BNP PARIBAS

The bank for a changing world

NOTICE CONCERNING REFERENCE RATES AND INDICES

The risks identified in this notice are provided as general information only. Clients and counterparties of BNP Paribas that have entered into (or may in the future enter into) financial contracts or have purchased (or may in the future purchase) financial instruments that include a reference rate or index should conduct independent investigation and analysis regarding the risks involved. BNP Paribas does not represent that the statements below are exhaustive, nor is BNP Paribas in a position to express a view on the likelihood of any contingency highlighted by this notice occurring.

General risks related to the use of Benchmarks

Reference rates and indices (**Benchmarks**), such as the London Interbank Offered Rate (**LIBOR**), are commonly used to determine amounts payable under various financial contracts, loans, account based products and financial instruments (including derivatives and notes), as well as their value.

Various Benchmarks and, in particular, interest rate Benchmarks, are the subject of ongoing national, international and other regulatory guidance and reform. In particular:

(i) With respect to certain interest rate Benchmarks, the Financial Stability Board has encouraged the identification and use of alternative risk-free (or near risk-free) rates (**RFRs**); and

(ii) New rules and guidance have been issued with respect to the administration, contribution to, and use of, certain Benchmarks, including, in the European Union, pursuant to the European Benchmark Regulation (Regulation (EU) 2016/1011) (**BMR**) and, globally, pursuant to statements published by the Board of the International Organization of Securities Commissions.

This means that:

(a) Some Benchmarks, including their methodology, may change to ensure compliance with applicable law;

(b) It may, now or in the future, no longer be permissible for market participants to enter into financial contracts or purchase financial instruments which reference some Benchmarks, because they (or their administrator) do not comply with applicable law;

(c) Some Benchmarks may perform differently if and when contributors cease providing quotations or transaction data used to determine the Benchmark;

(d) Some Benchmarks may disappear (and there is no guarantee that an appropriate alternative Benchmark will be available); and

(e) There may be merit in updating the terms of some financial contracts, loans, account based products or financial instruments, to refer to a relevant RFR.

Clients and counterparties of BNP Paribas that have entered into financial contracts, loans, account based products or purchased financial instruments that reference a Benchmark (or may in the future enter into or purchase such financial contracts, loans, account based products or financial instruments) should therefore (I) be aware of possible changes in, or disruption to, such Benchmarks or the possibility of the disappearance of such Benchmarks and (II) understand the potential market, liquidity, legal, operational, regulatory and financial impact on those financial contracts, loans, account based products or financial instruments.

Examples of possible change, disruption or disappearance include:

(i) The possibility that LIBOR will cease to be available after the end of 2021;

(ii) The impact of reforms to the methodology to determine the Euro Interbank Offered Rate (**EURIBOR**) on EURIBOR levels after the reform; and

(iii) The administrator of the Euro OverNight Index Average (**EONIA**) has stated that EONIA's compliance with the BMR "cannot be warranted". If neither EONIA nor its administrator are submitted for authorisation under the BMR, while EONIA may continue to be published, it may not be referenced in financial contracts or financial instruments that are within the scope of the BMR from 1 January 2020 (although this date may change) and continued use after that date for existing financial contracts or financial instruments within the scope of the BMR could only take place subject to a specific regulatory approval, which may not be granted.

Risks related to the use of benchmarks in derivative transactions

Please read "General risks related to the use of Benchmarks" above for an introduction to risks related to the use of reference rates and indices (**Benchmarks**), such as the London Interbank Offered Rate (**LIBOR**), in derivative transactions.

Derivative transactions which reference interest rate Benchmarks typically incorporate standard terms such as the 2006 ISDA Definitions, as published by the International Swaps and Derivatives Association, Inc. (**ISDA**). For a number of interest rate Benchmarks, this means that if it were to be unavailable, the rate would be determined by reference to quotations from other banks. The 2006 ISDA Definitions generally do not address the consequences of no quotations being provided. If this were to occur, the value and continued existence of, and payments due under, the relevant derivative transaction would be uncertain. If the transaction is centrally cleared, the rules of the central clearing house may allow it to determine a substitute rate using different criteria.

There has been, and continues to be, much activity concerning references to Benchmarks in derivative transactions among market participants, trade associations and regulators. Two notable projects are being undertaken by ISDA.

