the contract instead of the spot rate (that is a mere ingredient to the contract) tackles the issue of continued access head on. All the options would therefore have the advantage of creating a good level of legal certainty and would dispense EU dealer banks from the necessity to verify whether any of the underlying spot rates have been recognised or endorsed for use in the Union.

On the other hand, the **contract authorisation** option (**option 1**) would entail an administrative burden for supervised entities, because they would need to seek authorization for every new category of hedging products. In addition it might require investments on the side of regulators, because they need to take on the additional task of authorising contracts and checking, e.g., the robustness of contractual waterfalls in case

The main drawback of the authorisation option, compared to the other 3, lies in a lack of consistency of the current BMR approach, entailing a radical departure from the initial philosophy of the BMR which was meant to require authorisation of benchmark administrators not the individual contracts or products referencing the rate. A deficiency of this option is also the lack of future-proof breath. The authorisation option would therefore risk creating an inconsistent framework and potentially confusion on compliance matters among different market participants.

This last concern would also apply to **option 2 (contract exemption)** as, again, the point of attachment for the exemption would be the contract and not the rate that is referenced in determining payments due under the hedging contract. The exemption option would, nevertheless, score higher than option 1 in terms of reducing the cost for market participants and regulators, as no individual contract assessments and authorisations are necessary. The lack of contract authorisations might, on the other hand, make the hedging contracts slightly less robust than with option 1, although the actual value of a “per contract” authorisation process remains unproven, especially since the BMR did not rely on this tool before.

Option 3 (rate exemption) would score higher than the previous two options in terms of consistency with the original philosophy of the BMR, as the exemption for public policy rate is already embedded in the BMR philosophy of exempting policy rates published by central banks. In addition, if the exemption is formulated with the necessary degree of flexibility, it would also be suitable to cater to other policy rates that, for reasons of monetary or other policy goals, are produced in the relevant third countries under the guidance and control of central banks or other policy makers, such as national treasuries. This would make option 3 score more in terms of being future proof compared to the previous two options.

Option 3 would also tackle one of the design flaws of the BMR, which is to require BMR compliance for third country spot exchange rates which are so volatile that an EU-based market for forward contracts has developed precisely with the aim of hedging against the volatility of the relevant spot rate.

Table 6 – Comparison of the 3rd country options

	Effectiveness				Efficiency	Coherence	Total
	Maintain transparency in FX derivatives trading	Maintain risk management for EU exporters and foreign direct investors	Avoid EU banks' undue exposure to currency risk	Ensure EU banks' competitiveness			
Baseline	0	0	0	0	0	0	0
Option 1 contract authorisation	+	-	++	+	+	--	2
Option 2 Contract exemption	+++	0	+	++	+++	--	7
Option 3 Rate exemption	+++	0	+	++	+++	0	9

Note: Magnitude of impact as compared with the baseline scenario (the baseline is indicated as 0): +++ strongly positive (score 3); ++ very positive (score 2); + positive (score 1); ---strongly negative (score -3); --very negative (score -2); - negative (score -1).

11.3 Preferred option

11.3.1 Orderly IBOR transition

In light of the above, the **Option 1** is the preferred option. Option 1 gives the regulator a high degree of control over the orderly-wind down of a critical benchmark by equipping it with broad benchmark conversion powers, aimed at ensuring that there is a temporary rate to accompany the expiry of tough legacy contracts referencing the benchmark in cessation. This option combines the positive aspect of the authorisation option – the ability to calibrate the duration of an authorisation at sub-legislative level – with the main

advantage it has over all alternatives – that there is no need to create a statutory fall-back whereby this legacy rate “flows through” and directly replaces all existing IBOR references in tough legacy contracts.

In terms of regulation and supervision, Option 1 also scores high in providing the competent regulator with the tools to restrict usage to the legacy portfolio (the “no new flow” rule).

11.3.2 Loss of an EU-based risk management tool

In light of the described impacts, **Option 3** is the preferred option. This approach would enable EU supervised entities to continue referencing third country foreign spot exchange rate for non-convertible currencies on EU based forward contracts. At the same time it would maintain consistency within the Benchmark Regulation and not require regulators to authorise individual forward contracts.

12 HOW WILL ACTUAL IMPACTS BE MONITORED AND EVALUATED?

12.1 Orderly IBOR transition

Table 7 – Monitoring and evaluation – orderly IBOR transition

Objectives	Monitoring by EU institutions	Monitoring by competent authorities
Competitiveness (Safeguard competitive position of European banks by ensuring continued ability to manage assets vs liabilities)	<p>FISMA services remain in regular contact with EU banks represented in the EURO RFR in order to assess whether the cost of consent solicitation or other IBOR transition cost have been minimised in the intended manner by avoiding renegotiation of legacy stock. Banks will submit regular updates concerning the evolution of their legacy portfolios maturing after 2021 in all four relevant asset classes: loans, debt issuances, debt holdings, corporate deposits and derivatives.</p> <p>Banks will specify how much of these portfolios could be renegotiated using standardised protocols (ISDA), how much could be individually renegotiated using a rate different from the fall-back rate and how much of the portfolio is indeed “wound down” using the fall-back rate that flows through into all of their existing USD LIBOR contracts.</p> <p>On the basis of such contacts and of the report received by competent authorities, the European Commission will report to the co-legislators in 2025 on how many contracts are still pending at that stage and whether the legacy rate should be maintained for LIBOR contracts maturing until 2028. The European Commission’s report will contain recommendations on the future of the legacy rate and will be transmitted to Council, Parliament and ESMA.</p>	All NCAs with supervised entities that are affected by the “legacy contract” issue will regularly report to the competent authority which mandated the conversion as well as to the European Commission [and to ESMA] on the evolution of the legacy stocks in their respective jurisdictions.
Robustness of the legacy rate.	FISMA services remain in regular contact with EU banks represented in the EURO RFR in order to assess whether the legacy rates ensures coverage of all legacy contracts in the intended manner (no renegotiation of individual contracts necessary, as long as the legacy rate is	All competent authorities for critical benchmarks will regularly report on a confidential basis to the European Commission and to ESMA on the result of their periodic representativeness assessment on the critical benchmarks they are responsible for.

	<p>appropriate).</p> <p>FISMA services will regularly review, by regular contact with EU banks represented in the EURO RFR, whether the mandated legacy rate is sufficient for use by contractual parties and whether the rate is appropriate (shown by parties still having to incur the expense in renegotiating their contracts to insert a more appropriate rate).</p> <p>On the basis of such contacts and of the report received by competent authorities, the European Commission will report to the co-legislators in 2025 on the robustness of the legacy rate.</p>	<p>After having mandated the conversion of a critical benchmark into a legacy rate, the competent authority will be required to report to the European Commission [and to ESMA] on the supervisory measures adopted in connection with the mandatory conversion as well as on the actions taken by the administrator that has been requested with the publication of the legacy rate. All NCAs with supervised entities that are affected by the “legacy contract” issue will monitor whether the mandatory conversion has resulted in minimising or even avoiding litigation between counterparts in legacy contracts and report periodically to the European Commission [and to ESMA].</p> <p>Where litigation have been triggered against supervisory measures in connection with the mandatory conversion, NCAs will have to annually report to the European Commission [and to ESMA] on the development of the litigation cases.</p>
<p>Timeliness (toolkit has to be fit for purpose so that the regulator is able to mandate the legacy rate in due time before cessation of the IBOR publication).</p>	<p>FISMA services remain in regular contact with EU banks represented in the EURO RFR in order to assess whether the relevant NCAs have exercised their powers to mandate an appropriate legacy rate.</p> <p>On the basis of such contacts and of the report received by competent authorities, the European Commission will report to the co-legislators in 2025 on the timeliness of the tool kit for competent authorities.</p>	<p>All competent authorities that have exercised the power to mandate a conversion of an IBOR into a legacy rate will regularly report to the European Commission [and to ESMA] on the actions taken by the entity that publishes the mandated rate, as well as on the duration of the mandate and, if applicable, on whether the mandate has been extended to last for more than the initial period.</p>

12.2 Loss of an EU-based risk management tool

Table 8 – Monitoring and evaluation – loss of an EU-based risk management tool

Objectives	Monitoring by EU institutions	Monitoring by competent authorities
<p>1. Maintain trading transparency: Ensure that EU hedging tools remain listed on exchanges and therefore remain pre- and post-trade transparent</p>	<p>FISMA services remain in regular contact with all trading venues to assess that the range and diversity of currency forwards available in the EU is maintained.</p> <p>On the basis of such contacts and of the report received by competent authorities, the European Commission will report to the co-legislators in 2025 on how the changes to the BMR have ensured trading in currency forward contracts is maintained on transparent markets</p>	<p>All NCAs that supervise trading venues for foreign exchange derivatives will regularly report to the European Commission [and to ESMA] on the range and scope of instruments available and signal any lacuna that might arise.</p>
<p>2. EU Competitiveness: Ensure third country policy rates needed for hedging purposes for EU counterpart, for which no BMR compliant alternative exists, can be used by EU benchmark users</p>	<p>FISMA services remain in regular contact with EU corporates to assess whether the exemption of public policy exemption has enabled them to properly hedge their business activities against conversion and volatility of foreign currencies that are not freely convertible.</p> <p>On the basis of such contacts and of the report received by competent authorities, the European Commission will report to the co-legislators in 2025 on whether the changes to the BMR have ensured the competitiveness of the EU banking sector and the proper</p>	<p>All NCAs with supervised entities that use third country public policy rates will regularly report on the evolution of third country rates and whether the exemption is adequate to ensure EU corporates do not suffer competitive advantages with their third country counterparties.</p>

	development of business in third countries.	
<p>3. Avoid EU banks' undue exposure to currency risk: Provide for a regulatory toolkit that ensure that third country policy rates do not compete with BMR compliant alternatives on unfair terms</p>	<p>FISMA services remain in regular contact with EU supervised entities and benchmark administrators in order to assess whether the EU has been able to maintain deep liquidity pools for forward contracts hedging currency risk associated with non-convertible currencies.</p> <p>On this basis, FISMA services will regularly review whether the contours of the proposed exemption (foreign exchange rates for non-convertible currencies) remains appropriate.</p> <p>On the basis of such contacts and of the report received by competent authorities, the European Commission will report to the co-legislators in 2025 on the use made in EU based forward contracts of the exempt rates.</p>	<p>All NCAs with supervised entities that use third country public policy rates will regularly report to the European Commission [and where appropriate to the SSM] on the use made by those entities of the exempt rates for hedging purposes and on the impact of the changes of the balance sheets of supervised entities in terms of exposure to third country currency fluctuation.</p>

ANNEX 1: PROCEDURAL INFORMATION

1.1 Lead DG, Decide Planning/CWP references

Lead Directorate-General: Directorate-General for Financial Stability, Financial Services and Capital Markets Union (FISMA).

The initiative is included in the Commission Work Programme 2020 as agenda planning item PLAN/2020/7130.

1.2 Organisation and timing

Organisation and timing of Inter Service Steering Group’s meetings: two meetings on 2 March and 27 March. The Inter Service Steering Group included representatives of the Economic and Financial Affairs (ECFIN), Competition (COMP), Internal Market, Industry, Entrepreneurship and SMEs (GROW), Justice and Consumers (JUST), Trade (TRADE), the Legal Service (LS) and the Secretariat General (SG).

1.3 Consultation of the RSB

The Regulatory Scrutiny Board (RSB) has delivered its opinion on a draft of the Impact Assessment on 15 May 2020.

1st RBS Opinion (copy of the RSB comments from the opinion)	How and where comments have been addressed
<p>(1) The report should concisely present a more complete context of the initiatives. On LIBOR, this includes current best estimates of the size and composition of tough legacy assets, and relevant parallel measures to manage the transition that are in place or anticipated. The report should account for regulators’ views, in particular those of ESMA. On spot foreign exchange rates, the report should explain the reasons why the original Benchmark Regulation prohibited certain rates, and why this rationale is now outweighed by other considerations. If a permanent exemption was not considered when the Regulation was originally proposed, the report should explain why.</p>	<p>The entire Section 3.1.1 has been reworked to contain more granular estimates on how the expected USD LIBOR cessation at the end of December 2021 would affect the European banking and corporate borrowing sectors. Additional information on the number of USD IBOR contracts, their notional values and expected maturity ranges has been obtained from major European banks and their clients. The data differentiates between five asset classes in which USD LIBOR references are prevalent: corporate loans and advances, debt issued by banks, debt held by banks as an asset, corporate term deposits and derivatives. For each of these asset classes, estimates on contract volumes, notional exposures and expected maturity ranges are provided (confidential Annex 5). Section 10.1.2, when describing the impact of the new powers on competent authorities, reports details and references the views on a legacy rate expressed by both ESMA and UK FCA. Those opinions are also highlighted in Annex 2.</p>
<p>(2) The problem definition could be further developed, in order for instance to distinguish between the availability of a legacy rate (determined by the relevant entities), and the possibility to make this rate a mandatory replacement rate in the EU.</p>	<p>The problem definition has been reworked to more clearly distinguish between: (1) problems linked to uncertainties around the availability of a legacy rate and (3) problems pertaining to difficulty of integrating such a legacy rate (once it exists) into hundreds of thousands of contracts that are expected to reach maturity only after the end of LIBOR by 2021.</p>

<p>(3) The report should be transparent about what is known and what is not known. It should explain why quantification is not possible or not proportionate in some areas. It should better include the known and relevant information in relation to the size of the problem, its evolution over time, the steps taken and planned to prevent use of discontinued IBORs in new contracts, and any issues that will remain outstanding after a newly calculated LIBOR replacement rate.</p>	<p>The additional contract, exposure, maturity and cost data provided in Section 3.1.1 (confidential Annex 5) and in the baseline section, is prefaced with the necessary caveat that, apart from the tier one banking institutions consulted by DG FISMA staff, work on identifying LIBOR exposures is still in its incipency. The report clearly states that exposures residing with mid-tier institutions and non-financial companies cannot be assessed at this juncture and that the overall LIBOR exposures and maturity ranges identified in the report could be subject to considerable revisions as more financial and non-financial institutions are able to establish an inventory of their LIBOR exposures.</p> <p>The presentation of all options (Section 7) now contains a detailed chapter on how reference to a legacy rate is ring-fenced to contracts pending at the time of conversion/cessation of the IBOR rate.</p>
<p>(4) The report should simplify and clarify the baselines it uses for the two topics it analyses.</p>	<p>Sections 6.1 and 6.2 have been reworked to provide a single simplified baseline for the respective topics. The baseline (and confidential Annex 5) now contains quantitative estimates of what a ‘do nothing’ scenario might entail in terms of cost for both banks and small cap lenders (LIBOR), but also “values at risk” and lost risk management opportunities if nothing was done to safeguard access to foreign exchange spot rates.</p>
<p>(5) The description of options should be comprehensive and coherent. The report should clarify to what extent options provide solutions for any future possible benchmark discontinuation. It should provide more details about the role of regulators in mandating the use of a legacy-rate for LIBOR in the EU and the possible impact of Brexit. The report should also clarify the extent to which a mandated legacy rate would apply to all contracts concluded with EU counterparties, including contracts under UK law.</p>	<p>All policy options are now described according to a uniform grid comprising the following features (1) how the IBOR conversion/cessation process would be structured; (2) if, and in the affirmative, how a legacy rate is designated; (3) how the option aims to ensure that the legacy rate works across several jurisdictions and (4) how the option aims to avoid that the legacy rate is used beyond its intended aim.</p> <p>The description of the options now also contains a description on how the options would perform in a Brexit scenario.</p>
<p>(6) The report should explain to what extent the options are viable and reasonably futureproof solutions beyond the near term, or if additional amendments to this Regulation are likely.</p>	<p>The presentation of the option is improved to show their respective strengths and limits in a comprehensive manner. The presentation of the options aims to be clearer on the extent to which they aim to address the legacy contract issue and also on the areas which they do not aim to address.</p> <p>There is a detailed analysis (in Section 9) on why the preferred option addresses the issue of IBOR transition in a more comprehensive manner than the other options and explains why the chosen option scores best in terms of being “future-proof” beyond the near term.</p>
<p>(7) The report should analyse impacts in a more comprehensive way. It should discuss all relevant costs resulting from the options and wider impacts, including impacts on SMEs and possible social impacts. The report should clarify how it defines and analyses the efficiency of options.</p>	<p>In order to facilitate an analysis of the efficiency of the options, the specific objectives against which the efficiency of the options is assessed have been clarified (Section 5). Both the options (Section 7) and their anticipated impacts (Section 9) have been entirely reworked to show more precisely on how efficiently the options would work in achieving the specific policy objectives.</p>
<p>(8) For foreign exchange, the report should analyse impacts of the preferred option on financial stability. This includes risk considerations in terms</p>	<p>Section 2.2 on the operation of foreign exchange markets and their participants now contains chapters on the operation of forward contract markets and on</p>

<p>of the derivatives exposure of EU banks to certain foreign exchange risk that proposed exemptions from the Regulation would permit them to accumulate, and ability of regulators to monitor those risks.</p>	<p>the risk management tools that EU banks are obliged to employ in order to ensure that their balance sheet is not affected by currency exposures and, in particular, a decline in third country currency exchange rate. Section 2.2 also sets out the applicable risk management requirements in EU laws and the regulatory monitoring tools for risk exposures. This Section also sets out why access to deep liquidity pools for hedging instruments is itself necessary for banks to hedge their own currency exposures and why a reduction in access to the relevant spot exchange rates diminishes banks' own risk management.</p> <p>The impact session (9.3) now describes how the different options would impact the foreign exchange risk management opportunities of EU banks.</p>
<p>(9) The report needs careful editing to make it clearer, more concise and more reader-friendly for non-experts. The presentation of impacts relies too heavily on a tabular presentation. The accompanying text should guide the reader through the information that is in the tables and discuss the main conclusions.</p>	<p>The tabular presentation of impacts in Sections 9 and 10 has been replaced by text which is structured to guide the non-expert through the pros and cons of the policy options assessed.</p>

1.4 Evidence, sources and quality

This impact assessment draws on an extensive amount of targeted consultations, interviews, workshops and participation in international fora that are tasked with the reform of benchmarks, such as the Financial Stability Board (FSB). Regular work on the reform of critical benchmarks has been taking place for several years, but has notably accelerated with the latest progress report on benchmark reform presented by the FSB in January 2020. There have been considerable efforts to use authoritative sources (European Central Bank, Bank for International Settlements, other central banks, national regulators, or ESMA).