First, ISDA has published the ISDA Benchmarks Supplement (the **Benchmarks Supplement**) and related protocol. Amongst other things, the Benchmarks Supplement provides for consequences if a Benchmark ceases to be provided on a permanent basis or if an administrator or a Benchmark itself ceases to have all required regulatory permissions and/or authorisations. If the Benchmarks Supplement is incorporated into a derivative transaction, one possible outcome is that the relevant Benchmark may be replaced with an alternative Benchmark. The possible consequences under the Benchmarks Supplement include a change to the amounts payable under the terms of the derivative transaction as well as changes to its value.

Second, ISDA has stated that it will publish updates to a number of Interbank Offered Rate Benchmarks (**IBORs**) included in the 2006 ISDA Definitions and a related protocol, inserting a new fallback for circumstances in which the relevant IBOR ceases to be available on a permanent basis. It is expected that the new fallback will be to a risk-free (or near risk-free) rate (an **RFR**) plus a spread. A spread will be added because IBORs are term rates and include a degree of perceived bank credit risk. RFRs are not a direct replacement for existing interest rate Benchmarks such as LIBOR. A transition from an IBOR to a RFR may cause the value of a derivative transaction to change or cause a derivative transaction to hedge any underlying exposure less effectively, particularly in circumstances where fallback arrangements (or a lack of fallback arrangements) in relation to the hedged exposure produce a different result.

ISDA has stated that the 2006 ISDA Definitions will be updated to include the new fallbacks. Incorporating those new fallbacks in derivative transactions entered into before the relevant fallbacks in the 2006 ISDA Definitions are updated will require positive action by the parties.

For derivative transactions that are traded other than under ISDA terms, counterparties should understand the potential legal, regulatory and financial impact on those transactions of possible changes in, or disruption to, Benchmarks referenced in those transactions, and that it may be necessary to take additional action in relation in relation to such transactions since solutions such as those made available by ISDA may not be available.

Parties to derivative transactions may have also entered into related credit support documentation (such as a credit support annex). These documents may also reference interest rate Benchmarks and consideration must be given to the consequences of any disruption to any of those Benchmarks.

Risks related to the use of benchmarks in debt securities

Please read “General risks related to the use of Benchmarks” above for an introduction to risks related to the use of reference rates and indices (**Benchmarks**), such as the London Interbank Offered Rate (**LIBOR**), in debt securities.

There is no standard master form of terms and conditions for debt securities.

Issuers should assess risks associated with issuing long dated bonds (including securitisations) referencing Benchmarks (and entering into any associated hedges) and ensure that the terms of the bonds include detailed risk factors relating to Benchmark discontinuation and fallback mechanisms which attempt to provide the means by which a future alternative rate might be identified. Issuers should also review the terms and conditions of their outstanding long dated bonds which reference Benchmarks which may be disrupted or disappear before the bonds’ maturity date, in order to identify and assess the fallback mechanisms which would be applicable. Many legacy debt agreements currently have fallback mechanisms in the event that a Benchmark ceases to be quoted or is unavailable. In most cases, these fallbacks are intended to address temporary disruptions in the market. Where the Benchmark is not published on the relevant screen page, the provisions typically provide for a fallback first to various iterations of rates to be determined by reference banks and finally to a fixed rate using the last available floating rate (or rate of the preceding interest period) for the life of the bonds. Since reference banks may be unwilling to provide the quotes needed to implement the first stage of this fallback process, this may effectively result in instruments becoming fixed rate. Case by case analyses will need to be carried out by issuers.

In respect of debt securities for which BNP Paribas or one of its affiliates is the issuer or the guarantor (**BNPP Securities**), the terms and conditions will typically state that, in the event of a discontinuation of a Benchmark: (i) the applicable interest rate would be determined by reference to quotations from other banks and (ii) if no quotations are provided, the last available rate of the Benchmark will be used. Investors in most existing floating rate BNPP Securities should be aware that, if a Benchmark ceases to be published on a permanent basis and no quotations are provided, unless the terms and conditions of the BNPP Securities are amended, the interest rate will be fixed at that last available rate until maturity.

BNP Paribas has initiated a process of revising the terms of the debt securities programmes for which it or an affiliate is the issuer, to provide for a new fallback for where the original Benchmark ceases to be published on a permanent basis. Under that fallback:

(i) The issuer or the calculation agent will select a replacement Benchmark that has been specified by a public body, such as a regulator or central bank, and is consistent with industry accepted standards. If they are unable to identify a replacement Benchmark, the issuer will appoint a determination agent which will select a replacement Benchmark that is substantially comparable to the original Benchmark; and

(ii) The entity that determined the replacement Benchmark will make any other changes necessary to account for observed differences between the replacement Benchmark and the original Benchmark, such as adding an ‘adjustment spread’ to the replacement Benchmark.

If, following the permanent cessation of a Benchmark, the terms and conditions of a BNPP Security lead to the selection of an alternative Benchmark, investors should be aware that, even with the application of any ‘adjustment spread’, it is possible that the alternative Benchmark may result in a change to the amounts that would otherwise have been payable under the terms of the BNPP Security as well as changes to its value.

If the alternative Benchmark is a risk-free (or near risk-free) rate (**RFR**), it may be that, unless a term RFR is developed and used for the relevant currency, the interest rate is only determined at the end of an interest period based on a collection of overnight rates, rather than at the start of an interest period as is currently the case.

As RFRs in different currencies are being developed at different times, it may be that the consequences are different for different currencies.

If the interest rate payable under a BNPP Security is hedged, any change to the interest rate in the BNPP Security may cause any derivative transaction hedging that exposure to be a less effective hedge.

Investors buying or having bought floating rate securities issued by issuers other than BNP Paribas are likely to face similar issues to those described above but such other issuers may envisage different actions or remedies for their own securities.

Risks related to the use of benchmarks in loan documentation

Please read “General risks related to the use of Benchmarks” above for an introduction to risks related to the use of reference rates and indices (**Benchmarks**), such as the London Interbank Offered Rate (**LIBOR**), in loan documentation.

Loan Market Association (LMA) recommended form syndicated loan documentation typically includes provisions intended to address the short-term unavailability of interest rate Benchmarks such as LIBOR. Borrowers using LMA recommended form syndicated loan documentation should be aware that, if a relevant Benchmark is not available for a required currency and interest period, a waterfall of fallback methods to determine an alternative rate will apply, with the final fallback typically referencing the lenders’ cost of funding.

Borrowers with syndicated loan facilities governed by the laws of New York or another state of the USA should be aware that such loan facilities often provide that an unavailability of, or an inability to determine, LIBOR results in a conversion of existing LIBOR priced loans to an alternative base rate of the higher of (i) the federal funds effective rate plus 0.50%, or (ii) the then current prime rate (such as that announced periodically by the administration agent for the facility). Many recent US syndicated loan facilities have included an amendment mechanism that will allow for the selection of a replacement benchmark, in the absence of an objection from the majority of syndicate lenders.

Where BNP Paribas or one of its affiliates is a lender on a bilateral basis (**BNPP Loans**), the loan agreement may or may not contain provisions intended to address the short-term unavailability of interest rate Benchmarks such as LIBOR.

If, in respect of both BNPP Loans and syndicated loans involving BNP Paribas and other lenders, the applicable Benchmark ceases to be published on a permanent basis and the parties wish to use an alternative Benchmark, to do so will typically require an amendment with the consent of some or all of the parties to the loan agreement and there is no guarantee that it will be possible to reach an agreement on the amendment in all cases.

If, following the permanent cessation of a Benchmark, the terms of a loan lead to the selection of an alternative Benchmark, borrowers should be aware that, even with the application of any ‘adjustment spread’, it is possible that the alternative Benchmark may result in a change to the amounts that would otherwise have been payable under the terms of the loan.

If the alternative Benchmark is a risk-free (or near risk-free) rate (**RFR**), it may be that, unless a term RFR is developed and used for the relevant currency, the interest rate is only determined at the end of an interest period based on a collection of overnight rates, rather than at the start of an interest period as is currently the case.

As RFRs in different currencies are being developed at different times, it may be that the consequences are different for different currencies.

To the extent that a loan is one element of wider financing arrangements, including (without limitation) hedging, the permanent cessation of a Benchmark and the selection of an alternative Benchmark may materially impact the economics of such arrangements, and in particular the effectiveness of the hedging.