With respect to the critical importance of interest rate benchmarks, notably USD LIBOR, considerable amounts of evidence has been gathered from the European banking sector (individual bank treasury departments, not only trade associations) and ICE Benchmark Administration. All conversations took place at the level of top management in the treasury departments and directly with the executive level at ICE Benchmark Administration. As this evidence was gathered in detailed (often on-site) conversations with corporate treasurers, the relevant benchmark administrators and international regulators in the FSB, the quality of the evidence can be considered as very granular and of the highest possible quality.

In particular information on the balance sheet of European banks has been obtained in detailed conversations with the heads of major European banks' treasury departments.

Equally, the situation on third country currency rates has been under review for at least two years and has been explored in several on-site interviews with the banks that offer foreign exchange hedging tools. Work to find practical solutions to this obvious "design flaw" in the Benchmark Regulation has resulted in interviews not only with the dealer banks that offer the EU based hedging contracts, but also with the operators of trading platforms where these hedging contracts are traded (both interdealer platforms and dealer-to-customer platforms were interviewed since at least 2018). Member States have

also been involved in this work via different session of the Expert Group of the European Securities Committee (EGESC)

Below is a list of official and other key materials for the year 2020⁴⁸ that has been produced by the various working streams. The list is organised by several jurisdictions (EU and euro area, UK, US, and global).

EU and euro area:

- April 2020: ESMA issued a Public Statement regarding the timeliness of fulfilling external audit requirements for interest rate benchmark administrators and contributors to interest rate benchmarks. Due to the difficulties arising from the COVID-19 pandemic, ESMA expects NCAs not to prioritise supervisory actions against administrators and supervised contributors relating to the timeliness of fulfilling audit requirements where the audits are carried out by 30 September 2020.
- March 2020: The European Commission published a roadmap of the BMR review⁴⁹.
- March 2020: The working group on euro risk-free rates published its March 2020 newsletter.
- March 2020: The working group on euro risk-free rates updated its communications toolkit, including the slides on EURIBOR fall-backs.
- March 2020: The working group on euro risk-free rates published a consultation giving interested parties the opportunity to provide feedback as to whether the working group should issue recommendations regarding the voluntary exchange (or lack thereof) of cash compensation between bilateral counterparties to swaption contracts impacted by the CCP discounting switch from EONIA to the €STR. The working group expects that the feedback on this consultation document will provide valuable input in order to evaluate whether recommendations from the working group would be of assistance to the market and, if so, what the recommended approach should be. The deadline for responses is 3 April 2020. The European Commission and the European Central Bank will evaluate all responses and prepare an anonymised summary of their feedback. This summary will be published on the ECB's website and considered by the working group at its meeting on 21 April 2020.
- March 2020: ESMA launched a consultation on draft RTS under the EU Benchmarks Regulation covering various aspects relevant to benchmark administrators (e.g. governance, benchmark methodology, systems and controls). There is also a section on mandatory administration of a critical benchmark, which proposes the minimum criteria that NCAs should take into account when assessing the cessation of a critical benchmark or the transition of a critical benchmark to a new administrator pursuant to Article 21(1)(b) of the BMR. The deadline for responses is 9 May 2020.
- February 2020: The working group on euro risk-free reference rates published a report on the transfer of EONIA's cash and derivatives markets liquidity to the

⁴⁸ <https://www.icmagroup.org/Regulatory-Policy-and-Market-Practice/benchmark-reform/benchmark-reform-and-transition-to-risk-free-rates-archive/> (for year 2017 to 2019 please refer to the website)

⁴⁹ <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12268-Review-of-the-Benchmark-Regulation>

€STR on the working group main website and on the key milestones webpage, together with a press release.

- February 2020: ESMA announced that it responded to the European Commission consultation on the EU Benchmarks Regulation review. On critical benchmarks, ESMA proposes that: (i) competent authorities are able to request an administrator to change its methodology; (ii) the process of suspension or withdrawal of authorisation or registration of an administrator is clarified; and (iii) the assessment by competent authorities of the cessation procedures of the administrator is clarified. In relation to third country benchmarks, ESMA proposes to take into account different alternative approaches when defining the scope of the BMR; and, to increase transparency to the benefit of benchmark users, ESMA proposes to include the list of both EU and third-country benchmarks in its register together with an appropriate identification of benchmarks⁵⁰.

UK:

- April 2020: the FCA submitted supportive feedback of the European Commission roadmap of the BMR review (Inception Impact Assessment)⁵¹.
- March 2020: UK HMRC has published a draft guidance paper explaining its view on the tax implications of changes to financial instruments driven by benchmark reform. Among other things, there is a statement that “Where the parties agree to change the terms of the instrument for the purposes of responding to the withdrawal of LIBOR, HMRC would normally view this as a variation of the existing instrument. The amended contract should be regarded as the same contract and entered into at the same time as the original one. This would apply, for example, where the parties agree to replace LIBOR for one of the new reference rates or with a fixed interest rate. It does not matter if the spread on the instrument needs to be amended slightly, or if additional payments are made between the parties, provided the economics of the transaction remain mostly the same. Comments on the draft guidance are requested by 28 May 2020.
- March 2020: The FCA, Bank of England and Working Group on Sterling Risk-Free Reference Rates issued a statement on the impact of COVID-19 on firm’s

⁵⁰ <https://www.esma.europa.eu/press-news/esma-news/esma-responds-european-commission-consultation-benchmark-regulation-review>

⁵¹ <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12268-Review-of-the-Benchmark-Regulation/F512186>

“We think these changes proposed by the European Commission are important ideas in addressing the challenges of enabling smooth transition away from critical benchmarks that cannot be sustained indefinitely, including where their representativeness cannot or will not be restored due to the underlying markets they seek to represent changing in fundamental ways. These could be of great value to other authorities if they in future face the sort of challenges the FCA has had to consider in respect of the end of LIBOR. We think that the chances of being able to achieve smooth transition can be maximised if competent authorities are empowered with tools to minimise the potential disruption, including tools that could protect those ‘trapped’ on outstanding contracts referencing the critical benchmark (for example, by enabling the use of an alternative formula for the retiring benchmark’s calculation that protects the economic position of contractual parties while the critical benchmark is retired), whilst in similar spirit to some original provisions in the Benchmark Regulation, new use of benchmarks that no longer meet the representativeness or other requirements of the Regulation would be restricted. Given that critical benchmarks such as LIBOR are often used on a cross-border basis, the FCA will continue to co-ordinate with EU and other overseas authorities on these matters, including through the FSB’s Official Sector Steering Group work on these issues.

LIBOR transition plans. The central assumption that firms cannot rely on LIBOR being published after the end of 2021 has not changed and end-2021 should remain the target date for all firms to meet. The full statement is available on the Working Group on Sterling Risk-Free Reference Rates' website and the FCA website.

- March 2020: The Working Group on Sterling Risk-Free Reference Rates published a summary of responses to its consultation on credit adjustment spread methodologies for fall-backs in cash products referencing GBP LIBOR. The consultation identified a strong consensus in favour of the historical 5 year median approach, in line with the approach adopted by ISDA, as the preferred methodology for credit adjustment spreads across both cessation and pre-cessation fall-backs for cash products maturing beyond end-2021.
- March 2020: The FCA released a statement on how it would announce LIBOR contractual triggers.
- March 2020: The UK Budget 2020 included a statement that the UK government will consult to ensure that where tax legislation makes reference to LIBOR it continues to operate effectively. The consultation will also enable the government to ensure it is aware of all of the significant tax issues that arise from the reform of LIBOR and other benchmark rates.
- March 2020: The Working Group on Sterling Risk-Free Reference Rates issued a statement welcoming the Bank of England's discussion paper on the publication of a SONIA compounded index to further support the widespread use of SONIA compounded in arrears. The statement outlines how bond markets can use the proposed SONIA index and its relevance for issuers' choice of conventions.
- March 2020: The Working Group on Sterling Risk Free Reference Rates published its monthly newsletter for February 2020.
- February 2020: The FCA sent a "Dear CEO" letter to all UK regulated asset management firms setting out their expectations for firms as they prepare for the end of LIBOR.
- February 2020: The Bank of England announced that it intends to publish a daily SONIA Compounded Index, which is a number representing the returns from a rolling investment earning interest each day at the SONIA rate. The change in this index between any two dates could be used to calculate the interest rate payable on a SONIA product over that period. This is consistent with the approach taken by the Federal Reserve Bank of New York and the publication of its SOFR Index. Publication of the SONIA Compounded Index is anticipated to commence by end July 2020. In addition to the SONIA Compounded Index, the Bank of England is considering whether – and, if so, how – to publish daily a simple set of SONIA Period Averages. These could directly provide the interest rate payable over specific periods of time (i.e. the compounded rate over the last X days or months). The Bank invited comments on the options presented in the discussion paper by 9 April 2020, after which it will decide whether it would be helpful to publish such averages.
- February 2020: The Bank of England announced that from October 2020 it will begin increasing haircuts on LIBOR-linked collateral it lends against. From 2020 Q3, the Bank will make newly-issued LIBOR collateral ineligible and progressively increase the haircuts on existing LIBOR-linked collateral over time. Haircuts are scheduled to reach 100% (i.e. implying effective ineligibility) at the end of 2021.

- January 2020: The Working Group on Sterling Risk-Free Reference Rates, the Bank of England and FCA published a set of documents, outlining priorities and milestones for 2020 on LIBOR transition and emphasizing the need for firms to accelerate efforts to ensure they are prepared for LIBOR cessation by end-2021. A press release entitled “**Next steps for LIBOR transition in 2020: the time to act is now**” is also available. The package includes:
 - The Working Group's priorities and roadmap for 2020.
 - The use cases of benchmark rates: compounded in arrears, term rate and further alternatives: This paper sets out the Working Group’s views on the appropriate use of SONIA compounded in arrears for businesses and clients, and guidance for where the use of alternative approaches, such as a Term SONIA Reference Rate, may be necessary. In relation to the bond market, it notes that overnight SONIA compounded in arrears has become the market norm for floating rate sterling bonds and there is strong liquidity developing for securitisations that reference overnight SONIA compounding in arrears.
 - Progress on the transition of LIBOR-referencing legacy bonds to SONIA by way of consent solicitation: This paper highlights the progress on the transition of LIBOR-referencing legacy bonds to SONIA by way of consent solicitation and sets out six considerations “lessons learned” from recent conversions of legacy LIBOR bonds to SONIA.
 - Factsheet - Calling time on LIBOR: Why you need to act now: This is a high-level (1-page) factsheet with sections “What’s happening?”, “What do I need to do?” and “Where can I find more information?”
 - The Working Group’s consultation (published in December) on credit adjustment spread methodologies for cash products, seeking feedback by 6 February 2020, is highlighted again on the Working Group’s webpage. The paper considers four methodologies that could be used to calculate the credit adjustment spread for fall-back language in sterling cash instruments.
 - FCA and Bank of England statement regarding a switch from LIBOR to SONIA for sterling interest rate swaps: This FCA and Bank of England statement encourages market makers to switch the convention for sterling swaps from LIBOR to SONIA on 2 March 2020.
 - PRA and FCA letter to Senior Managers – Next steps on LIBOR transition: This is a joint letter from the PRA and FCA to major banks and insurers setting out initial expectations of firms’ transition progress during 2020. It emphasizes that 2020 will be a key year in the transition away from LIBOR and highlights the Working Group’s 2020 targets for 2020. It states that LIBOR transition plans should include the targets in project milestones and ensure that management information is available to track progress. As a guide, the FCA and PRA consider that action in the following areas is key to delivery: (a) product development; (b) reviewing infrastructure, including updating loan system capabilities; (c) client communications and awareness; and (d) updating documentation. The FCA and the PRA will step up engagement with firms on LIBOR transition through their regular supervisory relationship, reviewing firms’ management information and collecting data from firms to assess progress. There is also an appendix detailing progress made in 2019.
- January 2020: The Working Group on Sterling Risk Free Reference Rates published its monthly newsletter for January 2020.

US:

- April 2020: The ARRC welcomed Fannie Mae and Freddie Mac's announcements that provided additional details about their SOFR-linked adjustable-rate mortgage (ARM) products.
- April 2020: The ARRC announced a recommendation of a spread adjustment methodology for cash products based on a historical median over a five-year lookback period calculating the difference between USD LIBOR and SOFR. This matches the methodology recommended by ISDA for derivatives and would make the ARRC's recommended spread-adjusted version of SOFR comparable to USD LIBOR and consistent with ISDA's fall-backs for derivatives markets.
- March 2020: The ARRC released its February-March 2020 newsletter. This newsletter summarises the most recent ARRC, US official sector, market and international developments and SOFR market liquidity.
- March 2020: The ARRC released a proposal for New York State legislation. The legislation is intended to minimize legal uncertainty and adverse economic impacts associated with LIBOR transition. The ARRC will hold a webinar on the legislative proposal in the coming weeks.
- March 2020: The ARRC announced that it is extending the comment period for public feedback on its consultation about spread adjustment methodologies for cash products referencing USD LIBOR. The consultation was initially released on 21 January 2020 and the comment period is being extended until 25 March 2020 to provide sufficient time to allow for thorough feedback. The consultation proposes a static spread adjustment that would be implemented at a specific time on or before USD LIBOR's cessation and would make the spread-adjusted version of the SOFR comparable to USD LIBOR.
- March 2020: The Federal Reserve Bank of New York began publishing 30-, 90-, and 180-day SOFR Averages as well as a SOFR Index, in order to support a successful transition away from USD LIBOR. The Chair of the ARRC welcomed this.
- February 2020: The ARRC has welcomed the US Federal Housing Finance Agency's announcement that Fannie Mae and Freddie Mac will stop accepting adjustable-rate mortgages based on LIBOR by the end of 2020; and plan to begin accepting ARMs based on SOFR later in 2020. Both Fannie Mae and Freddie Mac also announced they would adopt the ARRC's recommended fall-back language.
- January 2020: The ARRC released its December 2019 - January 2020 newsletter. This newsletter summarises the most recent ARRC, US official sector, market and international developments and SOFR market liquidity.
- January 2020: The ARRC released two items developed by its Operations/Infrastructure Working Group: a vendor survey and a buy-side checklist. Both documents are intended to support market participants' work to address operational challenges in the transition from USD LIBOR to SOFR. As noted in the accompanying letter, the survey serves as a self-assessment tool for software and technology vendors to assess their own readiness, while also serving as a platform to raise operational issues to the ARRC. The checklist provides steps that buy-side firms can consider when transitioning from LIBOR.
- January 2020: The ARRC released a consultation on spread adjustment methodologies for cash products referencing USD LIBOR. These spread adjustments are intended for use in USD LIBOR contracts that have incorporated

the ARRC's recommended hardwired fall-back language, or for legacy USD LIBOR contracts where a spread-adjusted SOFR can be selected as a fall-back.

Global:

- March 2020: ISDA announced that it would re-consult following (i) the release of new information by the FCA and the IBA on the length of time LIBOR may be published following a regulatory statement that the benchmark is no longer representative of the underlying market; and (ii) the launch of a consultation by LCH on proposed rule book changes to implement pre-cessation fall-backs. The statements and this new consultation follow a 2019 ISDA consultation that was unable to find market consensus on how to implement pre-cessation fall-backs in derivatives contracts. The new consultation asks whether the 2006 ISDA Definitions should be amended to include fall-backs that would apply to all covered derivatives following the permanent cessation of an IBOR or a 'non-representative' pre-cessation event, whichever occurs first. Under this scenario, a single protocol would also be launched to allow participants to include both pre-cessation and permanent cessation fall-backs within their legacy derivatives trades.
- March 2020: ISDA published a report summarising the final results of its supplemental consultation on the spread and term adjustments that would apply to fall-backs for derivatives referencing euro LIBOR and EURIBOR. The report confirms the findings published by ISDA at the end of February 2020 that the overwhelming majority of respondents agreed with an implementation based on the 'compounded setting in arrears rate approach with a backward-shift adjustment' and a spread adjustment based on a 'historical median over a five-year lookback period' for fall-backs in derivatives referencing EUR LIBOR and EURIBOR and other less widely used IBORs, consistent with the preferred approach for other IBOR fall-backs.
- February 2020: The Basel Committee on Banking Supervision (BCBS) published a newsletter on benchmark rate reforms. Among other things, it confirms that, under the Basel Framework, amendments to capital instruments pursued solely for the purpose of implementing benchmark rate reforms will not result in them being treated as new instruments for the purpose of assessing the minimum maturity and call date requirements or affect their eligibility for transitional arrangements of Basel III.
- February 2020: ISDA has published a table identifying its key workstreams relating to IBOR reform and the development of RFRs.
- January 2020: IBA launched a consultation on the introduction of an ICE Swap Rate based on SONIA. (ICE Swap Rate represents the mid-price for interest rate swaps (the fixed leg), at particular times of the day, in EUR, GBP and USD and in tenors ranging from 1 year to 30 years. ICE Swap Rate is used for various purposes, including in some bonds.) The consultation focuses on the introduction of a new suite of ICE Swap Rate tenors which will have SONIA as the floating leg. Comments are invited by 20 March 2020.
- January 2020: Developments in relation to pre-cessation triggers for derivatives: The FCA responded to ISDA following ISDA's letter of December 2019 which, in turn, was a response to a letter from the Co-Chairs of the FSB's Official Sector Steering Group regarding pre-cessation triggers in derivative contracts referencing key IBORs. The FCA letter sets out the reasons why "market participants should not assume that any period of non-representative LIBOR

based on reduced panel bank submissions would last for more than a short period (i.e., a period of months, not years).” ISDA has also received a response to its letter from ICE Benchmark Administration. In addition, London Clearing House announced on 27 January that it is commencing a rulebook consultation process regarding the inclusion of an automatic trigger into fall-back arrangements where a relevant regulatory authority determines an existing benchmark to be non-representative (i.e. a “pre-cessation trigger”). The draft rulebook change proposes the same approach that is planned to be used in respect of permanent cessation triggers. That is, to use the adjusted RFR as formulated in the relevant ISDA supplemented IBOR definition together with a credit spread adjustment. The consultation period ends on 23 March 2020.

- January 2020: ISDA published its interest rate benchmarks review, full year 2019 and Q4 2019, which analyses trading volumes of interest rate derivatives (IRD) transactions in the US referencing certain RFRs and certain IBORs.
- January 2020: The European Commission published its endorsement of the International Accounting Standards Board (IASB) phase 1 IBOR amendments in the EU Official Journal. These amendments address the financial reporting consequences of the interest rate benchmark reform in the period before the replacement of an existing interest rate benchmark with an alternative reference rate.

ANNEX 2: STAKEHOLDER CONSULTATIONS

The Commission has carried out extensive consultations with various groups of stakeholders in order to obtain a complete picture of the different views market participants may hold with regards to the issues tackled in this impact assessment. Beyond the workshop and the public consultation presented in more detail in sections 2.1 and 2.2, the Commission has been actively following the work of the Euro RFR Working Group, composed of stakeholders from the private sector, including contributors, administrators and users of benchmarks, as well as the ECB which provides Secretariat and ESMA and the Belgian FSMA in observer status along with the EC, in order to identify varied stakeholder considerations that should be kept in mind in designing the best policy tools for the orderly cessation of critical benchmarks. Furthermore, the Commission is a member of the FSB OSSG, which comprises senior officials from central banks and regulatory authorities, thus giving it a good insight into the international public policy perspectives on the transition to risk-free rates. In addition the Commission Services sits as an observer in ESMA Board of Supervisors and in its technical standing groups among which that on Benchmark, from which it has closely followed the work of ESMA in the context of critical benchmarks. Finally, DG FISMA staff has had many bilateral contacts with a broad spectrum of stakeholders in order to further refine its analysis and policy approach.

Below is a detailed summary of the results of the workshop organized by the Commission and its public consultation on the BMR review, in anonymized form. However, given the importance of ESMA's views as one of the key public entity stakeholders, its views are rendered in more detail.

2.1 Workshop

On 26 November 2019, the Commission organised a workshop around three main topics:

1. The first panel discussed whether regulators had the necessary tools at hand in order to maintain, sustain and potentially amend the methodologies underpinning **critical benchmarks**. Competent authority A expressed the view that the current toolbox was broadly sufficient, but that some additional powers to force methodological change might prove useful in sustaining the IBOR rates. The same regulator also expressed satisfaction with the operation of the **Euribor college of supervisors** and the fact that all regulatory decisions that needed to be taken involving the college were taken swiftly and without any frictions between the lead regulator and the regulators that supervised the panel contributors.

Competent authority B argued that there would need to be a **significant increase in regulatory powers**, not only to maintain panel participation and **panel stability**, but also to actively increase participation rates. One proposal was that heavy users of Euribor should also be mandated to contribute transactions or quotes to the Euribor administrator. That regulator had strong words against “free riding” of banks that issue lots of financial products referencing Euribor, without participating in the panel. There was a general consensus among panellists that regulation of critical benchmarks should be based on the

“precautionary principle” giving supervisors the powers to intervene in anticipation of representativeness issues arising.

A central bank took a slightly divergent view, stating that the main issue is that market participants **break their dependency on Euribor** and undertake serious efforts to familiarise themselves with the new risk free rates as replacement rates. Risk-free rates had more plausible usage cases than was commonly assumed. A fall back rate is not a temporary crutch while Euribor is reformed or made representative again, it is a **permanent replacement** once the Euribor ceases (e.g., when the regulator concludes that it is no longer representing the underlying market reality it is supposed to measure). Competent authority C took an intermediate approach, stressing the need to continuously reform Euribor while also inserting replacement rates into legacy contracts that will not expire before the transitional period ends in 2021.

The EC raised the issue of **contractual continuity** with respect to contracts that will need to be adapted to incorporate a fall back rate. Competent authority B took the view that millions of consumer mortgages could not be renegotiated individually. Also, as there is no standard setter like ISDA for derivatives or the London Market Association (LMA) for corporate loans, the sector could not develop a contractual template for all mortgage banks. Competent authority B called for the European legislator to designate an **official replacement rate**, so that retail mortgage holders would not be able to complain in case the cessation trigger was pulled and the mortgage rate switched from Euribor to the replacement rate. Upon questioning, a member of the audience suggested to follow the approach by the French legislator which seems to consist in a law obliging customers to accept a replacement rate that most “closely resembled” the rate that it replaces. Apparently this standard (“economic equivalence”) would even allow a panel bank rate to be replaced by a rate based on wholesale financing or even a risk-free rate. Competent authority C would also be willing to assist in the preparation of contractual processes in designating the replacement rate, even if it was not an official one resulting from European legislation.

2. The second panel delved into further detail on whether BMR was fit to accompany the transition of existing interbank (IBOR) rates to the new risk free rates, also assessing whether BMR was sufficient to accompany the transition from Eonia to €STR. The verdict among panellists was that the transition issues were sufficiently covered, less so issues around legacy contracts and the insertion of substitute or fall back rates. The representative of the Loan Market Association mentioned that, between corporate loans and existing bond portfolios, there were still in excess of 2 trillion euro contracts at risk in the transition from IBOR to risk free rates. Difficult issues of whether the **replacement rates measured the same underlying markets** as the IBORs were not fully resolved and the BMR did not give guidance on what would be an economically equivalent rate to an IBOR. The LMA observes a fine line between regulatory powers to adapt methodologies and a mandate to actually change the underlying market that a benchmark is supposed to reflect. The LMA would also advocate for more legal certainty on when a replacement rate could be triggered, the BMR confines itself to requiring that such replacement rates should be agreed without stating when they should start to apply.
3. The third panel provided for a cross-cutting view on whether the BMR scope as well as the third country provisions should be reassessed. Bank A stated that the BMR should adopt a **designation approach** whereby the legislator should, on the basis of a

quantitative (trillions of reference contracts) and risk based assessment (propensity to manipulation) decide which indices should be regulated under BMR and which not. The designation approach was indeed the default choice of all other jurisdiction that followed the European lead of regulating benchmarks, such as Japan, South Korea, Australian NZ, etc. the designation approach was also the one initially in the UK's benchmark legislation. It is only the EU that opted for an "all-in" approach with the subsequent necessity to exclude from the scope of the BMR lots of indices, such as the ones provided by central banks, statistical offices or other comparable public sector bodies. This was clearly sub-optimal and resulted in a lot of time and resources being spent on authorisations and registrations on not very systemic indices.

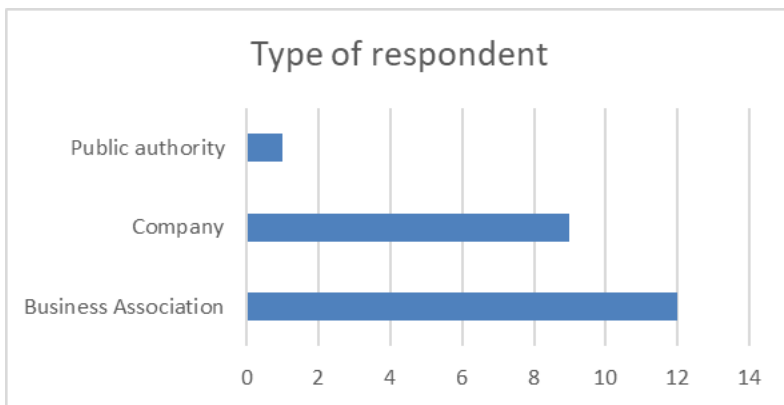
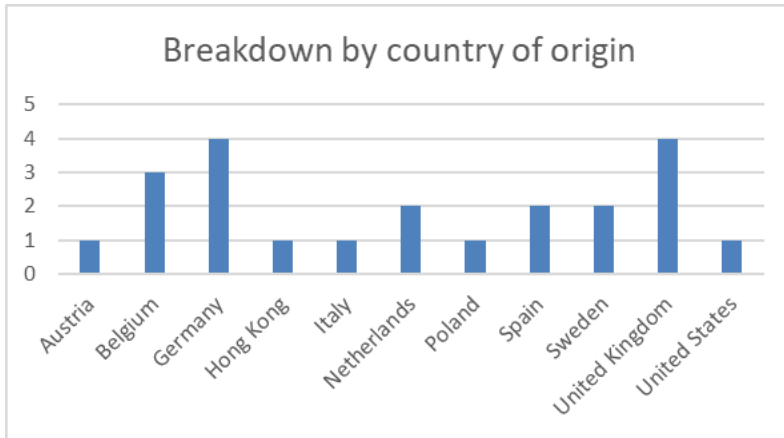
Bank B argued that a risk based approach might reveal that a **regulated data benchmarks**, such as the CAC 40 or the DAX, should not be regulated under BMR as the assembly of public price data according to a pre-established weighting formula (equal weighted, price weighted or free-float weighted) would not make the benchmark prone to manipulation. On the other hand, a benchmark that assembles quotes or pricing data from non-public markets might well be more prone to manipulation and should therefore be in scope. A data vendor argued that all types of "strategy indices" reflecting all kinds of different investment styles should be in scope, even if individual strategy indices did not have large sums of assets referencing them. The underlying rationale for regulating an index was to address "**conflicts of interest**" as strategy indices were often designed by the investment firms that also sold the underlying product. Bank C raised the issue of **foreign exchange indices** which were essential to determine the pay-out of non-deliverable forward contracts, but where BMR compliance was hardly enforceable. Bank C took the view that foreign exchange benchmarks that were set as policy rates should be excluded from the scope of the Regulation as "public administration" benchmarks.

2.2. Feedback statement of the Inception Impact Assessment relating to the review of the Benchmark Regulation

I. Introduction

On 18 March, DG FISMA published an inception impact assessment (IIA) intended to inform stakeholders about the scope of the review of Regulation (EU) 2016/1011 (Benchmark Regulation / BMR) and outlining different policy options considered. The consultation period closed on 15 April 2020.

This feedback statement provides a factual summary of the responses received. The Commission has received responses from 22 respondents, mostly private companies and business associations. Below are some statistics to provide a better understanding of the respondents' background.



In the IIA, the Commission has outlined two urgent issues that the BMR review aims to deal with, namely the helping to ensure the orderly transition from panel-based critical interest rate benchmarks to risk-free rates published by central banks. The below summary of the responses follows this outline.

II. Equipping competent authorities with supervisory powers to ensure the orderly cessation of a critical benchmark,

The Commission argued in the IIA that in order to accompany various IBOR phase-out scenarios, regulators need more extensive and finely graduated powers to monitor and accompany the industry-led IBOR transition process, and to intervene in it if there should be a market failure. This would include the power to mandate the continued provision of a critical benchmark using a different methodology or the provision of a replacement rate

A large number of respondents agreed with the problem identified by the Commission as well as the high-level proposals to amend the BMR.

In particular, one stakeholder noted that the issues related to the transition to risk free rates should indeed be at European level since this approach would avoid fragmentation risks linked to inconsistent implementation by Member States. However, it highlighted the need to pay particular attention to the consequences arising from applying different fallback rules to different instruments. Finally, that stakeholder called for a harmonized approach on communication and transparency issues related to the transition to risk-free rates.

Another stakeholder noted these additional powers, which should not be limited to critical benchmarks, are best placed with the Commission or ESMA and that further clarification is needed on how and in which situations these powers would be exercised. Two respondents explicitly supported endowing NCAs or ESMA powers to determine a statutory replacement rate in the event of cessation of a critical benchmark and allow its use in legacy contracts. These respondents also noted that it is of particular importance to ensure that any replacement rate is a legal successor of the discontinued rate, to avoid legal uncertainty.

Commenting on the scope of the measures aimed at helping stakeholders transition to risk-free rates, one respondent noted that they should apply to all agreements, regardless of whether they are subject the BMR or not. The same stakeholder welcomed the idea to reinforce the powers of competent authorities to require a change of benchmark methodology and even impose a new methodology. However, it noted that such powers should be accompanied by provisions to ensure the contractual continuity and legal certainty, for example through a determination that the modified benchmark continues to measure the same underlying interest. Alternatively, that stakeholder suggested the BMR could specify that in case of a trigger event, the Commission or ESMA could designate a statutory replacement rate.

Commenting on additional powers to be granted to NCAs, one stakeholder advocated for the extension of “trigger” events for remedial action to reinforce the representativeness of a benchmark as well as for additional powers underlying such remedial action. That stakeholder was also supportive of granting NCAs powers to change a benchmark’s methodology such that it can be published as a tracker rate of the discontinued benchmark, thus ensuring its continuity.

In support of introducing additional powers for NCAs, one respondent noted that they would help in avoiding the undermining of administrator’s credibility by withdrawing or suspending its authorisation or registration when it may not be at fault. Somewhat sceptical about giving additional powers to regulators with regards to benchmarks and its methodology, one stakeholder

noted that it is the administrator who is better placed to remedy any issues with the benchmark methodology and that in case further powers are given to the NCA it is to be made sure that they are limited to critical benchmarks. Voicing similar concerns, another stakeholder noted that increasing the powers for an EU NCA to amend the methodology of a benchmark which is used by investors outside of the EU could have significant implications both for the benchmark and investors, and concluded that if such additional powers are needed in connection with interest rate benchmarks, then they should be strictly limited to those benchmarks.

III. Ensuring the continued availability to EU users of third country benchmarks for which no suitable alternative exists in the Union

In the IIA, Commission has recognized that the third country regime provided by the BMR has had the unexpected effect of creating a risk of EU investors and businesses losing access to a number of non-EU benchmarks on which they depend e.g., to hedge exposure to interest rate or FX risk in their daily business. Portfolio managers, in turn, risk losing access to specialised strategy indices administered outside the EU. Therefore, with this initiative the Commission aims to ensure the continued availability of third country benchmarks for which no suitable alternative exists in the Union

A number of stakeholders recognized the need to maintain access for EU benchmark users to a number of non-EU benchmarks on which they depend.

One stakeholder noted that overall the BMR should exempt EU non- significant benchmarks and their equivalent third country benchmarks as well as public policy benchmarks, and that ESMA should be empowered to decide whether significant EU and third country benchmarks providers need to fulfil additional obligations. This was broadly echoed by another stakeholder, who also advocates narrowing down of the scope of BMR by allowing all benchmarks to be used in the Union unless specifically prohibited. Two stakeholders suggested that the endorsement and recognition process should be streamlined and clarified, either in the BMR or via an RTS. Another stakeholder called for an extension of the transition period by another year.

More specifically, regarding the use of third country FX rates in non-deliverable forward contracts, one stakeholder specifically called for sensible legislation that would allow the continued use of FX spot rates as reference rates in such contracts beyond 2021 and proposed to align Article 32(8) and Article 35 of the BMR to ensure a harmonized approach for both authorized/registered and recognised entities. Yet another stakeholder agreed that prohibiting EU supervised entities from using these rates will have various significant adverse effects, including the loss of the ability for EU exporters to hedge their currency risk, forcing them to potentially withdraw from markets in countries where the FX benchmarks are not currently exempt from the BMR.

On the other hand, one stakeholder opposed rolling back the scope of the BMR, instead advocating more targeted measures to ensure EU users can access third country benchmarks – such as broadening the public policy exemption already present in the BMR and a temporary *de minimis* exemption. Another respondent noted that third country benchmarks should be required to meet standards equivalent to those applied to benchmarks produced within the EU, otherwise EU administrators would suffer a competitive disadvantage.

2.3 Public consultation

On 11 October, DG FISMA published a public consultation intended to support its review of Regulation 2016/1011 (the Benchmark Regulation). Stakeholders had until 31 December 2019 to express their views via the online EU Survey portal.

It is worthwhile noting that the RFR working groups for IBORs did not as such respond to the public consultation on the BMR review. However, its participants are financial institutions which have expressed their views on the issues raised in the consultation through their respective industry associations or individually. Furthermore, the recommendations for fall-back rates issued or to be issued by the RFR Working Groups will present a compelling route for the national competent authority to follow when exercising the powers that would be granted by the preferred policy option for the purpose of winding down IBOR legacy contracts. Indeed, it is not reasonably feasible that the relevant competent authority, in mandating legacy rates, would deviate from the recommendations for fall-back rates issued by industry expert groups such as RFR working groups. In this sense, there is a degree of intrinsic alignment between the preferred policy option and the views of the RFR Group on the fall-back rates in contracts referencing LIBOR rates.

This feedback statement provides a factual summary of the 85 unique responses received during this period.

Outside this period, a number of other responses were received, including from ESMA. Those responses are not included in this summary.

Overview of respondents

Figure 3 – Respondent’s main activity in relation to benchmarks

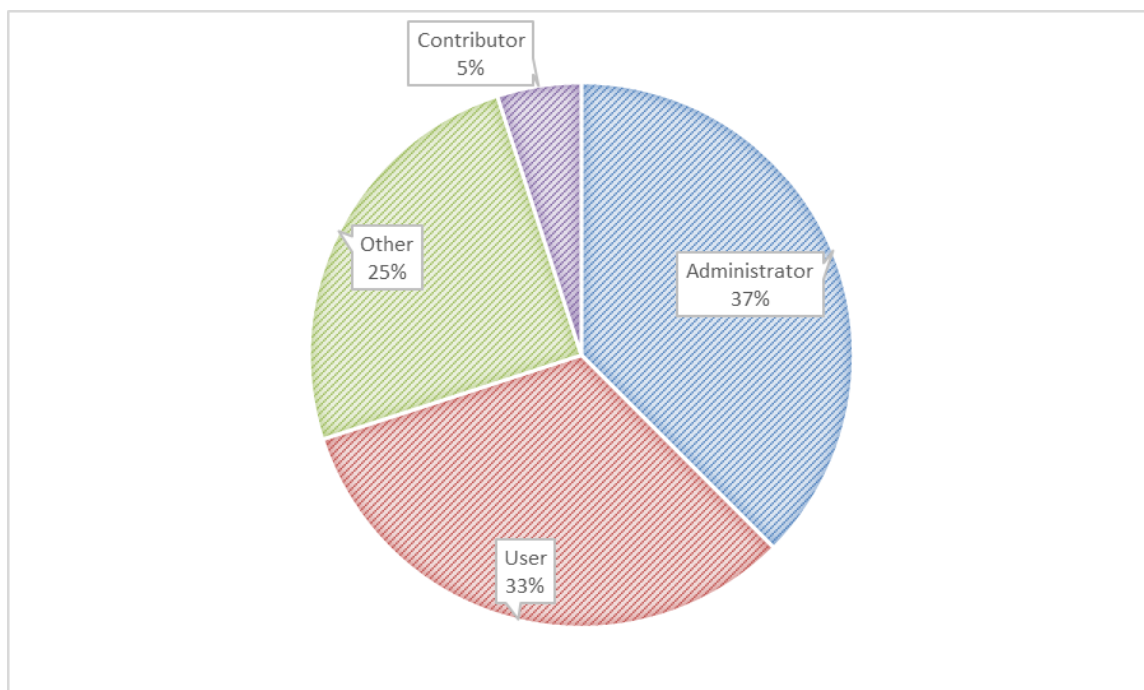


Figure 4 – Activity sector of respondent (more than one answer allowed)

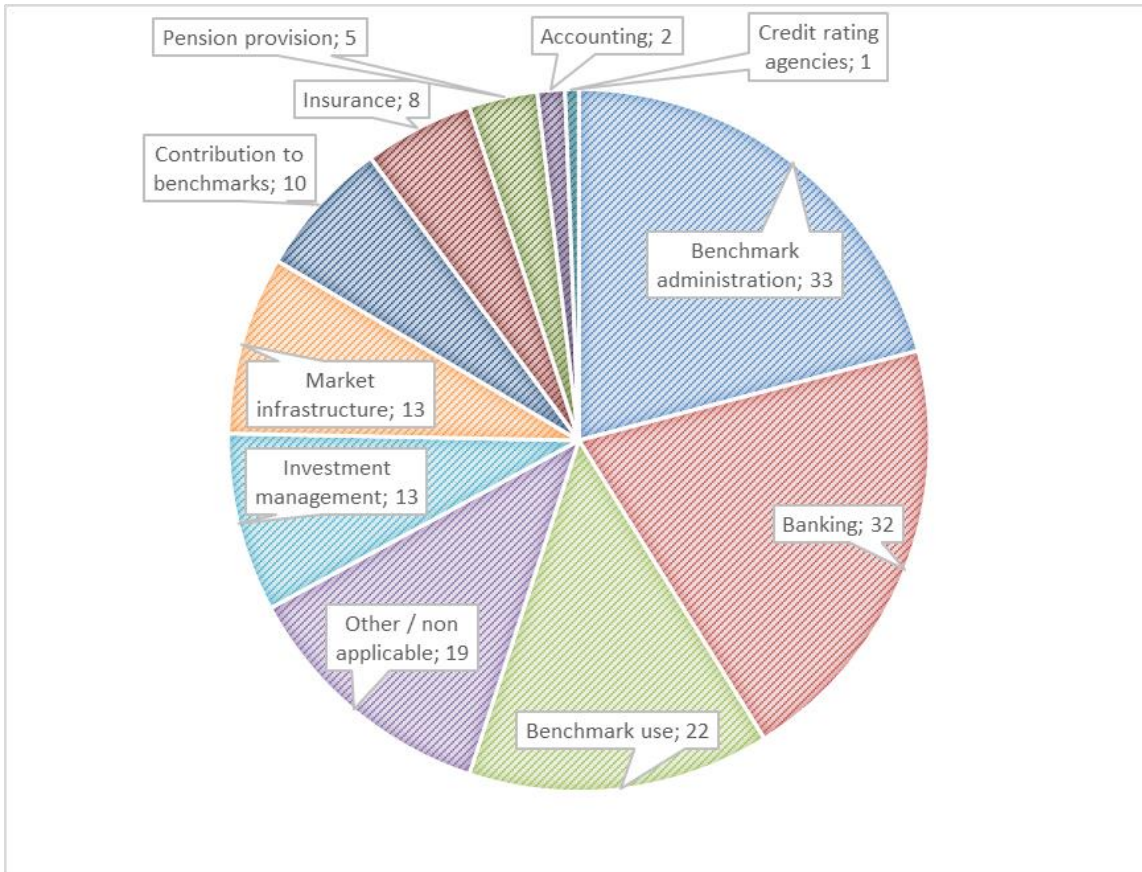
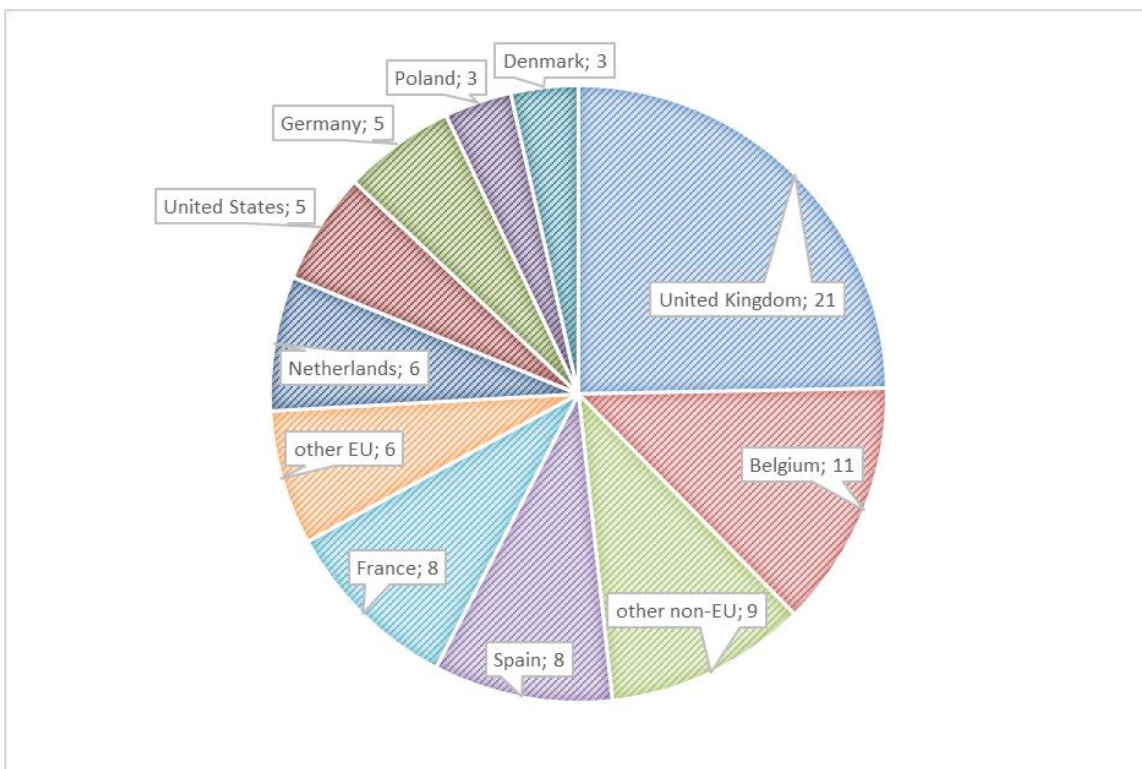


Figure 5 – Location of respondents



The key messages emerging from the assessment of the responses to the consultation were:

I. Critical benchmarks

Mainly benchmark users and most of the public sector respondents agreed with the proposal to grant more powers to competent authorities in order to require the administrator of a critical benchmark to change the methodology. They point out that “*it is better to instruct an adjustment for the benchmark calculation and maintain benchmarks, then to lose an important anchor point for many financial contracts*”. The respondents believe this power could help ensuring continuation of critical benchmarks and avoid potential market disruption of financial markets upon the cessation of a critical benchmark. For this reason, some of them claim that the reform should be carried on as soon as possible (and even before the entry into application of the new powers to ESMA).

Users consider that such power would help to ensure contract continuity, however they underline the need to introduce safe harbour legislation to limit litigation risks as a result of such changes. They suggest competent authorities should clearly state that the benchmark still calculates the same economic reality – same benchmark). One stakeholder notes that granting such powers to competent authorities may also have the undesirable side effect that future transitions will not be orchestrated by the private sector itself but by regulators. Another stakeholder underlines that the circumstances under which those powers would be activated need to be clear (i.e. as a matter of last resort). One stakeholder notes that the competent authority should also have the power to request provision of regulatory reporting data or data held by custodians to the benchmark administrator, in order to help the administrator ensure there is data sufficiency, as laid out in IOSCO principles (MMSR or Bond/Commercial Paper/Certificate of Deposit data...). According to the same stakeholder, the change of methodology could also mean to move away from panel’s bank contributions, and towards a fully transaction and market data based methodology fully managed by the administrator.

Public sector respondents considered that it would be better if the administrator makes the change. However, they recognised that there might be situations where the administrator does not implement the necessary changes to the methodology (e.g. due to external pressure or opposing interests between various stakeholders). Due to the potential impact of such new powers on users of the affected benchmark located in various EU jurisdictions, one NCA suggests to ensure that key NCAs are involved in the decision process prior to implementing such power.

Importantly, ESMA expressed support for granting additional powers to regulators to ensure an orderly cessation of a critical benchmark. ESMA recognized that regulators should be allowed to require a change of methodology also on the basis of their own assessment, whenever the critical benchmark is no longer representative of the underlying market. Importantly, it also acknowledged that there may be circumstances in which a benchmark cannot be made representative but its continued publication in a more stable and sustainable form may be desirable, if only for a limited wind-down period. Furthermore, ESMA noted that competent authorities should be able to allow for the continued publication of a benchmark if its cessation would result in frustration of existing contracts. It highlighted, however, that such powers should be flexible enough to allow the competent authority to limit the use of that benchmark only to certain contracts (e.g. tough legacy contracts). It has thus expressed broad alignment with the Commission’s policy choice to enable the regulators to mandate the publication of a substitute rate, to be used in certain existing contracts, in order to ensure smooth cessation of a critical benchmark.

Furthermore, most of the participants noted that:

- it is the administrator who bears the main risk in the event of a significant change in methodology. Therefore, setting the scope of new, extended powers of supervisory authorities should be preceded by a thorough impact assessment carried out by a panel of independent experts.
- Conditions should be clearly defined in the BMR.
- The scope of supervisory intervention in benchmark methodology should be precisely defined.
- Consideration should be given to limiting such corrective powers to formal guidance and approvals.
- The legislative amendment envisaged, if implemented, should account for the potential risk of civil litigation initiated by parties to financial contracts.

One benchmark administrator was moderately in favour and underlined that “*new powers for a competent authority to require the administrator of a critical benchmark to change its methodology would have to be limited to specific and pre-determined circumstances and be proportionate.*”

All **benchmark administrators** but one, some benchmark users, associations and one respondent from the public sector **did not agree** with empowering competent authorities with a tool to force an administrator to change the methodology against its will. In their view, this would create a situation where the continuity of the benchmark will be questioned and where the administrator and contracting parties might risk litigation. All argued that the BMR already provides that the oversight committee of the administrator and the competent authority have to periodically evaluate the methodology and the relevant market. (Art 5.3.a) Those stakeholders consider that NCAs should take into account the liability issues arising from the decision to impose a change of methodology. All administrators underlined the consequences in terms of significant risks to the operator of a derivatives market referencing the benchmark, resulting in market uncertainty and potential market instability. Two respondents considered that the NCA might not have as much market intelligence or be aware of all the impacts of the changes as the administrator. Some of them expressed concern that this power could affect also benchmarks different from IBORs and would like the power to be limited to IBORs and not to all critical benchmarks. One administrator underlined that the new measures could create reputational and litigation risks for administrators as well as market uncertainty and instability. In their view, these changes “*would effectively constitute a nationalisation of the benchmark in the absence of any compliance issue*”.

A majority of respondents agreed that **corrective powers** should not apply to critical benchmarks at all stages in their existence and that these powers should be **confined to situations when a contributor notifies its intention to cease contributions**. A majority also agreed that is the exercise of those powers should be confined to **situations in which mandatory administration and/or contributions of a critical benchmark were already triggered**.

A majority of respondents considered that **further changes** to the BMR would be needed to improve the robustness, reliability or representativeness of the benchmark. One respondent advocated for a mechanism ensuring **support** by the supervisory authority for the administrator and for panel banks. Several respondents advocated for a **validation** by competent authorities of the benchmarks methodology prior to the launch of the benchmark. Another respondent called for more **information** on changes in methodology, including the concerned users of such

benchmarks. Another stakeholder advocated for cooperation between the competent authority with key financial markets stakeholders (i.e. Central Banks, Treasury) and the relevant market associations to facilitate the development of liquid markets in instruments that would underlie the transactional support of financial benchmarks. A respondent suggested that administrators should receive **more means** to make effective changes in its methodology and ensure the representativeness of the panel; as an example administrators should be granted access to regulatory reporting data and statistics for the purpose of assessing the benchmark's methodology. It was also suggested to introduce power, or the obligation, for a competent authority to certify that the benchmark, after a change in methodology, still reflects the underlying interest.

An administrator and a competent authority advocated for the introduction of automatic criteria for contributions to a critical interest rate from e.g., all MMSR reporting banks; all credit institutions with an exposure to EURIBOR above a certain level should be required to contribute to the benchmark. One respondent suggested to consider increasing the frequency of the administrator's determination of representativeness in Article 23(2) from 2 years to 1 year. Two stakeholders aimed at introducing the power for competent authorities to compel administration of a critical benchmark under article 21 for longer than 5 years, where necessary to prevent market disruption, given the extended maturity of certain legacy exposures for all banks that use the rate above a given threshold. One respondent suggested that regulators/administrators should be required to seek regular feedback from buy-side firms and other end users on benchmark methodology. One respondent suggested that the change in methodology or a mandatory contribution should not be triggered when a less significant contributor ceases to contribute.

A **slight majority** appeared to be **in favour of requiring approval of benchmark cessation plans by a competent authority**. Against this option it was argued that it might shift responsibility to prepare for eventualities from the administrators, with whom it should rest, to its competent authority. Other arguments against this proposal mentioned (i) resource constraints at competent authorities and (ii) administrative burdens, as well as (iii) the fact that the BMR contains insufficient material guidance on what the cessation plans should contain. Respondents in favour argued that cessation plans approved by a competent authority would instil more confidence in market participants, or that the measure might be proportionate for critical benchmarks. In the latter case, it would be for the supervisory college to approve the plans. Also, it was suggested that these cessation plans, for critical benchmarks at least, should be made public.

Although this was not the subject of the question, a number of respondents also commented on the potential approval of contingency plans of benchmark users by a competent authority. This measure was considered to be disproportionate and potentially disruptive, since there might be fragmentation in the supervisory practice between the various national regulators.

A **slight majority** was **opposed to expanding the scope of contingency plans to also cover the case where a critical benchmark loses representativeness**. Respondents against cited, among other things, the fact that the "loss of representativeness" scenario would be hard to define legally. Notably, a benchmark user cannot itself be responsible to assess representativeness of a benchmark. Commenting on the current drafting of Article 28(2), respondents on the user side of the spectrum found that the concept of "material change" continues to be unclear.

Respondents on the other side made a mirroring argument: the requirement would be feasible, provided "loss of representativeness" is defined and benchmark administrators are obliged to

disclose when this happens. Several respondents also believe it would be good to clarify the exact extent of Article 28(2) for the case where a critical benchmark is found no longer to be representative. Several respondents also noted the appearance of a market practice to include fall-back provisions in e.g., bonds that are triggered by a statement from a competent authority attesting the non-representativeness of a benchmark (a so-called “pre-cessation trigger”), and questioned whether it would be useful to impose this market-wide in the BMR. Other benchmark users advocated for ESMA to develop uniform fall-back conventions for critical benchmarks. Finally, a respondent stressed the necessity of alignment between the contingency plans drawn up by the administrator and the plans that benchmark users should maintain, adding that it was a prerequisite that the administrator makes available all relevant information to its benchmarks’ users.

A majority was generally positive to neutral on the appropriateness of the system of supervision by colleges. Colleges are generally seen as a good way to ensure exchange of information and to bring together competent authorities responsible for the administrator, for the contributors and for the users of critical benchmarks. Those respondents that made suggestions commented on, inter alia, the transparency of the colleges, which could be improved in their view. Respondents also comment on a high degree of uncertainty in relation to the functioning of the colleges after the entry into application of the ESAs review (and the transfer of the supervision of the administrators of EU critical benchmarks to ESMA). On competent authority called for an increased role of colleges to ensure convergence in the supervision of benchmark contributors. Finally, there also appear to be questions as to the supervision of LIBOR post-Brexit.

II. Authorisation and registration

A majority of respondents find that it is currently insufficiently clearly set out in the current text of the BMR whether a competent authority has the powers to withdraw or suspend the authorisation or registration of an administrator in respect of one or more benchmarks only. Less than a quarter found it rather clear or very clear that they do.

A few respondents, including national competent authorities, were even of the opinion this interpretation would be contrary to the current text of the BMR. Several respondents added that they would welcome a clarification in this regard. One respondent stressed that a competent authority should have the option to decide whether a shortcoming affects one or several benchmarks or the administrator as an entity, and should act accordingly. No respondents are of the opinion that suspension or withdrawal of authorisation should always affect all benchmarks provided by an administrator.

In general, respondents commented on the tension between this welcome clarification, and the general principle of the BMR to authorise / register at administrator level. Moreover, several respondents observed that this understanding would be at odds with the way the benchmark register currently works, listing only the administrator for EU-registered or -authorised administrators, thus leading to the presumption that all of their benchmarks would be fit for use in the Union. Another respondent made a similar comment, stressing the importance of transparency and clear communication to benchmark users if a benchmark is the subject of suspension or withdrawal.

A clear majority of respondents are of the opinion that the current powers of NCAs to allow the continued provision and use in existing contracts for a benchmark for which the authorisation has been suspended are currently not sufficient, and argue for an expansion,

at least to cover also the case of withdrawal of authorisation / registration. In their comments, respondents explain that the difficulties faced in switching off a non-compliant benchmark could be alleviated by allowing the continued provision of a non-compliant benchmark for legacy contracts, at least for a sufficient grace period (12 months is cited as an example). However, users also cite the potential civil and contract law problems they may face in continuing to use a benchmark whose reliability may have been tainted by e.g., manipulation.

A limited number of respondents specifically advocate for a broad application of this grandfathering principle to third country benchmarks, where they anticipate that a large number of benchmarks will not meet the standard to be used for new contracts after the end of the transitional period. These respondent also argue in favour of an exemption for new contracts that would be used to ‘manage down’ legacy positions. One respondent, representing market infrastructures, considers that the BMR should be firm: if the NCA has opted to withdraw an administrator’s license, it can be presumed to have done so in full knowledge of the consequences.

Views were mixed among stakeholders as to **whether the powers of competent authorities are appropriate to permit continued use of a benchmark when cessation of that benchmark would result in contract frustration**, with as many of the opinion that the current set of powers is appropriate as that additional powers should be granted. One respondent mentions the possibility of legislative intervention to accompany benchmark transition, as was done in 1999 to move from the various national IBORs to EURIBOR. Another respondent calls on power to be conferred on the European Commission to nominate a successor benchmark where a critical benchmark is to be phased out.

III. Scope of the Benchmark Regulation

The **majority of respondents** consider that the **regulatory framework applying to non-significant benchmarks should be better calibrated** with mixed views on possible re-calibrations. Half of the respondents consider that a benchmark should be both quantitatively and qualitatively material i.e. satisfy both criteria in Articles 24(1)(a) and (b) in order to be deemed significant while a benchmark that only satisfies a single criterion should be deemed non-significant. Some respondents consider the overall compliance requirements disproportionate, emphasizing the importance of the proportionality where requirements should differentiate in respect of the various types of benchmarks and the proportionality should focus on size and risks of each benchmark and administrator (particularly lack of transparency, conflicts of interest) and should allow to remove excessive administrative burden.

A third of respondents indicate that both EU and third country non-significant benchmarks should be excluded from the scope of the Regulation, in line with most of the third country jurisdictions which tend to limit regulation and supervision to critical benchmarks of systemic importance. According to respondents the current regulatory framework creates disadvantages for EU benchmarks administrators while third country administrators may not be incentivised to keep providing non-critical benchmarks in the EU if they are required to comply with the relevant provisions of BMR, notably to have a legal representative located with the EU. Some respondents, including industry representatives and public authorities, are of the view that exclusions should not relate to benchmarks that are more subject to manipulations and climate-related benchmarks.

Finally, a few respondents consider that the regulatory framework applying to non-significant benchmarks is adequately calibrated and it is too early to assess any need for re-calibrations,

which could only be considered after a few years of effective implementation and use of BMR requirements. Respondents also consider that the framework provide for sufficient exemptions for administrators of non-significant benchmarks as compared to critical and significant benchmarks.

On the issue of third country FX spot rates referenced in non-deliverable forward contracts, some respondents stressed that such spot rates should be excluded from the Regulation as long as they are administered by public authorities or assimilated bodies. Alternatively, respondents suggest the definition of 'public authorities' to be expanded to include third-country administrators of non-deliverables forwards (NDFs). In particular, ESMA agreed that the prospective inability of the EU market participants to use these third country FX spot rates is indeed an issue and that the Commission's preferred option to deal with the problem, by exempting certain third country FX spot rates via extending the existing public policy rate exemption, may indeed be appropriate, as this would preserve the integrity of the BMR's existing third country regimes and would allow businesses to continue to hedge their currency risks by using these benchmarks.

A large majority respondents consider that **quantitative thresholds (such as the volume of transactions on the benchmark or the size of the underlying economy) would be the most objective and transparent approach** to ensure a harmonised establishment of categories of benchmarks. However almost all respondents indicate that experiences show that quantifying the use of benchmarks is an extremely complex exercise, given the difficulty for administrators to adequately monitor the thresholds which puts the reliability of the resulting calculations into question. For respondents these difficulties cause some administrators not to take advantage of the exceptions available for non-significant benchmarks.

For the majority of respondents an alternative approach based on a mix of quantitative and qualitative criteria would be preferable for all the categories of benchmarks, similarly to what the Regulation already foresees for 'critical benchmarks' where experience has shown to be the good approach. Some respondents would suggest a role for ESMA to ensure a uniform approach throughout the Union and avoid the potential risk of divergent applications which could also drive the choice of benchmark administrators for requesting the registration of benchmarks. For some respondents ESMA should also be responsible for determining whether a benchmark is critical, significant or non-significant, noting that non-significant benchmarks are likely to have greater impact in specific jurisdictions rather than across the Union. Respondents indicate that the oversight from ESMA would allow gather feedback from the national competent authorities and end users as to ensure that the administrator's decision to opt out of any requirements under the Regulation does not have an adverse effect on benchmark users. Few respondents would also favour the creation of a dedicated committee, which would include index industry experts, to develop and apply qualitative criteria for the establishment of a public list of significant benchmarks to update periodically. For some respondents a mix approach would help define the status of third country benchmarks with respect to the existing benchmark categories, noting that third country administrators face significant difficulties in accessing data to quantify the usage of their benchmarks within the EU when applying for recognition. A few respondents consider that the assessment of a third country benchmark's impact on market integrity or financial stability should also be part of the qualitative criteria.

Few respondents suggest the quantitative threshold for significant benchmarks be increased from a total average value of EUR 50 billion over six months to EUR 100 billion over the same period as a more appropriate threshold to capture benchmarks whose discontinuation or material change would have a significant and adverse impact on one or more Member States. Few others suggest

that, in situations where a benchmark is critical for the functioning of the financial markets and the economy, the competent authority should have the power to deem the benchmark as a national critical benchmark based on qualitative criteria, even though that benchmark does not meet the quantitative threshold criteria. This might be the case for non-euro countries where IBOR benchmarks are locally critical but the underlying value is below threshold.

Finally, very few respondents consider would welcome the complete abolition of quantitative thresholds which could solely remain as indicative guide for the competent authorities when designating which benchmarks are significant or critical. One respondent would recommend to build a mapping of the different categories of existing benchmarks at the EU level which could help for informed considerations on appropriateness of quantitative threshold and other qualitative criteria.

A **majority of respondents** consider that the **calculation method used to determine the thresholds for significant and critical benchmarks is appropriate**, albeit with opportunities for possible adjustments. A third of respondents, including industry stakeholders and public authorities, consider the calculation method not appropriate due to the significant challenges encountered with the unavailability of data that should be used to determine the thresholds. Respondents would recommend the calculation methodology to only reference data available under EU regulations repositories, excluding data which are either not publicly available or only partially available or not centralised.

Some respondents indicate that the lack of a ‘golden source’ of data is an important issue for third-country administrators seeking to identify their member state of reference for the usage of a benchmark in the Union for the purpose of recognition. Few respondents also refer to issues with regard to financial products such as funds or structured products that have a primary listing in a third country but are redistributed to EU investors with the difficulty to calculate the exact exposure in the EU due to lack of clarity whether the underlying indices can be considered as benchmarks or not.

Finally, some respondents express mixed views with regard to the alternative methodology and the ‘best effort basis’⁵² approach. A few respondents are supportive of alternative source of data if the information cannot be accessed or is not sufficiently reliable, also suggesting that all threshold calculations under the regulation should be done on a reasonable best efforts basis, regardless the data sources. A few others consider that the usage of alternative source of data may undermine the objective of a harmonised and consistent approach in the calculation method and would rather suggest the competent authority to review the calculation in conjunction with the administrators to allow for a more consistent approach in the designation of benchmarks.

A **large majority of respondents** consider an **alternative approach completely appropriate for benchmarks that are less prone to manipulation** and that the methodology could include some proportionality looking at key areas such as the ‘use of discretion’, ‘conflict of interests’ or ‘risk of manipulation’. Respondents believe it is important that the Regulation continues to provide a framework for a robust governance structure for the administrators. For the majority of respondents regulated data benchmarks, where input data is regulated at its source (i.e. produced by regulated trading venues subject to continuous oversight), should be exempted from the regulation or at least be subject to reduced regulatory burden (i.e. authorisation/registration

⁵² As under Commission Delegated Regulation (EU) 2018/66

requirements seem unjustified). A few respondents consider that the definition of regulated data benchmarks category should cover a substantial number of third country benchmarks and not exclusively derivatives.

Some respondents call for a more flexible regulatory approach for other type of benchmarks such as the proprietary indices which are solely used in over the counter transactions or benchmarks based on the reporting of underlying transactions i.e. risk free rates. A few respondents consider that current provisions do not take into account the different risk profile of physical commodities benchmarks which are by essence less prone to distortion caused by financial flows as predominantly used to manage the risks along the supply chain.

Finally, a minority of respondents state that an alternative approach is neither appropriate nor feasible and believe that all types of benchmarks are open to potential manipulation, hence the quantitative assessments based on thresholds are the most suitable ones. A few respondents also refer to the Market Abuse Regulation which prohibits all market manipulation and express concerns by a classification which could categorise certain benchmarks as less prone to manipulation (i.e. potentially the case for equity benchmarks), implying that others are more prone to manipulation.

IV. Non-EEA benchmarks

A **large majority** replied that the potential **issues in relation to FX forwards did affect them** much or even very much. Several respondents explained that the current regulation will likely result in third country benchmarks in non-deliverable FX forwards for not fully convertible currencies, no longer being allowed. This would lead to a severe impact due the fact that many FX exposures could no longer be fully hedged. The solution that is suggested by most of the respondents who claimed to be affected by this, is to exclude third-country administrators of FX spot rates in not fully convertible currencies from the benchmark regulation. More concretely, this could be done by expanding the definition of ‘public authority’ so that it includes administrators of FX rates. In addition, several respondents point out that regulators should reach out to relevant third country providers and where possible declare them equivalent. Furthermore, one respondent suggests that ESMA should operate a system to designate whether non-EEA benchmarks are critical with regard to financial stability. Only the benchmarks that are designated as critical would require authorization. Finally, one respondent suggests that, since EMTA monitors the fixing rates of non-deliverable forwards as determined by central banks, to investigate whether a cooperation with EMTA is possible.

A **majority of respondents** indicated that the **possibilities for third country benchmark administrators to have access to EU markets are insufficient** and that this could be problematic. There are respondents who have not been made aware of issues or who argue that the current system works fine and that the lack of applications to be either recognized or endorsed is due to the extension of the transitional period. The respondents who are of the view that the possibilities for third country benchmark administrators to access EU markets are insufficient provide a variety of arguments to substantiate their position. A potential problem with regard to the equivalence regime is that not many countries have benchmark legislation, and the countries that do (or will) have benchmark legislation, focus on significant or critical benchmarks, leaving a vast amount of benchmarks out of scope of an equivalence decision. For endorsement and recognition the costs, the identification of the member state of reference and the (absence of clarity surrounding the) responsibilities and liabilities of the endorsing entity or the legal representative are mentioned as major obstacles. This is especially the case for benchmarks that

are provided free of charge, or against a small fee. Furthermore several respondents questioned the usefulness of the criterion that there needs to be an objective reason for a third country benchmark to be endorsed for their use in the Union. One respondent raises concerns on the definition of ‘regulated data benchmarks’. Their limitation to EU or equivalent regulated venues deprives EU investors from access to a variety of innovative index options and access to emerging markets. This definition has furthermore lead to the Swiss regulated market data not being regulated data anymore due to the decision that the Swiss regulated markets no longer where equivalent.

A **variety of solutions** has been offered by the respondents. Some respondents stress the importance of **interaction between EU and third country authorities and regulators** about the consequences of not having third country benchmarks recognized. Furthermore several respondents ask the Commission for **clarification or alteration of the responsibility of the endorser or the legal representative**, the requirement of having an objective reason for endorsing the use of a third country benchmark in the Union, the criterion that a benchmark is ‘used’ in the Union, how to determine the member state of reference and the roles of ESMA and the NCA’s. It is suggested that it is important that the **framework applies equally to EU and non EU benchmark administrators and that the rules should not just apply to critical benchmarks**. Several respondents, however, also argue that non-significant and/or non-critical third country benchmarks should be exempted or out of scope of the regulation since the cessation of these benchmark are unlikely to pose a threat to the financial stability or market integrity. One respondent suggests that they should be out of scope for as far as they are used in contracts with professional parties. It is suggested that the use of those non-significant or non-critical benchmarks is allowed unless ESMA has declared them significant or critical and requires authorization. Some respondents suggest to declare out of scope certain specific benchmarks, such as foreign exchange, interest rate and regulated data benchmarks. Potential investor protector issues could be addressed through disclosure requirements for certain out of scope benchmarks. Alternatively it is suggested that authorization of third country benchmarks should be granted when an independent third party auditor declares that the IOSCO principles are complied with. Finally, one respondent mentions that the regulation should provide for sufficient safeguards with regard to third country benchmarks that will be prohibited. This means that legacy contracts should be protected in order to not cause market disturbances and that, for a sufficient period of time, reference to non-qualifying benchmarks is allowed in order to give market parties enough time to adjust to a decision of supervisory authorities.

ANNEX 3: WHO IS AFFECTED AND HOW?

3.1 Practical implications of the initiative

3.1.1. Business loan exposures to USD LIBOR

Table 9 – Business loan exposure to USD LIBOR across maturity ranges.

	Outstanding Volumes (Q4 2012)	Relation to LIBOR
Syndicated loans	\$3.4 trillion - US market: \$2.5 trillion - Non-US: \$0.9 trillion	97% LIBOR linked ¹ - Primarily 3 month and 1 month - ~10% of deals linked to 6m tenor <0.01% T-Bill linked
Corporate business loans (bilateral)	\$1.65 trillion - Some overlap may exist with syndicated loans	30-50% LIBOR linked (Higher proportion for larger exposures) - Primarily 1m and 3m tenors - Some 6m linked <2% Linked to T-bills
Non-corporate business loans	\$1.25 billion	Assumed 30-50% LIBOR linked - Primarily 1m and 3m tenors <2% Linked to T-bills
CRE/Commercial mortgages	\$3.6 trillion	Assumed 30-50% LIBOR linked - Primarily 3m
Floating/Variable Rate Notes	\$1.5 trillion - 24% of issuance volume nondomestic ¹	84% of issuance linked to LIBOR ¹ , of which - 42% linked to 1m - 53% linked to 3m - ~0.5% linked to 6m - ~0.5% linked to 12m 0.1% of issuance linked to T-bills

4. Source: Dealogic, Federal Reserve, World Bank, BIS quarterly review, Oliver Wyman analysis

5. Note: Based on 2012 issuance, DG FISMA interviews indicate that the breakdown is still relevant today.

According to fact-finding interviews by DG FISMA staff, the following amounts of global LIBOR exposures can be attributed to the balance sheet of European banks (the categories do not perfectly overlap with the ones used by Dealogic, but the below estimates indicate that a considerable amount of existing LIBOR exposures originate in the European Union.

-	\$3.4 Trillion in business loans
-	\$1.3 Trillion in retail mortgages and consumer loans
-	\$1.8 Trillion in floating rate/variable rate debt
-	\$1.8 Trillion in securitized products

3.1.2. Impacts of USD LIBOR cessation on EU vs US banks

The table below provides an overview on the stylised balance sheet of the different impact the cessation of USD LIBOR has on a European bank (represented as the bank that borrows USD from wholesale sources) vs a US bank that has USD assets in the form of retail deposits.

European wholesale bank

Pre-USD LIBOR cessation		Post USD LIBOR cessation	
Liabilities	Assets	Liabilities	Assets

Deposits (30)	HQLA (30)	Deposits (30)	HQLA (30)
FX swaps (20)	Floating rate loans (40)	FX swaps (20)	Floating rate loans (40)
Term debt (20)		Term debt (20)	
Money markets (20)	Fixed rate loans (30)	Money markets (20)	Fixed rate loans (30)
Equity (10)		Equity (10)	

Total (100)	Total (100)	Total (100)	Total (100)
USD LIBOR (60)	USD LIBOR (70)	USD LIBOR (40)	USD LIBOR (0)
LIBOR hedge (0)	LIBOR hedge (0)	LIBOR hedge N/A	LIBOR hedge N/A
Open LIBOR risk (0)		Open (unhedged) LIBOR risk (40)	

Pre-USD LIBOR cessation, the wholesale bank has matched liabilities and assets that reference LIBOR or are swap hedged to a LIBOR rate (the shaded areas in the first two columns of the table above – short-term debt and equity at 70 vs fixed and floating rate corporate loans at 70). Post USD LIBOR cessation, the wholesale bank’s loan book will reference a SOFR rate rather than LIBOR. In consequence, the wholesale bank has a mismatch between the cost of its unsecured liabilities where borrowing cost continues to reflect “unsecured” credit risk, previously reflected in the LIBOR rate (40), and a loan portfolio that is creating cash flows at SOFR. As LIBOR is no longer published, the wholesale bank can no longer hedge this mismatch (basis risk) with LIBOR based derivatives.

US deposit taking bank

Pre USD LIBOR cessation		Post USD LIBOR cessation	
Liabilities	Assets	Liabilities	Assets
Deposits (60)	HQLA (20)	Deposits (60)	HQLA (20)
	Floating rate loans (40)		Floating rate loans (40)
Money markets (10)		Money markets (10)	
Term debt (20)	Fixed rate loans (40)	Term debt (20)	Fixed rate loans (40)
Equity (10)		Equity (10)	

Total (100)	Total (100)	Total (100)	Total (100)
USD LIBOR (40)	USD LIBOR (80)	USD LIBOR (10)	USD LIBOR (0)
LIBOR hedge (0)	LIBOR hedge (40)	LIBOR hedge N/A	LIBOR hedge N/A
Open LIBOR risk (0)		Open (unhedged) LIBOR risk (10)	

Pre-USD LIBOR cessation, the US deposit-taking bank has a significant percentage of USD deposits as a source of funding and, in consequence, relies less on wholesale funding in unsecured markets. It has more assets that track USD LIBOR than USD LIBOR liabilities.

Post USD LIBOR cessation the deposit-taking bank will have assets that reference SOFR rather than LIBOR and only a small percentage of borrowing that references a rate that correlated to the present LIBOR (money markets at 10). This (unhedged) mismatch is much smaller than that of the European wholesale bank (40).

3.1.3. EU banks main USD financing sources

In order to describe the differential effects of a USD LIBOR phase-out, it is useful to describe the USD financing sources available to non-US banks. For those banks with insufficient USD deposits on their balance sheet, there are three main sources of obtain USD funding: (1) Short term wholesale borrowing; (2) FX currency basis swaps; and (3) offshore dollar deposits. For funding emergencies, there are also (4) FX swap lines

available through central banks, but such emergency funding does not reference LIBOR and depends on swap lines being established among the relevant central banks.

Table 10 – EU banks’ wholesale funding sources

	Short-term wholesale USD borrowing	FX currency swaps	Offshore USD deposits	Central bank Liquidity swap lines
Short-term (below 1 year) EU bank funding sources	Term deposits, certificates of deposit, floating rate notes, money market instruments	Often the only way non-US banks can access the USD necessary for USD denominated corporate lending, as trade finance is predominantly denominated in USD	EU banks with an international client base are able to rely on offshore USD deposits, which are not covered by the IHC rules. These offshore USD are, however, not sufficient to finance the entirety of an active USD loan book	The Federal Reserve can extend a USD liquidity swap lines to the ECB. The ECB can then hand out the USD to EU banks in its jurisdiction
Reference rate for short term EU banks	Three or six month LIBOR (directly or as a fixed rate “swapped” back to LIBOR)	European bank borrows USD and pays interest on USD LIBOR while the US counterpart pays interest for euros on the basis of EURIBOR. As USD is in much higher demand than EUR, the EURIBOR rate is usually EURIBOR minus 5 basis points, sometimes as low as EURIBOR minus 50 basis points (“adjustment spread”)	Corporate account holders accept the USD offshore rate as they are speculating on an appreciation of USD against the EUR or GBP.	During the 2008 financial crisis banks borrowed through swap line facilities at a rate of OIS plus 100 basis points. The FOMC dropped the rate to OIS plus 50 bps in November 2011. As part of the coronavirus crisis, new facilities will be offered at OIS plus 25 bps ⁵³
Medium Long Term (MLT) funding (1 year plus)	Bonds (1 year plus), paper issuance programmes and, where available, wholesale deposits		EU banks with an international client base are able to rely on offshore USD wholesale deposits, which are not covered by the IHC rules	
Reference rate for medium term funding	Fixed rate, often “swapped back” to LIBOR for risk management purposes		Term deposit rate as applicable in the relevant currency area	

Source for the above: FISMA interviews with five leading EU corporate lending institutions

3.1.4. Break down of derivatives exposures

The table below represents the derivatives exposures of a major European corporate bank. The table shows that, even for derivatives, the legacy issues will not be addressed entirely by an ISDA protocol. Just more than half (57%) of the contracts are written under the ISDA contracts standard. Of those derivatives that are not written under the ISDA standard, 20% are under the FBF contract standard and 23% under a variety of other contract standards. Moreover, it can be seen that although the majority of the derivatives under the ISDA standard is those contracts written under English law (70%), the remaining derivatives contracts are written under NY law or other law:

⁵³ Why-FX-swap-lines-are-back, ftalphaville, 17 March 2020

Table 11 – Break down of derivatives exposures

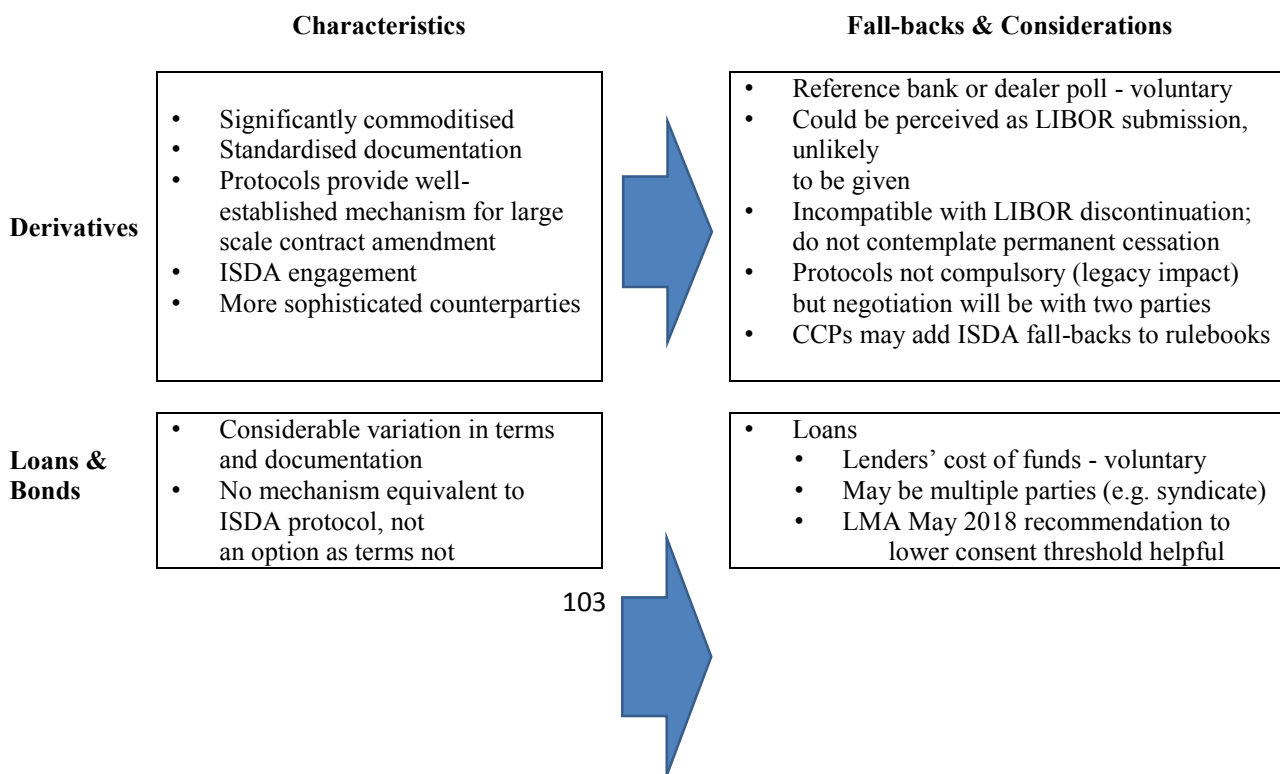
Contract Standard	Governing Law	Quantity
FBF	French	20%
ISDA	English	40%
ISDA	NY Law	13%
ISDA	Other	4%
Others	-	23%

Source: based on DG FISMA interviews with banks

Silent contracts would fall back to a term equivalent rate plus a fixed spread reflecting the credit risk of the banking sector. For NY law contracts, the US RFR working group (the ARRC) would recommend the applicable fall-back rate. Contracts that would pro-actively insert the ARRC recommended fall-back would enjoy a safe harbour (the choice could not be contested by one of the parties at a later stage). All contract parties remain at liberty to negotiate individual arrangements, also such not involving an ARCC recommended substitute.

The NY statute is designed to minimize litigation by providing legal certainty for the issues that are likely to arise under New York law. Notably, the proposed statute would: (1) prohibit a party from refusing to perform its contractual obligations or declaring a breach of contract as a result of the discontinuance of LIBOR or the use of the statute’s recommended benchmark replacement; (2) definitively establish that the recommended benchmark replacement is a commercially reasonable substitute for and a commercially substantial equivalent to LIBOR; and (3) provide a safe harbour from litigation for the use of the recommended benchmark replacement. The proposed legislation would achieve these goals by requiring the use of the recommended benchmark replacement where the contract language is silent or the fall-back provisions prescribe the use of LIBOR. Where the fall-back provisions are discretionary, the proposed legislation’s safe harbour is intended to encourage the selection of the recommended benchmark replacement. The proposed legislation, however, would not impact legacy contracts that have fall-back provisions to a non-LIBOR replacement rate (such as the prime rate). The proposed statute is based, in part, on New York legislation enacted in 1998 in anticipation of the discontinuance of sovereign currencies that were being replaced by the euro.

3.1.5 Legal considerations



- standardised
- Product by product amendments challenging
- Market practice on significant issues generally well-defined but not uniform
- ICMA and LMA engagement
- Identity of some ultimate beneficial owners unlikely to be known
- Some counterparties may be less sophisticated

- Earlier loans probably require full consent
- Bonds
 - Reference rate from banks - voluntary
 - Defaults to most recent rate – fixed
 - May be commercially unacceptable to issuer and investor
 - Requirements for consent may be amplified by consumer protection laws
 - Trustee discretion to amend unlikely
 - High consent thresholds

Source: based on DG FISMA interviews with banks

3.2 Summary of costs and benefits

<i>I. Overview of Benefits (total for all provisions) – Preferred Option</i>			
	<i>Description</i>	<i>Amount</i>	<i>Comments</i>
	<i>Direct benefits</i>		
Mandating the publication of a time-limited legacy rate	Continuity for SME financing	In the European Union, SMEs are an important group of corporate borrowers and their loan payments are often based on LIBOR plus a spread reflecting their own credit rating. It is fair to say that LIBOR plays a crucial role in SME financing, also for debt issued by SMEs. Many of the financing instruments used by SMEs are “priced” off a LIBOR rate (either three, six or one year LIBOR). A universally agreed legacy rate would therefore give legal certainty for SME contracts that are still in course at the end of December 2021.	Legal certainty as to the applicable financing rate would be highly beneficial for SME financing and the continued availability of such financing, especially in current circumstances when the COVID 19 crisis is putting at risk the very survival of many SMEs.
	Avoided litigation cost	It is very difficult to give an accurate quantitative assessment of the cost savings resulting from avoiding legal disputes relating to tough legacy contracts for the no agreed fall-back rate scenario (baseline). However, we could make a very rough “ballpark” estimate based on the number of legacy contracts pending in 2021 and the cost of litigation if these contracts risk being considered void due to the absence of a mutually accepted fall-back rate. Conversations with major EU corporate lenders reveal that the “big five” banks have in excess of 1000 contractual counterparts, roughly 600 of them corporations. But each of these counterparts has, naturally, several loans or other LIBOR related transactions pending after December 2021, a conservative estimate would be that LIBOR loans and debt, end 2021, will comprise more than 50.000 contracts per lending institution. Should	The main beneficiaries of litigation cost-savings will be the benchmark users (and the national court system as an indirect beneficiary, see below). The continuity option implies a <i>de iure</i> switch to the reformed IBOR rate for tough legacy contracts, which would provide legal certainty for parties to those contracts. Therefore, this approach would avoid litigation costs that would otherwise arise in a number of cases due to the legal uncertainty about the contract reference rate following the discontinuation of the rate in the baseline scenario.

		<p>the parties wish to renegotiate/litigate this entire legacy stock on account of the absence of a LIBOR replacement, costs would reach millions per institution and probably in excess of 1 billion for the EU banking sector.</p>	
	<p>Avoided renegotiation cost</p>	<p>In the absence of any action, the (consensual) repapering of contracts linked to a disappearing IBOR is considered as a huge burden for European banks. According to estimates conducted by the private sector, a Global Systemically Important Bank (GSIB) may have more than 250,000 contracts with references to IBORs that are likely to mature post-2021, in addition to several thousand other contracts with indirect IBOR exposure (e.g., a penalty clause in supplier agreements). The volume of documents can increase significantly when considering activities such as servicing, where firms may not have direct financial exposure but play an important operational role in IBOR contracts.</p> <p>According to FISMA Services informal contacts, in terms of cost and complexity of renegotiation of USD LIBOR legacy contracts, the cash market (loans and debt) is more challenging than derivatives (where agreements are often covered by standardised contracts which can be amended via accepted protocols – like the ISDA’s ones).</p> <p>In the cash markets, counterparties have varying degrees of sophistication and individual negotiations are required for each agreement. According to the estimates received, there are thousands of contracts that banks’ would need to renegotiate (because they mature after the end of 2021). The legal cost associated with renegotiating “tough legacy” contracts is expected to vary, driven by the following key variables: (i) Complexity, (ii) client sophistication and (iii) lawyer time required. According to estimates by a major corporate lender, renegotiating loan agreements with relatively more standardized terms would likely cost, on average, EUR 55,000 per transaction, with variations depending on jurisdiction, governing laws and whether there are contractual securities involved or not. More complex and bespoke loan or debt re-negotiations could see costs rise significantly, possibly exceeding EUR 100,000 per transaction. Cost also increases if parties engage in extended negotiations, because</p>	<p>It is estimated that legal and contract remediation for IBOR transition may cost more than USD 50 million and would require enterprise-wide contract discovery, digitization, term extraction, repapering, client outreach and communication capabilities[Source: Ernst & Young analysis].</p>

		of a lack of borrower or lender cooperation	
Indirect benefits			
	Smooth transition away from an IBOR rate ensures international competitiveness, notably with the United States	In order to demonstrate the indirect benefits in ensuring a smooth IBOR transition, the following extracts from the ARRC proposal to adopt a statutory fall-back rate for USD LIBOR ⁵⁴ is illustrative: “The proposed statute is designed to minimize costly and disruptive litigation by providing legal certainty for the issues that are likely to arise under New York law. Notably, the proposed statute would: (1) prohibit a party from refusing to perform its contractual obligations or declaring a breach of contract as a result of the discontinuance of LIBOR or the use of the statute’s recommended benchmark replacement; (2) definitively establish that the recommended benchmark replacement is a commercially reasonable substitute for and a commercially substantial equivalent to LIBOR; and (3) provide a safe harbour from litigation for the use of the recommended benchmark replacement. The proposed legislation would achieve these goals by requiring the use of the recommended benchmark replacement where the contract language is silent or the fall-back provisions prescribe the use of LIBOR”.	The indirect benefit of an agreed legacy rate for LIBOR have been described by the ARRC as follows: “Although the notes could theoretically be amended to resolve this problem, they typically require consent from each holder to change the interest rate. So while it may be possible to obtain consent in isolated cases, it is unlikely to be workable for many securities with a large number of holders, especially if held by retail investors. The administrative burden and potentially high costs of reaching these investors will be significant, particularly when unanimous consent of security holders would be required”.
	Contractual robustness leads to business continuity	The benefits of business continuity are not only evident or businesses and banks that have loan or debt arrangements referencing LIBOR at the end of 2021, contractual robustness is also in the public interest. The ARRC proposal described these indirect benefits as follows: “The proposed legislation would [instead] uniformly implement a fall-back to the statute’s recommended benchmark replacement for securities. This outcome would avoid the use of a rate (last quoted LIBOR) that is no longer representative of a market rate, reduce uncertainty about the replacement rate, and minimize market disruption, potential disputes and the costs and burdens of litigation on New York courts, residents and commercial participants.”	Not overloading the EU Member State’s court system with LIBOR related litigation is an important aspect of the proposed reform, notably in current circumstances where physical courtroom based litigation is a scarce resource, due to the COVID 19 pandemic.
Direct benefits			

⁵⁴ <https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2020/ARRC-Proposed-Legislative-Solution.pdf>

Exemption of third country foreign exchange spot rates	Avoid increase of cost or limited offer of hedging contracts for EU investors	The possibility for EU banks to continue reference FX spot rate in listed derivatives will maintain the current level of transparency on those contracts and avoid an increase of their costs for EU investors due to diminished offer. It will also avoid that investors have to seek their usual financial counterparty for hedging their business risk.	
	Indirect benefits		
	EU Banks do not lose a business sector ensures international competitiveness of EU banks in this FX hedging	If European banks are allowed to continue the business of hedging from currency risk they will not lose their market stake and maintain competitiveness vis-à-vis third country financial sectors players.	

(1) Estimates are relative to the baseline for the preferred option as a whole (i.e. the impact of individual actions/obligations of the preferred option are aggregated together); (2) Please indicate which stakeholder group is the main recipient of the benefit in the comment section; (3) For reductions in regulatory costs, please describe details as to how the saving arises (e.g. reductions in compliance costs, administrative costs, regulatory charges, enforcement costs, etc.; see section 6 of the attached guidance).

II. Overview of costs – Preferred option							
		Citizens/Consumers		Businesses		Administrations	
		One-off	Recurrent	One-off	Recurrent	One-off	Recurrent
Mandating the publication of a time-limited legacy rate	Direct costs	There are no direct costs for citizens and consumers	There are no recurrent costs for citizens and consumers	Banks will cease submissions to the old LIBOR and will, in consequence save the cost of submitting transaction data or exercising expert judgment as to their wholesale funding cost	There is no recurrent cost for business benefiting from a formula-based legacy rate, published by the administrator of the old LIBOR rate	The legacy rate is sourced from a central bank publication (the risk free rare) with a fixed spread added; this is a simple formula implying essentially no extra cost to the original LIBOR administrator	Publication of the LIBOR successor rate is based on a formula, hence cheaper to produce than the “old” LIBOR
	Indirect costs	There are no indirect costs	There are no indirect costs	Banks will save indirect costs of having to employ staff that prepare and verify the daily rate submissions	Personnel that was previously engaged in administering the daily LIBOR submissions will need to be redeployed elsewhere in the bank, this could result in a small cost of redeployment	The cost of daily publications of a formula-based legacy rate will be lower than assembling a panel bank rate each day	The recurrent cost of publishing a formula-based replacement rate is expected to cease after a period of 5 years, when the majority of the legacy stock has matured

Exemption of third country foreign exchange spot rates	Direct costs	There are no costs for citizens and consumers	There are no recurrent costs for citizens and consumers.	Businesses and their banks will have no extra cost when the foreign exchange spot rates remain available for use in hedging contracts	An exemption does not cause recurrent cost, as it avoids the cost of any alternatives, such as contract authorisations or rate endorsements	Third country administrators of spot rates do this in pursuit of a public mandate. The fact that these rates are used in EU-based hedging contracts neither causes nor reduces their cost base.	As in the previous column, usage of third country spot rates in EU-based hedging contracts has no incidence on the cost that these administrators incur. The rates are not licensed, so there is no benefit either.
	Indirect costs	There are no indirect costs for citizens and consumers		There are no indirect cost for business, only the benefit to be able to hedge volatility of foreign exchange spot rates	Same as previous column	Usage of foreign exchange spot rates in EU based hedging contracts has no incidence on the cost of producing the spot rates	Same as previous column

(1) Estimates to be provided with respect to the baseline; (2) costs are provided for each identifiable action/obligation of the preferred option otherwise for all retained options when no preferred option is specified; (3) If relevant and available, please present information on costs according to the standard typology of costs (compliance costs, regulatory charges, hassle costs, administrative costs, enforcement costs, indirect costs; see section 6 of the attached guidance).

ANNEX 4: BACKGROUND INFORMATION

The following sections provide further background information to the elements stated in the impact assessment.

4.1. Overnight nearly risk-free rates

As mentioned in section 1.1, the recent global trend to develop nearly risk-free overnight rates as alternatives for existing IBORs. The table below sets out the identified alternative risk free rates for five LIBOR currency areas.

Table 12 – Overview of identified alternative RFRs in the five LIBOR currency areas

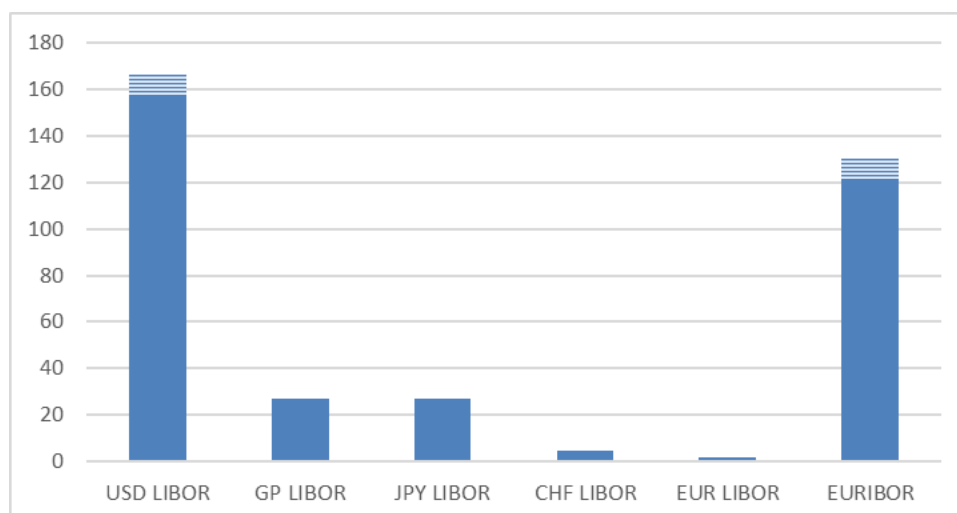
	United States (USD)	U.K.(GBP)	Euro area (EUR)	Switzerland (CHF)	Japan (yen)
Alternative rate	SOFR (Secured overnight financing rate)	SONIA (Sterling overnight index average)	€STR (Euro short-term rate)	SARON (Swiss average overnight rate)	TONA (Tokyo overnight average rate)
Administrator	Federal Reserve, Bank of New York	Bank of England	ECB	SIX Swiss Exchange	Bank of Japan
Data source	Triparty repo, FICC GCF, FICC bilateral	Form SMMD (BoE data collection)	MMSR	CHF interbank repo	Money market brokers
Inclusion of Wholesale non-bank counterparties	Yes	Yes	Yes	No	Yes
Secured rate	Yes	No	No	Yes	No
FICC = Fixed Income Clearing Corporation; GCF = general collateral financing; MMSR = money market statistical reporting; SMMD = sterling money market data collection reporting					

Source: BIS, March 2019

4.2 Exposures to the main critical benchmarks: LIBOR and EURIBOR

Error! Reference source not found. summarises the notional outstanding for the two main IBOR rates, LIBOR and EURIBOR, indicating the most relevant currency rates.

Figure 6 – Notional IBOR exposures by currency (in EUR trillion)



Source: Oliver Wyman analysis (2018), data as available as of December 2017

Note: The solid bar is the lower estimate, the lined bar is the upper estimate. Asset classes with more than EUR 1 trillion in both USD LIBOR and EURIBOR are: syndicated loans, Interest rate swaps (OTC), forward rate agreements (OTC), Interest rate options (OTC), Cross-currency swaps (OTC), Interest rate options and futures (Exchange traded). See table 25 for further details.

Table 13 – Notional IBOR exposures by currency and asset class (in EUR)

Notional volume	LIBOR USD, GBP, JPY and CHF reference rates USD > 215 trillion				EUR reference rates USD > 130 trillion	
	USD LIBOR 157-166 trillion	GBP LIBOR 27 trillion	JPY LIBOR 27 trillion	CHF LIBOR 4,5 trillion	EUR-LIBOR 1,8 trillion	EURIBOR 121-130 trillion
Currency						
Asset classes						
Syndicated loans	High	High	High	High	High	High
Corporate loans	High	High	High	High	High	High
Other business loans	High	High	High	High	High	High
Commercial mortgages	High	High	High	High	High	High
Retail mortgages	High	High	High	High	High	High
Credit cards	High	High	High	High	High	High
Auto loans	High	High	High	High	High	High
Consumer loans	High	High	High	High	High	High
Student loans	High	High	High	High	High	High
Floating rate notes	High	High	High	High	High	High
RMBS	High	High	High	High	High	High
CMBS/ABS/CLO	High	High	High	High	High	High
Interest rate swaps (OTC)	High	High	High	High	High	High
Forward rate agreements (OTC)	High	High	High	High	High	High
Interest rate options (OTC)	High	High	High	High	High	High
Cross-currency swaps (OTC)	High	High	High	High	High	High
Interest rate options (Exchange traded)	High	High	High	High	High	High
Interest rate futures (Exchange traded)	High	High	High	High	High	High
Deposits	High	High	High	High	High	High

Source: Oliver Wyman analysis, data as available as of December 2017

Note: High (dark): more than 1 trillion, Medium (grey): 100 billion to 1 trillion, Low (white): less than 100 billion

4.3 LIBOR

As mentioned in section 2.1, LIBOR is the discount rate most widely used to value future cash flows and investment portfolios. Below are further details regarding LIBOR and figure 8 gives a breakdown of data sources used in the determination of USD LIBOR.

LIBOR was authorised for use in the Union by the UK Financial Conduct Authority (FCA) which is the national competent authority for the supervision of ICE Benchmark Administration (IBA) which is located in London.

IBA currently publishes LIBOR in five currencies (USD, GBP, EUR, YEN and CHF) in London. In order to assemble the daily LIBOR rates, IBA has constituted a designated panel of global banks for each currency and tenor pair. For example, 16 major banks, including Bank of America, Barclays, Citibank, Deutsche Bank, JPMorgan Chase, and UBS constitute the panel for USD LIBOR. Only those banks that have a significant role in the London market are considered eligible for membership on the LIBOR panel, and the selection process is held annually.

As of 1986, the British Bankers' Association (BBA) collected interbank offered rate quotes from a panel of banks. These rates reflected the rates at which banks claimed they could borrow funds from other banks. For example, USD LIBOR reflects the rates on interbank USD loans in London. It is published for the above five currencies and serves seven different maturities—overnight/spot next, one week, and one, two, three, six, and 12 months.

The combination of five currencies and seven maturities leads to a total of 35 different LIBOR rates calculated and reported each business day. The most commonly quoted rate is the three-month U.S. dollar rate, usually referred to as the current LIBOR rate.

Every day, major global banks communicate to IBA how much they would charge other banks for short-term loans. IBA takes out the highest and lowest figures, then calculates the average from the remaining numbers. This is known as the trimmed average. This rate is posted each morning as the daily rate. Once the rates for each maturity and currency are calculated and finalized, IBA publishes these rates once a day at around 11:55 am London time.

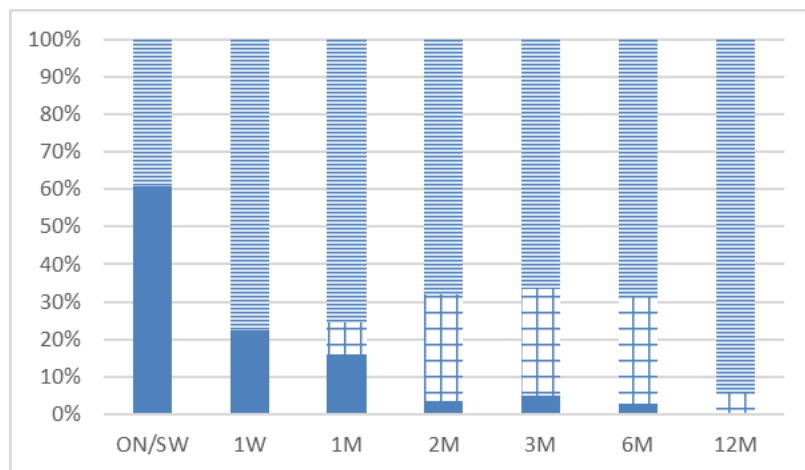
As of April 2018, IBA submitted a new proposal to strengthen the LIBOR calculation methodology. Further to such reform, a standardized, transaction-based, data-driven, layered method called the Waterfall Methodology is used for determining LIBOR.

One of the two main factors driving the international interbank benchmark reforms is the considerably reduced volumes of interbank unsecured term borrowing and **structural changes in the money market landscape**. This phenomenon has put a question mark on IBOR's ability to reflect the cost of interbank financing. Interbank market activity is thus unlikely to recover much, even if central banks decide to reabsorb such excess liquidity (Kim et al (2018))⁵⁵. One driver is the abundant supply of reserve balances created as a result of central banks' unconventional policies (e.g. Bech and Monnet (2016)). Post-crisis, banks have also repriced the risks associated with unsecured interbank lending, reflecting higher balance sheet costs due to tighter risk management and implementation of the new regulatory standards (BIS (2018)) (most notably through the liquidity standards).

⁵⁵ Andreas Schrimpf and Vladyslav Sushko, BIS Quarterly Review, 05 March 2019.

A scarcity of activity in interbank borrowing signals that a particular index might no longer be representative of the underlying (interbank) market. In accordance with the BMR, such an index would no longer be eligible for use in financial instruments or contracts issued by regulated entities within the Union. According to the Schrimpf and Sushko (March 2019) very few actual transactions underpin the submissions for the longer LIBOR tenors.

Figure 7 – Breakdown of data sources used in the determination of USD LIBOR



Source: theICE, IBA

Note: **Level 1 (solid)**: The LIBOR submission is equal to the volume weighted average price of eligible transactions in unsecured deposits, primary issuances of commercial paper and certificates of deposit, with a higher weighting for transactions booked closer to 11:00 a.m. London time. **Level 2 (checkered)**: Where a Contributor Bank has insufficient eligible transactions to make a Level 1 submission, the LIBOR submission is based on transaction-derived data, including time-weighted historical eligible transactions adjusted for market movements and linear interpolation. **Level 3 (lined)**: Where a Contributor Bank has insufficient eligible transactions or transaction-derived data to make a Level 1 or Level 2 submission, the LIBOR submission is the rate at which it considers it could fund itself at 11:00 a.m. London time with reference to the unsecured wholesale funding market.

4.4 EURIBOR

As mentioned in section 2.1, EURBOR is primarily a European corporate loan and retail mortgage markets reference. More than one trillion euro in retail mortgages reference EURIBOR, mostly in the Spanish, Italian and Finnish retail markets. Below are further details on EURIBOR.

EMMI received an authorisation to publish EURIBOR in accordance with the EU Benchmark Regulation in July 2019. Due to its location in Brussels, EURIBOR is currently within the regulatory purview of the Belgian markets supervisor (the Financial Services and Markets Authority, FSMA). As of January 2022, ESMA will become the supervisor of EURIBOR.

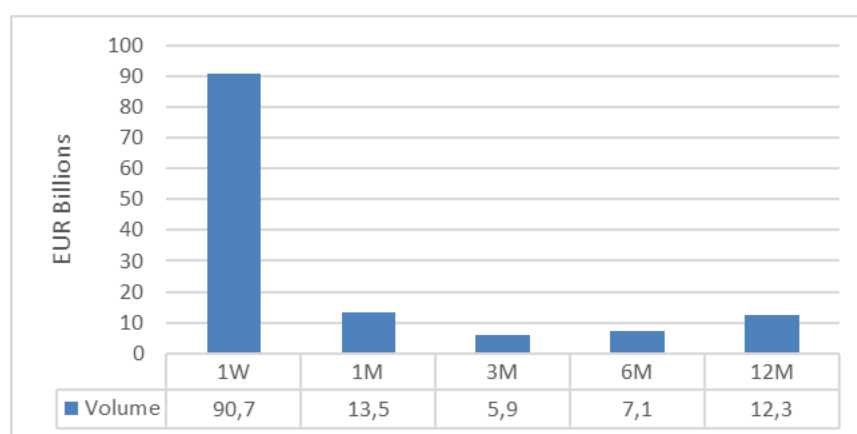
EURIBOR relies on contributions made by panel banks; currently 18 panel banks contribute transactions, interpolation or rates based on expert judgement to the administrator of EURIBOR. In 2012, the EURIBOR panel comprised 46 banks, so the gradual decline of contributors is a cause of concern.

EURIBOR plays an important role in the euro corporate loan and short-term commercial paper markets (12 trillion euro). Around 110 trillion euro in derivatives contracts, essentially interest rate swaps, reference EURIBOR. According to ECB data presented at the RFR WG, there are outstanding derivative contracts referencing EURIBOR for a notional value of around EUR 109

trillion. EURIBOR is also reference in debt securities with a notional value of around EUR 1.6 trillion. EURIBOR is used in loans for around EUR 10 trillion.⁵⁶ Exposures in these segments are, of course, much shorter in term than retail mortgages. Due to the significance of its use in the Union, in 2016 the European Commission designated EURIBOR as critical benchmark.

In the case of EURIBOR, European banks often attribute the gradual erosion of panel banks to the regulatory liability for the accuracy of contributions, especially those based on expert judgement. In this context, panel banks deplore an element of “free riding”⁵⁷ by banks that do not contribute data to EURIBOR but reference this rate in their contracts and derivatives (see *Figure 8*).

Figure 8 – Transaction volume (monthly) underpinning the determination of EURIBOR for different tenors (January 2020)



Source: EMMI EURIBOR Transparency Indicators (January 2020)

Note: Level 1 and Level 2.2 aggregate monthly notional volumes of transactions used in the determination of EURIBOR for different tenors (January 2020). For Level 2.2, only the portion of the overall volume of the transaction that is attributed to a particular tenor is considered. Level 1 consists of contributions based solely on transactions in the underlying interest at the defined tenor from the prior TARGET day, using a formulaic approach provided by EMMI. Level 2.2 is based on qualifying non-standard maturity transactions, where the maturity date falls between two defined tenors. The transactions may be used to determine a contribution at the two nearest defined tenors.

4.5 The FCA Cessation plan

Section 3.1.1 notes that UK’s FCA announced that it would not exercise the “mandatory contribution” powers granted by the BMR after the expiration of a gentlemen’s agreement with the LIBOR panel banks at the end of 2021. Below you’ll find further details of the FCA Cessation plan.

The FCA, the national competent authority for LIBOR, has set out a cessation plan for LIBOR that is applicable all five LIBOR currencies. The success of this cessation plan crucially depends on the fall-back provisions that derivatives market participants will have integrated in their agreements (via a standardised ISDA protocol).

⁵⁶ Molitor, Philippe, ECB, 2018, Update on quantitative mapping exercise.

⁵⁷ In order to tackle the “free riding” issue EMMI, the benchmark’s administrator, launched several efforts aiming to increase the contributor base for EURIBOR and further review its underlying methodology. The EURIBOR panellists and EMMI will shortly launch another initiative aimed at increasing the number of EURIBOR panel banks, aiming to make the rate more representative of the cost of euro-denominated wholesale financing of European banks.

The ISDA fall-back provisions could be activated either by means of the announcement of the permanent cessation of the benchmark – by the competent authority or by its administrator – or by the FCA activating a “pre-cessation” trigger by declaring the benchmark no longer to be representative of its underlying market. Three events are likely to affect the continued publication of LIBOR in all five currencies, including the crucial USD LIBOR rate.

On or around 2021, the FCA is expected to adopt a public statement that, in its view, LIBOR, in any of the five currencies it covers, is no longer representative of the underlying interbank market (the “pre-cessation trigger”). Although the activation of the pre-cessation trigger does not automatically imply the cessation of the benchmark, (1) the statement of non-representativeness would be irreversible, and (2) the grace period during which the benchmark is allowed to survive afterwards would be very short (e.g., 3 months).

The FCA statement of non-representativeness would be irreversible, reflecting the FCA view that LIBOR cannot be reformed after end-2021. The FCA consider LIBOR a structurally flawed benchmark that does not reflect the funding cost of a well-capitalised bank. In the view of the FCA, LIBOR cannot be made representative again. The FCA will therefore not activate the powers in Article 11(4) or Article 23(6)(d) of the BMR. CCPs have indicated that they would not continue to clear LIBOR derivatives after the point the FCA determines LIBOR to be “non-representative”.

In the event the pre-cessation trigger is activated on or around December 2021, market participants expect that a “cash” instrument portfolio of between USD 8-12 trillion in legacy contracts cannot be renegotiated in time to incorporate a contractual “fall-back” rate to cater to the cessation of LIBOR.

To anticipate the permanent cessation, a private-sector GBP RFR working group was established. This working group is engaged in setting cut-off dates as of which contract parties in the UK will no longer issue new financial instruments or sign contracts referencing GBP LIBOR (the “no new flow” principle). For example, the group has already undertaken that U.K. domiciled banks will grant no new GBP LIBOR loans after Q3/2020, although this undertaking may now slip on account of the coronavirus crisis. The FCA and Bank of England strongly advocate more private sector “no new flow” undertakings to cover a range of GBP derivatives markets in the near future. For USD LIBOR, US banks, assembled in the ARRC, are preparing similar private sector “no new flow” commitments.

In parallel, the FSB OSSG has mandated ISDA to consult on a protocol on the contractual insertion of a pre-cessation trigger, in legacy derivative contracts, whereby contractual fall-back provisions in derivative contracts would activate as soon as the FCA deems LIBOR no longer representative. The ISDA protocol on a fall back rate in case the regulator pulled the “pre-cessation trigger” would apply to all currencies so various quorums on participation and majorities have to be met. If not, the pre cessation trigger can be an opt-in among parties that agree on it. Most importantly, the ISDA fall back rates will be based on term adjusted risk free rates. They’ll have no credit component.

Tough legacy contracts are characterised as contracts (1) not covered by the ISDA pre-cessation triggers, (2) maturing after 2021, and (3) for which consent for insertion of a fall-back rate cannot be obtained prior to 2021. IBA estimates that the European stock of tough legacy contracts in cash markets is around 9 trillion USD maturing in 2025/26 with around 1 trillion maturing after

that date. The FSB has issued a questionnaire to assess residual LIBOR exposures in all five remaining currencies.

The current EU Benchmark Regulation (BMR) is designed to safeguard the continued publication of critical benchmarks, such as IBOR rates. It does not contain any powers to achieve various mitigation measures once a critical IBOR, such as USD LIBOR, ceases to be published (for further detail, see Section 5.1).

4.6 *Non-deliverable forwards (NDF)*

As stated in section 2.2, below is a definition of a non-deliverable forward (NDF).

A NDF is a bilateral contract between a corporate and a bank that allows local currency hedging. Like any other derivative, an NDF trades as a “forward rate”. The crucial feature of a NDF is that, at maturity, the profit (or loss) is calculated by comparing the forward rate to a fixing rate, which is the spot exchange rate at the date of maturity. The profit (loss) of a NDF is therefore dependent on the relevant currency’s published spot rate, as published by the organisation administering this rate.

FX spot rates are therefore one element in calculating the profit or loss of a NDF currency hedge. NDF currency hedges, in turn, are relevant for European corporates that have to manage cash flows denominated in emerging market’s (volatile) currencies. Other stakeholders exposed to volatility in emerging markets FX spot rates are companies that undertake capital investments abroad, hedge funds or mutual funds that manage foreign investment assets and banks that manage foreign cash and liquidity flow for their clients.

4.7 *References*

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ANNEX 5: CONFIDENTIAL ANNEX

The examples below can only indicate estimated orders of magnitude in terms of percentage exposures and number of contracts that EU banks would need to renegotiate, but as work in the non-financial sector has only begun, these numbers may not reflect the depth of the legacy contract problem.

Table 14 – EU banks’ USD LIBOR exposure across four asset classes

Asset class	Size	Maturity
<i>Loans and advances</i>	Loans and advances are by far the most affected asset class, both in terms of contract number and notional exposure amounts. When it comes to loans and advances, most major European banks currently have between 7000 and 20.000 pending loan agreements with various corporate clients that reference USD LIBOR across all maturity ranges. In terms of money lent, the individual loan portfolios of a major EU bank can amount to anything between USD 25 billion (mid-tier institution) to in excess of 50 billion USD (large institution).	USD LIBOR loans still pending at the expected LIBOR cessation date (December 2021) amount to between 50 and 60% of outstanding loans and advances.
<i>Corporate deposits</i>	Most major European banks maintain corporate deposit accounts for their clients. A major bank has anything between 4500 to almost 10.000 corporate deposit accounts exposed to USD LIBOR. In terms of value, USD denominated corporate deposits vary between USD 15 and 20 billion for each bank.	Around 50% of corporate deposits are based on agreements that expire beyond December 2021.
<i>Debt (issuances and assets)</i>	All major EU corporate lenders are both issuers of USD LIBOR debt and holders of USD LIBOR corporate debt on the asset side of their balance sheets. Major EU banks have between 400 to 1000 debt instruments on their respective balance sheets. The average value of debt instruments varies between USD 10 for a smaller institution to over 50 billion for the larger ones.	Around 50% to 75% of debt instruments will not reach maturity before December 2021. The longer maturity ranges can be both on the liabilities and the asset side of the banks’ balance sheets. Some of the longest term maturities are concentrated in the debt issued by the banks, these longer-term debt issuances are crucial in terms of ensuring access to long-term

		USD financing.
<i>Derivatives</i>	A major EU bank often has between 10.000 and 80.000 USD LIBOR derivative contracts in its portfolio at any given point in time. Notional exposures of these portfolios amount to several trillion USD.	Between 45 and 50% of derivatives contracts mature beyond December 2021. 25% of current derivatives contracts will mature beyond 2025.

Source: Based on confidential data from FISMA interviews with large and mid-sized EU banks

The cost of renegotiating a USD LIBOR legacy portfolio, for a mid-tier (lower range) and a large European bank (upper range) can be extrapolated as follows

Table 15 – Per bank cost of renegotiating the USD LIBOR portfolio (figures indicate lower and upper ranges) **for the EU banking sector**

	Loan agreements	Debt instruments	Derivative portfolio	Added cost for complex loans/debt
Number of contracts to be renegotiated	7000-20.000	400-1000	10.000-80.000 x 0.4 to reflect that 60% of derivatives are potentially covered by the ISDA protocol ⁵⁸	At least 50% of loan (3500-10.000) and debt (200-500) agreements require more complex negotiation
Cost (in €)	a) 385 million-1.1 billion	b) 22-55 million	c) 220 million-1.76 billion	d) 157-450 million (loans) f) 9-22 million (debt)
Total cost for loan and debt agreements	407 million-1.15 billion = a) + b)			
Total cost for loan, debt and derivatives	627 million – 3 billion = a) + b) + c)			
Total cost for loan, debt and derivatives (incl. complex loans and debt)	793 million-3.47 billion = a) + b) + c) + d) + f)			

Source: Based on confidential data from FISMA interviews with large and mid-sized EU banks

The above assumptions remain conservative as they do not include the renegotiation for corporate deposits, for which no precise data on cost per contract could be obtained.

Table 16 – Per bank cost of renegotiating the USD LIBOR portfolio (figures indicate lower and upper ranges) **for EU small business borrowers**

	Loan agreements	Debt instruments	Derivative portfolio	Added cost for complex loans/debt
Number of contracts to be renegotiated	7000	400	10.000 x 0.4	At least 50% of loan (3500) and debt (200) agreements
Cost (in €)	a) 385 x 0.2 = 77 million	b) 22 x 0.2 = 4.4 million	c) 220 x 0.2 = 44 million	d) 157 x 0.2 = 31.4 million (loans) f) 9 x 0.2 = 1.8 million (debt)
Total cost for loan and debt agreements	81.4 million =			

⁵⁸ For ISDA legacy rates (covering approximately 60% of derivatives exposures) preparation appears advanced enough such that a contractual approach might avoid the need to legislate on an orderly IBOR phase-out scenario (see annex 3.1.4 for more details).

	a) + b)	
Total cost for loan, debt and derivatives	125.4 million = a) + b) + c)	
Total cost for loan, debt and derivatives (incl. complex loans and debt)	158.6 million = a) + b) + c) + d) + f)	